Odense 2017

Congratulation to Scandinavian Journal of Urology with its 50 years anniversary. I am sure that the abstracts in the present supplementum from the 31st NUF meeting in Odense will give insight into the present research in the Nordic countries. I would like to thank the advisory board for a great job and the authors for their contributions.
I wish you all a great meeting in Odense June 2017.

Lars Lund
Guest Editor
Professor, DMSci
Department of Urology
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ORAL PRESENTATIONS

Wednesday 14. June 2017

Oral Session I 15.45 - 16.45

1. ROBOT-ASSISTED PYELOPLASTY AND PYELOLITHOTOMY IN PATIENTS WITH URETEROPELVIC JUNCTION STENOSIS
   Pernille Hammershoej†, Kasper D. Berg†, Nessn Azawi†
2. **SINGLE CENTER INITIAL EXPERIENCE WITH ADJUSTABLE TRANSOBTURATOR MALE SYSTEM (ATOMS) – 4-YEAR RESULTS**
Ingunn Roth *, Karin M. Hjelle *, Christian Beisland *, Gigja Gudbrandsdottir *, Yngve Nygård *
1Urology Department, Surgical Clinic, Haukeland University Hospital, Helse Bergen, Bergen, Norway

3. **NO DIFFERENCE IN RISK OF CARDIOVASCULAR DISEASE IN MEN WITH PROSTATE CANCER TREATED WITH GNRH AGONISTS OR ORCHIECTOMY. SEMI-ECOLOGIC, NATIONWIDE, POPULATION-BASED STUDY**
Frederik B. Thomsen *, Fredrik Sandin, Hans Garmo, Ingela F. Lissbrant, Göran Ahlgren, Mieke Van Hemelrijk, Jan Adolfsson, David Robinson, Pär Stattin
1Copenhagen Prostate Cancer Center, Department of Urology, Rigshospitalet, Copenhagen, Denmark, 2Regional Cancer Centre Uppsala Örebro, Uppsala University Hospital, Uppsala, Sweden, 3Division of Cancer Studies, Cancer Epidemiology Group, King’s College London, School of Medicine, London, United Kingdom, 4Department of Oncology, Institute of Clinical Sciences, The Sahlgrenska Academy, University of Gothenburg, Gothenburg, 5Department of Urology, SUS Malmö, Malmö, 6Institute of Environmental Medicine, Epidemiology Unit, 7CLINTEC-department, Karolinska Institutet, Stockholm, 8Department of Urology, Ryhov Hospital, Jönköping, 9Department of Surgical Sciences, Uppsala University Hospital, Uppsala, 10Department of Surgical and Perioperative Sciences, Urology and Andrology, Umeå University Hospital, Umeå, Sweden

Hedvig Haeger *, Tomas Jerlström *
1Dept of Urology, School of Health and Medical Sciences, Örebro University, Örebro, Sweden

5. **EXTRACORPOREAL SHOCK WAVE LITHOTRIPSI OF KIDNEY STONES AT A SMALL PERIFERAL DISTRICT HOSPITAL ON THE FAROE ISLANDS**
Johan Poulsen *, Joan Sivertsen, Heri Olsen, Helena K. Sundsskard
1Department of Urology, Klaksvig Sygehus, Klaksvig, Faroe Islands

6. **RE-BIOPSY RATES IN MEN WITH A NEGATIVE INITIAL BIOPSY SET: A POPULATION-BASED ANALYSIS**
Nina Klemann *, M. Andreas Røder, J. Thomas Helgstrand, Klaus Brasso, Birgitte Grønkær Toft, Ben Vainer, Peter Iversen
1Department of Urology, Copenhagen Prostate Cancer Center, Copenhagen N, 2Department of Pathology, Rigshospitalet, Copenhagen Ø, Denmark
7. **CAUSES OF DEATH IN PROSTATE CANCER: RESULTS FROM THE DANISH PROSTATE CANCER DATABASE (DAPROCA DATA)**
Mary Nguyen Nielsen* 1, 2, Anne Tjønneland 2, Henrik Møller3, 4, Michael Borre1
1Department of Urology, Aarhus University Hospital, Aarhus, 2Diet, Genes and Environment, Danish Cancer Society Research Center, Copenhagen, Denmark, 3Cancer Epidemiology, King’s College London, London, United Kingdom, 4Department of Public Health, Aarhus University, Aarhus, Denmark

8. **MULTI-PARAMETRIC MAGNETIC RESONANCE IMAGING AND MAGNETIC RESONANCE GUIDED BIOPSIES AT ACTIVE SURVEILLANCE INCLUSION SELECTS PROSTATE CANCER PATIENTS FOR ACTIVE TREATMENT**
Maria Elkjær* 1, Bodil G. Pedersen2, Morten H. Andersen1, Søren Høyer3, Michael Borre1
1Department of Urology, 2Department of Radiology, Aarhus University Hospital, Skejby, 3Department of Pathology, Aarhus University Hospital, NBG, Aarhus, Denmark

9. **INCIDENTAL PROSTATE CANCER DOES NOT INCREASE OVERALL MORTALITY IN PATIENTS UNDERGOING RADICAL CYSTPROSTATECTOMY – A POPULATION-BASED ANALYSIS**
Simon Jønck* 1, John T. Helgstrand1, Nina Klemann1, Martin A. Røder1, Ben Vainer2, Birgitte Grønkær Toft2, Peter Iversen1, Klaus Brasso1
1Copenhagen Prostate Cancer Center, Dept. of Urology, 2Dept. of Pathology, Copenhagen University Hospital, Rigshospitalet, University of Copenhagen, Copenhagen, Denmark

10. **ASTHMA AND ALLERGY IN ADOLESCENCE AND RISK OF PROSTATE CANCER**
Henrik Ugge* 1, 2, Ruzan Udumyan2, Scott Montgomery2, Katja Fall2
1Department of Urology, Örebro University Hospital, 2School of Medical Sciences, Örebro University, Örebro, Sweden

Wednesday 14. June 2017

Oral Session II 16.45 - 17.45

11. **LOW-INTENSITY EXTRACORPOREAL SHOCK WAVE THERAPY IMPROVES ERECTILE DYSFUNCTION - A PILOT STUDY WITH 2 YEARS FOLLOW-UP**
Hans C. Bang* 1, Milad Hanna2, Lars Lund1, 3
1Urology, Odense University Hospital, Odense, Denmark, 2Urology, Charring Cross, London, United Kingdom, 3Department of Clinical Research, University of Southern Denmark, odense, Denmark
12. **PATIENT-PERCEIVED EFFECTIVENESS AND IMPACT ON QUALITY OF LIFE OF SOLIFENACIN IN COMBINATION WITH AN A-BLOCKER IN MEN WITH OVERACTIVE BLADDER IN DENMARK: A NON-INTERVENTIONAL STUDY**
   Maja Svensson1, Ove Schebye1, Suzanne Kilany1
   1Nordic and Baltic Operations, Astellas Pharma a/s, Kastrup, Denmark

13. **LONG-TERM DATA ON EFFICACY AND SAFETY OF BOTULINUM TOXIN A FOR TREATMENT OF OVERACTIVE BLADDER**
   Karin Andersen1, Line G. Andersen1, Margrethe Andersen, Lars Lund1
   1Urology, Odense University Hospital, Odense, Denmark

   Rikke N. Haase*, Lotte Sander1
   1Urology, Aalborg university Hospital, Aalborg, Denmark

15. **A PROSPECTIVE STUDY TO VALIDATE AN ALGORITHM USING URINE AND PLASMA BIOMARKERS FOR PREDICTING HIGH-RISK PROSTATE CANCER ON BIOPSY**
   Mike A. Mortensen1, 2, Søren Feddersen3, Maher Albitar4, Lars Lund1, 2
   1Department of Clinical Research, University of Southern Denmark, 2Department of Urology,
   3Department of Clinical Biochemistry and Pharmacology, Odense University Hospital, Odense,
   Denmark, 4NeoGenomics, NeoGenomics Laboratories, California, United States

16. **DETECTION OF PROSTATE CANCER BY DNA ANALYSIS OF FILTRATION-CAPTURED CELLS FROM URINE**
   Louise K. Larsen*, Jørn S. Jakobsen1, Ahmad Abdul-Al2, Per Guldberg2
   1Urology, Herlev Hospital, Herlev, 2Cancer Genetics, Danish Cancer Society, Copenhagen Ø,
   Denmark

17. **PATIENT-REPORTED OUTCOME MEASURES IN PROSTATE CANCER: RESULTS FROM THE DANISH PROSTATE CANCER DATABASE (DAPROCA DATA)**
   Mary Nguyen Nielsen1, 2, Anne Tjønneland1, Henrik Møller3, 4, Michael Borre2
   1Diet, Genes and Environment, Danish Cancer Society Research Center, Copenhagen ,
   2Department of Urology, Aarhus University Hospital, 3Department of Public Health, Aarhus
   University, Aarhus, Denmark, 4Cancer Epidemiology, King’s College London, London, United
   Kingdom
18. USE OF PALLIATIVE MEDICATIONS BEFORE DEATH FROM PROSTATE CANCER: A POPULATION BASED STUDY

Magdalena Lycken*1, Linda Drevin2, Hans Garmo2, 3, Pär Stattin1, 4, 5, Jan Adolfsson6, Ingela Franck Lissbrant7, Lars Holmberg1, 2, 3, Anna Bill-Axelson1

1Department of Surgical sciences, Uppsala University, 2Regional Cancer Centre, Uppsala Örebro Region, Uppsala, Sweden, 3School of Medicine, Division of Cancer Studies, King’s College London, London, United Kingdom, 4Department of Surgery, Urology Service, Memorial Sloan-Kettering Cancer Center, New York, United States, 5Department of Surgical and Perioperative Sciences, Umeå University, Umeå, 6Department of Clinical Science, Intervention and Technology, Karolinska Institute, Stockholm, 7Department of Oncology, Institute of Clinical Sciences, Sahlgrenska Academy, Göteborg, Sweden

19. CHOLESTEROL SYNTHESIS PATHWAY GENES IN PROSTATE CANCER ARE DOWNREGULATED

Morten Rye*1, May-Britt Tessem2, Maria Andersen3, Kjersti Rise1, Tone Bathen3, Finn Drabløs1, Helena Bertilsson4

1Cancer Research and Molecular Medicine, 2Ciculation and Medical Imaging, 3MI Lab, Ciculation and Medical Imaging, Norwegian University of Science and Technology, 4Department of Urology, St. Olav’s Hospital, Trondheim University Hospital, Trondheim, Norway

20. BONE HEALTH AND BODY COMPOSITION CHANGES IN MEN TREATED WITH ANDROGEN DEPRIVATION THERAPY FOR PROSTATE CANCER

Mads H. Poulsen*1, 2, Morten Frost3, 4, Bo Abrahamsen3, 5, Oke Gerke6, 7, Steen Walter2, Lars Lund1.

2, 31Academy of Geriatric Cancer Research (AgeCare), 2Department of Urology, Odense University Hospital, 3OPEN, Institute of Clinical Research, University of Southern Denmark, 4Department of Endocrinology and Metabolism, Odense University Hospital, Odense, 5Department of Medicine and Endocrinology, Holbæk Hospital, Holbæk, 6Department of Nuclear Medicine, Odense University Hospital, 7Centre of Health Economics Research, University of Southern Denmark, Odense, Denmark

Thursday 13. June

Oral Session III 08.00 - 09.00

21. ADVERSE WEIGHT GAIN AND FAT ACCUMULATION AFTER ORCHIECTOMY COMPARED WITH LUTEINIZING HORMONE-RELEASING HORMONE AGONISTS: A RANDOMIZED CLINICAL TRIAL

Peter Østergren*1, Caroline Kistorp2, Mikkel Fode1, Finn N. Bennedbæk2, Jens Faber2, Jens Sønksen1
22. **NATIONWIDE ANALYSIS: DIAGNOSTIC CHARACTERISTICS OF PATIENTS WITH LETHAL PROSTATE CANCER.**
John T. Helgstrand¹, Nina Klemann¹, Birgitte G. Toft², Ben Vainer², Klaus Brasso¹, Peter Iversen¹, Martin A. Røder¹
¹Copenhagen Prostate Cancer Center, Dept. of Urology, ²Dept. of Pathology, Copenhagen University Hospital, Rigshospitalet, Copenhagen, Denmark

23. **IS BLADDER TUMOUR FULGURATION UNDER LOCAL ANAESTHESIA MORE PAINFUL THAN CYSTOSCOPY ONLY?**
Viveka Ströck¹, Sten Holmång¹
¹Department of Urology, Sahlgrenska University Hospital, Gothenburg, Sweden

24. **LATE URINARY MORBIDITY AND QUALITY OF LIFE AFTER RADICAL PROSTATECTOMY AND SALVAGE RADIOThERAPY FOR PROSTATE CANCER**
Maria Ervandian*, Morten Høyer¹, Stine Petersen², Lisa Sengeløv³, Steinbjørn Hansen⁴, Mette Kempel⁵, Peter Petersen⁶, Michael Borre⁷
¹Danish Center for Particle Therapy, ²Department of Oncology, Aarhus University Hospital, Aarhus, ³Department of Oncology, Herlev Hospital, Herlev, ⁴Department of Oncology, Odense University Hospital, Odense, ⁵Department of Oncology, Aalborg University Hospital, Aalborg, ⁶Department of Oncology, Copenhagen University Hospital, Copenhagen, ⁷Department of Urology, Aarhus University Hospital, Aarhus, Denmark

25. **DETECTION RATE OF LYMPH NODE METAStASIS IN PATIENTS UNDERGOING SURGICAL TREATMENT FOR PROSTATE CANCER USING A MODIFIED D’AMICO RISK CLASSIFICATION SYSTEM**
Alfred Honoré*, Lars A. R. Reisæter¹, Yngve Nygård², Ravi Rawal², Øyvind Ulvik², Bjarte Almås², Ole Johan Halvorsen³, Christian Beisland²
¹Radiology, ²Urology, ³Pathology, Haukeland University Hospital, Bergen, Norway

26. **TRANSITIONAL UROLOGY & COMPLEX STAGED HYPOSPIADIAS REPAIR**
Yazan F. Rawashdeh*, Gitte M. Hvistendahl¹, Martin Skøtt¹, L. Henning Olsen¹
¹Urology / Section of Paediatric Urology, Aarhus University Hospital, Aarhus, Denmark

**Thursday 15. June**

Session IV   13.15 - 14.30
27. INTERLEUKIN-6 AND RENAL CELL CARCINOMA WITH PARTICULAR REFERENCE TO PROGNOSIS
Gigja Gudbrandsdottir*, Karin M. Hjelle¹, Jannicke Frugård¹, Leif Bostad², Hans J. Aarstad³, Christian Beisland¹
¹Department of Urology, ²Department of Pathology, ³Department of Otolaryngology/Head and Neck Surgery, Haukeland University Hospital, Bergen, Norway

28. METASTASECTOMY FOR RENAL CELL CARCINOMA: A SINGLE CENTER EXPERIENCE OF MULTIMODALITY TREATMENT
Petrus Järvinen¹, Harri Visapää¹,², Sara Tornberg¹, Tuomas P. Kilpeläinen¹, Kimmo Taari¹, Riikka Järvinen¹, Harry Nisen¹
¹Department of Urology, ²Comprehensive Cancer Center, University of Helsinki and Helsinki University Hospital, Helsinki, Finland

29. BODY MASS INDEX IN YOUNG MEN AND RENAL CELL CARCINOMA
Anna Strand¹, Katja Fall², Anna Fält², Scott Montgomery², Pernilla Sundqvist¹
¹Department of Urology, Faculty of Medicine and Health, Örebro University, ²Clinical Epidemiology and Biostatistics, School of Medical Sciences, Örebro University, Örebro, Sweden

30. FASTTRACK INTEGRATED CANCER PATHWAY FOR TESTICULAR CANCER – A REVIEW OF ALL PATIENTS REFERRED TO AARHUS UNIVERSITY HOSPITAL IN A THREE YEAR PERIOD
Peter F. Vedel¹, Bálint Vajta¹, Frank Schmidt¹
¹Department of urology, Aarhus University Hospital, Aarhus, Denmark

31. HUMAN PAPILLOMAVIRUS AND SQUAMOUS CELL CARCINOMA OF THE URINARY BLADDER - THE DABLACA10 STUDY
Kit R. Jørgensen*, Søren Høyer¹, Jakob K. Jakobsen², Thor K. Jensen³, Jørgen B. Jensen²
¹Pathology, ²Urology, Aarhus University Hospital, Skejby, Aarhus, ³Urology, Odense University Hospital, Odense, Denmark

32. PERIOPERATIVE SYSTEMIC SURGICAL INFLAMMATORY RESPONSE FOLLOWING ROBOT-ASSISTED LAPAROSCOPIC CYSTECTOMY VS OPEN MINI-LAPAROTOMY CYSTECTOMY - A PROSPECTIVE STUDY
Pernille S. Kingo*, Johan Palmfeldt¹, Rikke Nørregaard¹, Michael Borre², Jørgen B. Jensen²
¹Clinical Medicine, Aarhus University, ²Urology, Aarhus University Hospital, Aarhus N, Denmark
33. **SIGNIFICANTLY MORE DOWNSTAGING IN PATIENTS RECEIVING PREOPERATIVE (NEOADJUVANT AND INDUCTION) CHEMOTHERAPY PRIOR TO CYSTECTOMY FOR MUSCLE-INVASIVE BLADDER CANCER.**


   1Dept of Urology, School of Health and Medical Sciences, Örebro University, Örebro, 2Dept of Urology, Danderyd Hospital, Karolinska Institutet, Dept. of Clinical Sciences, Stockholm, 3Dept of Urology, Sahlgrenska University Hostpital, Gothenburg, 4Dept of Clinical and Experimental Medicine, Linköping University Hostpital, Linköping, 5Dept. of Molecular Medicine and Surgery, Section of Urology, Karolinska Institutet, Stockholm, 6Dept. of Surgical and Perioperative Sciences, Urology and Andrology, Umeå University, Umeå, 7Department of Oncology-Pathology, Karolinska Hospital, Stockholm, 8Dept. of Surgical Sciences, Urology, Uppsala University, Uppsala, 9Dept. Translational Medicine, Lund University, Malmö, Skåne University Hospital, Malmö, Malmö, Sweden

**Thursday 15. June**

**Session V  14.30 - 15.15**

34. **RAT MODEL FOR STUDY OF ERECTILE DYSFUNCTION**

   Morten Hox*, Peter Zvara

   1Urology, Odense University Hospital, Odense, Denmark

35. **APPLICATION OF TLR2 ANTIBODY INCREASES AKT-MEDIATED APOPTOSIS IN MURINE RENAL ISCHEMIA AND REPERFUSION INJURY**

   Anja Urbschat*, Patrick Baer, Kai Zacharowski, Thorsten Maier, Rainer Hofmann, Jan Mersmann

   1Department of Biomedicine, Aarhus University, Aarhus, Denmark, 2Clinic of Internal Medicine III, Division of Nephrology, 3Clinic of Anesthesiology, Intensive Care Medicine and Pain Therapy, Goethe-University Hospital, Frankfurt, 4Clinic of Urology and Pediatric Urology, Philipps-University, Marburg, Germany

36. **SIMULATION-BASED TRAINING FOR FLEXIBLE CYSTOSCOPY – A PATIENT TRANSFER RANDOMIZED TRIAL**

   Sarah Bube*, Lars Konge, Rikke B. Hansen

   1Simulation Center, Copenhagen Academy for Medical Education and Simulation, Copenhagen, Denmark
37. **INDIVIDUAL IMMUNOPROTEOMICS IDENTIFIES IL-16 PROCESSING IN TREGS AS A FACTOR IN BLADDER CANCER TUMOUR IMMUNITY**

Michael Mints¹, David Krantz², Markus Johansson³, Johan Hansson⁴, Jonas Vasko⁵, Malin Winerdal⁶, Ali Zirakzadeh², Katrin Riklund⁶, Roman Zubarev⁷, Dorothea Rutishauser⁷, Amir Sherif¹, Ola Winqvist²

¹Department of Surgical and periprofessional Sciences, Umeå University, Umeå, ²Department of Medicine, Karolinska Institutet, Stockholm, ³Department of Urology, Sundsvall Hospital, Sundsvall, ⁴Faculty of Medicine, Uppsala University, Uppsala, ⁵Department of Medical Biosciences, ⁶Department of Radiation Sciences, Umeå University, Umeå, ⁷Department of Medical Biochemistry and Biophysics, Karolinska Institutet, Stockholm, Sweden

38. **SENTINEL NODE DETECTION IN MUSCLE INVASIVE UROTHELIAL BLADDER CANCER IS FEASIBLE AFTER NEOADJUVANT CHEMOTHERAPY IN ALL PT-STAGES**

Amir Sherif*, Robert Rosenblatt¹, Markus Johansson², Farhood Almadari³, Alexander Sidiki⁴, Benny Holmström⁵, Johan Hansson⁶, Janos Vasko⁷, Per Marits⁸, Susanne Gabrielsson⁸, Katrine Riklund⁶, Ola Winqvist⁸

¹Department of Surgical and Perioperative Sciences, Urology and Andrology, Umeå University, Stockholm, ²Department of Urology, Sundsvall Hospital, Sundsvall, ³Department of Urology, Västmanland Hospital, Västerås, ⁴Department of Urology, Länsstyrelsen Rybo, Jönköping, ⁵Department of Urology, Akademiska University Hospital, Uppsala, ⁶Department of Urology, Centre for Research and Development, Faculty of Medicine, Uppsala University, County Council of Gävleborg, Gävle, ⁷Department of Medical Biosciences, Pathology, Umeå University, Umeå, ⁸Department of Medicine, Unit for Immunology and Allergy, Karolinska Institutet, Stockholm, ⁹Department of Radiation Sciences, Umeå University, Umeå, Sweden

39. **PHOTODYNAMIC DIAGNOSIS (PDD) IN FLEXIBLE CYSTOSCOPY - IMPACT ON EFFECTIVENESS AND COSTS. A RANDOMIZED CONTROLLED TRIAL**

Anne-Louise Moltke¹, Ditte Drejer¹, Jørgen B. Jensen¹,²

¹Department of Urology, Aarhus University Hospital, Aarhus N, ²Department of Urology, Hospital of West Jutland, Holstebro, Denmark

40. **EXOSOMES IN URINE RETAIN A MALIGNANT PROTEIN PROFILE AFTER PRIMARY TUMOUR ABLATION IN PATIENTS WITH INVASIVE URINARY BLADDER CANCER**

Michael Mints¹, Stefanie Hiltbrunner², Maria Eldh², Robert Rosenblatt¹, Benny Holmström³, Farhood Almadari⁴, Markus Johansson⁵, Johan Hansson⁶, Janos Vasko⁷, Ola Winqvist², Amir Sherif¹, Susanne Gabrielsson²
1Department of Surgical and perioperative Sciences, Umeå University, Umeå, 2Department of Medicine, Karolinska Institutet, Stockholm, 3Department of Urology, Akademiska University Hospital, Uppsala, 4Department of Urology, Västmanland Hospital, Västerås, 5Department of Urology, Sundsvall Hospital, Sundsvall, 6Faculty of Medicine, Uppsala University, Uppsala, 7Department of Medical Biosciences, Umeå University, Umeå, Sweden
Poster Presentations

Session 1  Wednesday 14 June

41. IS DETRUSOR OVERACTIVITY NECESSARY FOR LEAKAGE IN LUTS CHILDREN?
   Yutao Lu* 1, Jens C. Djurhuus1, L. Henning Olsen1,2
   1Department of Clinical Medicine, 2Department of Urology, Aarhus University, Aarhus, Denmark

42. DOES “SECURING THE CATHETER” MAKE ANY DIFFERENCE?
   James Macneil* 1, Howard Lau1, 2
   1Department of Urology, Macquarie University Hospital, 2School of Medicine, Western Sydney University, Sydney, Australia

43. TREATMENT OF MEATAL STENOSIS WITH A NEW SURGICAL TECHNIQUE.
EXPERIENCE FROM SAHLGRENSKA UNIVERSITY HOSPITAL.
   Jenny Magnusson* 1, Lars Grenabo1, Klas Lindqvist1
   1Department of Urology, Sahlgrenska University Hospital, Gothenburg, Sweden

44. FORESKIN TRANSPLANT BETWEEN DISCORDANT MONOZYGOTIC TWINS FOR REDO SALVAGE HYPOSPADIAS REPAIR
   Yazan F. Rawashdeh*

45. LAPAROSCOPIC AND ROBOTIC NEPHROURETERECTOMY: DOES LYMPHADENECTOMY HAVE AN IMPACT ON THE CLINICAL OUTCOME? ON BEHALF OF UROLAP GROUP

46. PRIMARY TREATMENT AND RECURRENCE RATES IN PATIENTS WITH NON-MUSCLE INVASIVE BLADDER CANCER IN ICELAND
   Oddur Björnsson* 1, Guðmundur Geirsson2, Ársæll Kristjánsson2, Árni S. Leifsson2, Eiríkur O. Guðmundsson2, Valur P. Marteinsson3, Eiríkur Jónsson2, Sigurður Guðjónsson2
   1Faculty of Medicine, University of Iceland, 2Department of Urology, Landspitali University Hospital, 3Department of Surgery, Akureyri Hospital, Iceland

47. THE DANISH BLADDER CANCER DATABASE: ESTABLISHMENT AND PRELIMINARY RESULTS
   Erik Hansen* 1, Heidi Larsson2, Mette Nørgaard2, Anette P. Pilt3, Niels V. Jensen4, Knud Fabrin5, Peter Thind6, Jørgen B. Jensen1
   1Department of Urology, 2Department of Clinical Epidemiology, Aarhus University Hospital, Aarhus, 3Department of Pathology, Zealand University Hospital-Roskilde, Roskilde, 4Department of Oncology, Odense University Hospital, Odense, 5Department of Urology, Aalborg University Hospital, Aalborg, 6Department of Urology, Rigshospitalet, Copenhagen, Denmark

48. SIDE EFFECTS OF AMBULANT MITOMYCIN INSTILMENT IN THE BLADDER GIVEN AS WEEKLY TREATMENT AFTER TRANSURETHRAL RESECTION OF THE BLADDER (TURB) IN COMPARISON WITH
SIDE EFFECTS OF MITOMYCIN INSTILMENT GIVEN WITHIN 24 HOURS AFTER TURB.
Annette Hjuler*

49. KIUROLOGYX – THE FIRST CLINICAL MOOC IN UROLOGY
Nima Dastaviz1, Natalia Stathakarou2, Cormac McGrath2, Lars Henningsohn1
1Dep of Urology, Institution for CLINTEC, 2Karolinska Institutet, Institution for LIME, Stockholm, Sweden

50. THE PREVALENCE AND OUTCOMES OF FRAILTY IN ELDERLY PATIENTS UNDERGOING CURATIVE SURGERY FOR UROLOGIC MALIGNANCY – A PILOT STUDY.
Anna Emilie Livbjerg*, Torben Dørflinger1
1Department of Urology, Aalborg University Hospital, Aalborg, Denmark

51. COMPARISON OF SEMEN QUALITY BETWEEN UNIVERSITY AND PRIVATE CLINIC LABORATORIES
Christian Fuglesang Skjødt Jensen1, Omar Khan2, Jens Sønksen1, Mikkel Fode3, Tariq Shah4, Dana Ohl2
1Department of Urology, Herlev and Gentofte Hospital, Herlev, Denmark, 2Department of Urology, University of Michigan, Ann Arbor, United States, 3Department of Urology, Roskilde Hospital, Roskilde, Denmark, 4Department of Obstetrics and Gynecology, University of Michigan, Ann Arbor, United States

52. HAND-ASSISTED LAPAROSCOPIC VERSUS LAPAROSCOPIC NEPHRECTOMY AS OUTPATIENT PROCEDURE-A PROSPECTIVE RANDOMIZED STUDY.
Nessn Azawi1,2, Tom Christensen3, Claus Dahl3, Lars Lund1,4
1Clinical institute of Public Health, University of Southern Denmark, Odense, 2Department of Urology, 3Zealand University Hospital, Zealand University Hospital, Roskilde, 4Department of Urology, Odense University Hospital, Odense, Denmark

53. MICROWAVE ABLATION OF RENAL CELL CARCINOMA: INITIAL SAFETY AND EVALUATION OF LOSS OF FUNCTION IN THE TREATED KIDNEY
Jesper Bergqvist1, Bjarne Kromann-Andersen1
1Urologisk, Herlev Hospital, Copenhagen, Denmark

54. RENAL CELL CARCINOMAS MASS OF LESS THAN 4 CM ARE NOT ALWAYS INDOLENT
Ann Buhl Bersang1, Lars Lund1, Mikkel Fode2, Nessn Htum Majeed Azawi3
1Urology, Odense Universitetshospital, Odense, 2Urology, Sjaellands Universitets hospital, Roskilde, Copenhagen, 3Urology, Sjaellands Universitets hospital, Roskilde, Roskilde, Denmark

55. A RANDOMIZED CONTROLLED STUDY OF SPINAL ANALGESIA SHOW IMPROVED SURGICAL OUTCOME AFTER OPEN NEPHRECTOMY FOR RENAL CELL CARCINOMA AS COMPARED WITH EPIDURAL ANALGESIA
Börje Ljunberg1, Mascha Thurm1, Britt-Inger Kröger Dahlin1, Ola Winso1
56. USE OF VENOUS-THROMBOTIC-EMBOLIC (VTE) PROPHYLAXIS IN PATIENTS UNDERGOING SURGERY FOR RENAL TUMORS IN NORDIC COUNTRIES (THE NORENCA-II STUDY)
Lars Lund1, Harry Nisen1, Petrus Järvinen1, Magnus Fovaeus2, Eirikur Gudmundson3, Bjarne Kromann-Andersen4, Börje Ljungberg5, Frode Nilsen6, Pernilla Sundqvist7, Peter Clark8, Christian Beisland9
1Urology, Helsinki University Hospital, Helsinki, Finland, 2Urology, Sahlgrenska University Hospital, Gothenburg, Sweden, 3Urology, Landspitali University Hospital, Reykjavik, Iceland, 4Urology, Herlev Hospital, København, Denmark, 5Urology, Umeå University, Umeå, Sweden, 6Urology, Akershus University Hospital, Lørenskog, Norway, 7Urology, Örebro University, Örebro, Sweden, 8Urology, Vanderbilt, Nashville, United States, 9Urology, University of Bergen, Bergen, Norway

57. RECURRENCE OF RENAL CELL CARCINOMA AFTER KIDNEY SURGERY FOR LOCALIZED DISEASE– FIRST DANISH EXPERIENCE
Malene H. Niebuhr*1, Bjarne Kromann-Andersen1
1Department of Urology, Herlev Hospital, Herlev, Denmark

58. DO WE NEED A POST-BIOPSY OBSERVATION PERIOD FOLLOWING ULTRASOUND GUIDED BIOPSIES OF RENAL MASSES?
Ole Graumann*1, Lars Rene Rasmussen2, Martina Loft3, Marie Jensen4, Søren Høyer4, Arne Høllyck5, Tommy Kjærgaard Nielsen6
1Radiology, Odense University Hospital, Odense, 2Radiology, Silkeborg Hospital, Silkeborg, 3Radiology, Aarhus University Hospital, 4Pathology, 5Radiology, 6Urology, Aarhus University Hospital, Aarhus, Denmark

59. ALTERING EXPRESSIONS OF NOD1 AND NOD2 (NUCLEOTIDE-BINDING OLIGOMERIZATION DOMAIN) RECEPTORS IN HUMAN CLEAR CELL RENAL CELL CARCINOM
Anja Urbschat*1, Thorsten Maier1, Debbie Lemming1, Kristina Boysen1, Rainer Hofmann2, Axel Hegele2
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1. ROBOT-ASSISTED PYELOPLASTY AND PYELOLITHOTOMY IN PATIENTS WITH URETEROPELVIC JUNCTION STENOSIS

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Introduction: Approximately one in five patients with ureteropelvic junction stenosis (UPJS) also present with renal or ureteral stones. Different approaches, including retrograde intrarenal surgery, percutaneous nephrolithotomy, endoscopic combined intrarenal surgery, and extracorporeal shockwave lithotripsy, have been proposed; however, all are associated with varying rates of residual stones. For patients with UPJS, the European Association of Urology guidelines currently recommend that robot-assisted pyeloplasty (RAP) and pyelolithotomy are performed as two separate procedures. Theoretically, robot-assisted pyeloplasty and concomitant pyelolithotomy (RAP+P) could combine the advantages of a minimally invasive approach with benefits for postoperative outcomes and long-term success rates. However, the experience with RAP+P remains limited, with only a few published reports.

Objectives: The aim of the present study was to evaluate the feasibility and safety of RAP+P in patients diagnosed with UPJS and renal stones.

Methods: In total, 56 RAP procedures and 18 RAP+P procedures were performed between Dec. 2012 and Jan. 2014. Patient records were retrospectively reviewed for operation time (OT), estimated blood loss (EBL), length of hospital stay (LOS), complications, stone burden, and stone-free rates at one, three, and six months following surgery.

Results: A significant difference in the OT was demonstrated between RAP and RAP+P, with a median of 120 min (IQR: 100–134 min) and 151 min (IQR: 128–185 min), respectively, \( p < 0.0001 \). In contrast, no difference in LOS (median 2 days [IQR: 2–3 days] vs. 3 days [IQR: 2–4 days], \( p = 0.50 \)) or EBL (median 0 mL [IQR: 0–50 mL] vs. 20 mL [0–50 mL], \( p = 0.64 \)) was observed between RAP and RAP+P. The median total stone burden was 1.5 cm (IQR: 1.0–4.3 cm; range: 1–10 cm). The stone-free rate at one, three, and six months was 94%, 83%, and 72%. No grade 3–5 complications were observed in the RAP+P group.

Conclusion: RAP+P can safely be offered to patients with UPJS and renal stones, with acceptable stone-free rates in two-thirds of patients within the first 6 months, evaluated by controlled CT scans. There were no major complications associated with the procedure, and the LOS was comparable to that of patients undergoing RAP alone.

Disclosure of Interest: None Declared

Keywords: Instrumentation & Technology, Invasive

2. SINGLE CENTER INITIAL EXPERIENCE WITH ADJUSTABLE TRANSOBTURATOR MALE SYSTEM (ATOMS) – 4-YEAR RESULTS

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Introduction: 45 patients treated with ATOMS between June 2012 and October 2016.

Objectives: We have evaluated the functional outcomes, complications and reoperations after surgery with ATOMS for post-prostatectomy incontinence.

Methods: The ATOMS is inserted through a perineal incision. Its cushion is placed on the bulbospongious muscle and fixed with two mesh arms around the obturator foramina. The port was placed inguinal or scrotal. 37 patients had been operated with robot-assisted laparoscopic radical prostatectomy and 8 patients with retropubic radical prostatectomy. 16 patients underwent radiotherapy. Investigation for stress urinary incontinence started one year after prostatectomy. All patients had to record voiding and leakage diary for 3 days. The work-up consisted of uroflowmetry, residual urine (RU), cystometry and cystoscopy. Observation time was 2.4 years (0.3–4.2).

Results: Time from prostatectomy until ATOMS was 3.3 years (2.7, 1.2–10.2). All patients had done cystometry; 31 with normal findings, 9 with overactive bladder and 5 had reduced compliance. The bladder capacity was 344 ml (332, 296–400). 37 patients with normal cystoscopy and 4 with cystitis. Pre-operative residual volume was 5 ml (0, 0-8). Operative-time was 47 min. (45, 42-52) and with no perioperative complication. The cushion was filled with 6.7 ml NaCl (7, 6-7.5). Postoperative stay was 1.3 days (1, 1-1). RU at discharge was 15 ml (0, 0-20). At first control 37% of the patients had experienced transient pain in the perineum, and 8.8% had persistent pain. The port had given 2 patients transient pain, 3 persistent pain and was dislocated in 3 patients. On average there was one adjustment/patient the first year. In the observation time it was 1.8 adjustments/patient (1.0 0–3). Before treatment the pad-weight/day was 192 g (116, 51-240), at first control 60 g (0, 0-20) and at one year 43 g (10, 0-48). At first control 23 patients had no leakage and 7 patients had leakage > 50 g, at one year the numbers were 15 and 8, respectively. 10 out of 45 patients were re-operated, 4 had the port adjusted or removed. 3 patients switched to AMS 800 and 3 removed the ATOMS due to pain, erosion or infection. Radiated patients are more prone to have the device removed, compared to those who are not, 25% and 7% respectively.

Conclusion: Short time results show considerable reduction in leakage and numbers of daily pads. The patency and complications are at the same level as earlier reports.

References: EAU 2016 Abstrakt 345; Long Term Efficacy and safety og Adjustable Transobturator Mal System (ATOMS):6 years result of a European multi –institutional study;Friedl A WJU Jan 2016; Five-year experience with the adjustable transobturator male system for treatment of male stress urinary incontinence: a single-center evaluation; Mühlstädt S

Disclosure of Interest: None Declared

Keywords: Evaluation, Prostate & Genitalia

3. NO DIFFERENCE IN RISK OF CARDIOVASCULAR DISEASE IN MEN WITH PROSTATE CANCER TREATED WITH GNRH AGONISTS OR ORCHIECTOMY. SEMI-ECOLOGIC, NATIONWIDE, POPULATION-BASED STUDY

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Introduction: In observational studies, Gonadotropin Releasing Hormone (GnRH) agonists have been associated with increased risk of cardiovascular disease (CVD) compared to orchiectomy in men with prostate cancer. If this is true it would mean that the indication for a very common treatment for a very common cancer would need to be changed.

Objectives: To investigate type of hormonal therapy with risk of CVD while minimizing selection bias.

Methods: In Prostate Cancer data Base Sweden, 6 556 men received GnRH agonists and 3 300 men underwent orchiectomy as primary hormonal treatment for prostate cancer in 1992-1999. The association with CVD was assessed in a semi-ecologic analysis with exposure measured as the proportion of men who received GnRH agonists in 580 experimental units defined by healthcare provider, diagnostic period, and age at diagnosis. Incident or fatal CVD events were assessed on an individual level. Analyses of net and crude probabilities based on individual exposure levels were also performed.

Results: There was a seven-fold difference between the experimental units with the lowest and the highest proportion of men treated with GnRH agonists (14% vs. 96%). In units with the highest compared to lowest proportion of GnRH agonist use, risk of CVD was lower in the first year after prostate cancer diagnosis, relative risk (RR) 0.81 (95% CI 0.70-0.95) but not during subsequent follow-up, RR 1.10 (95% CI 0.96-1.26). Similarly, the net probability of CVD was lower in the first year of follow-up of men on GnRH agonists compared to orchiectomy, hazard ratio (HR) 0.84 (95% CI 0.76-0.92), but there was no difference during subsequent follow-up, HR 1.06 (95% CI 0.99-1.14). The 10-year crude probability of CVD for men on GnRH agonists was 0.58 (95% CI 0.57-0.59) and for men treated with orchiectomy 0.55 (95% CI 0.54-0.57). 10-year risk for prostate cancer death was 0.30 (95% CI 0.29-0.31) for GnRH agonists and 0.35 (95% CI 0.33-0.36) for orchiectomy.

Conclusion: In this nationwide, population-based observational study in Sweden, there was no increased risk of CVD for men on GnRH agonists compared to men treated with orchiectomy. Our study provides no support for a change of recommendations for hormonal treatment for prostate cancer.

Disclosure of Interest: None Declared

Keywords: None

4. FUNCTIONAL OUTCOME OF ORTHOTOPIC BLADDER SUBSTITUTION: A COMPARISON BETWEEN THE S-SHAPED, U-SHAPED AND NEO S-SHAPED NEOBLADDER

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Introduction: Since the introduction over three decades ago, orthotopic bladder substitution has become the standard of care after cystectomy in selected patients. However, the use is decreasing in Sweden since several years. The three versions of bladder substitutes used at Örebro University Hospital over time have been S-bladder according to Schreiter, U-bladder according to Studer and the newer Neo S-bladder, a combination of the two earlier.

Objectives: To compare the three bladder substitutes regarding functional results in aspects of leakage, frequency and capacity as well as quality of life.

Methods: 95 men had a cystectomy and orthotopic bladder substitution done at the Department of Urology at Örebro University Hospital between 1999 and 2016. 23 patients obtained the S-bladder (1999-2006), 30 the U-bladder (2003-2007) and 42 the Neo S-bladder (2008-2016). At follow up one, three and six months after removal of the catheter they estimated leakage by weighted pad test, frequency and maximum capacity by micturition charts and filled out a quality of life questionnaire (EORTC QLQ-C30).
**Results:** The S-bladder had the smallest median leakage (daytime 0 ml, nighttime 21 ml) and largest median capacity (562 ml) at follow up at six months and the Neo S-bladder showed similar results (daytime leakage 6 ml, nighttime leakage 21 ml, capacity 450 ml). The U-bladder had the largest leakage (daytime 10 ml, nighttime 182 ml, $p=0.007$ vs S-bladder and nighttime 182 ml, $p=0.004$ vs Neo S-bladder) and the smallest capacity (380 ml, $p=0.031$ vs Neo S-bladder) at the six month follow up. The groups did not differ in quality of life.

**Conclusion:** The U-bladder presented poorest results in both leakage and capacity whilst both the S-bladder and Neo S-bladder showed a substantially better outcome in both aspects and seems to be a better choice of orthotopic bladder substitution after radical cystectomy according to this study. Since the U-bladder have shown good result in other studies, it might be other factors, such as patient selection and surgical technique, influencing the result rather than the folding of the bowel used for the substitute.

**Disclosure of Interest:** None Declared

**Keywords:** None

5. **EXTRACORPOREAL SHOCK WAVE LITHOTRIPSI OF KIDNEY STONES AT A SMALL PERIFERAL DISTRICT HOSPITAL ON THE FAROE ISLANDS**

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**Introduction:** The Faroe Islands is a small society in the middle of the North Atlantic with approximately 50,000 inhabitants. The second largest city called Klaksvik has got a small district hospital with about 2,000 admissions, 700 surgical procedures and 12,000 outpatient visits every year. The hospital also has a small X-Ray Department doing about 5,500 examinations a year. Until January 2015 all patients in need of ESWL treatment were sent to Denmark.

**Objectives:** In autumn 2014 Aalborg University Hospital purchased a new ESWL machine. The old one PiezoLith 3000 lithotripter became available. This machine is now 12 years old but was totally renovated with exchange of lithotripter components in 2013. The lithotripter was installed at Klaksvik Hospital in December 2014. The staff at the Radiological Department underwent a well structured training program and also radiographic team from Aalborg University Hospital came to the Faroe Islands supervising treatments for the first year.

**Methods:** The results after two years have now been evaluated. A total number of 48 patients have had ESWL treatment, 31 males, 17 females. Median age was 58 years, maximum 75, minimum 23 years. Median treatment 1.6 procedures per patient. Results were divided into three groups. Group 1: Totally stone free or only minimal residual fragments less than 3 mm in diameter. Group 2: Stone disintegration but residual fragments more than 3 mm. Group 3: No stone fragmentation.

**Results:** Of the 48 patients 16 patients were totally stone free and 12 patients had residual fragments less than 3 mm (58% of patients). Group 2: 14 patients had good fragmentation but residual fragments more than 3 mm (30% of the patients). Group 3: 6 patients had no fragmentation following ESWL treatment (12% of patients).

**Conclusion:** We found that installment of an ESWL machine at a small peripheral located hospital has been to great benefit to Faroe patients as they now no longer have to travel long distances in order to get treated. Treatment results have been comparable to other international series. The training of ESWL nurse specialists has meant a closer collaboration between Klaksvik Hospital an Aalborg University Hospital. Patients in need of more advanced endoscopy (nine patients developed steinstrasse) were given a JJ stent locally and thereafter sent for the advanced stone treatment at the Urology Department in Aalborg.

**References:** No References.

**Disclosure of Interest:** None Declared

**Keywords:** Kidney & Bladder, Shock Wave Lithotripsy
6. **RE-BIOPSY RATES IN MEN WITH A NEGATIVE INITIAL BIOPSY SET: A POPULATION-BASED ANALYSIS**

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**Introduction:** Despite recommendations against prostate-specific antigen (PSA) testing in otherwise healthy men, prostate cancer (PCa) has become the second most common cancer in Denmark during the past 20 years. The development in incidence-rates of PCa in Denmark seems comparable to countries that endorse PSA screening, indicative of an on-going opportunistic PSA testing strategy. So far, no studies have described the consequences of PSA-testing to the diagnostic activity, i.e. biopsy rates, on a population-based level.

**Objectives:** This abstract describes the diagnostic activity from 1995-2011 in Denmark, focusing on the risk of re-biopsy in men with a negative first biopsy set.

**Methods:** Data were extracted from DaPCaR, a comprehensive, national registry including clinical data on every man who underwent histopathological evaluation of prostate tissue from 1995-2011. Every man who underwent TRUS-gb during the period was identified. The number of biopsy sets per individual was counted and stratified by year of the last biopsy set. The mean number of biopsy sets over the years was compared using the One-way ANOVA test.

**Results:** A total of 83,041 TRUS-gb sets of the prostate from 64,430 individuals were identified. In 1995, a total of 757 needle core prostate biopsy sets were performed vs 8,899 in 2011. When stratified by the year of the last biopsy set, the mean number of biopsy sets per individual, regardless of diagnosis, increased from 1.08 in 1995 to 1.46 in 2011. (p=0.0001). The mean number of negative biopsy sets per individual increased from 1.04 to 1.47 (p=0.0001). The maximum number of consecutive negative biopsy sets for an individual was 9. For the men with negative initial biopsy sets, the percentage of patients who underwent one or more re-biopsy sets increased from 21.9% in 1995 to 41.4% in 2004, then later decreasing to 31.2% in 2009.

**Conclusion:** Our data demonstrate a dramatic increase in the diagnostic activity in Denmark, which is worrying from both an ecological, economical and health-care perspective. Almost every other man evaluated for PCa today undergoes 2 TRUS-gb sets in spite of evidence from the ERSPC and DaPCaR suggesting that the risk of PCa mortality in men with negative initial TRUS-gb is very low(1,2). Our data indicate that an increasing number of men undergo unnecessary biopsies and thus, the need to reduce over-diagnosis and over-management of men with elevated PSA remains.

**References:**

**Disclosure of Interest:** None Declared

**Keywords:** None

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7. **CAUSES OF DEATH IN PROSTATE CANCER: RESULTS FROM THE DANISH PROSTATE CANCER DATABASE (DAPROCA DATA)**

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**Introduction:** DAPROCAdata is a nationwide clinical database of prostate cancer patients in Denmark (Nguyen-Nielsen et al. 2016). Since February 2010, data has been prospectively collected from online registration of key clinical variables by treating physicians at urological and oncological departments and from linkage to nationwide health registries.

It remains unclear in the literature whether prostate cancer is still a leading cause of death in men, or whether prostate cancer has become a chronic disease that men live with. Prostate cancer may also be misattributed as the underlying cause of death on death certificates in men with prostate cancer due to the perceived severity of cancer. Currently, 4,500 new cases are diagnosed and 1,250 deaths are attributed to prostate cancer each year in Denmark.

**Objectives:** We investigated cause of death in a nationwide cohort of men diagnosed with prostate cancer and compared medical chart data with national registry data.

**Methods:** Underlying cause of death was assessed by blinded medical chart review (gold standard) and compared to death certificates in the Danish Cause of Death Registry. We computed proportions for cause of death by 5 categories: prostate cancer-specific death, other specified cancer deaths, other unspecified cancer deaths, cardiovascular disease deaths, and other causes (e.g. infection, trauma).

**Results:** From 2010 to 2014, approximately 17,000 Danish men were registered with incident prostate cancer. From this cohort, and within the same calendar period, a total of 1,853 deaths occurred. A total of 722 medical charts were collected and among these, 670 had complete medical documentation for the period leading up to death.

<table>
<thead>
<tr>
<th>Categories</th>
<th>Medical chart review n=670 N (%)</th>
<th>Registry n=670 N (%)</th>
<th>Registry n=1853 N (%)</th>
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<tr>
<td>Prostate cancer-specific death</td>
<td>343 (51.2)</td>
<td>469 (70.0)</td>
<td>1368 (73.8)</td>
</tr>
<tr>
<td>Cardiovascular death</td>
<td>114 (17.0)</td>
<td>73 (10.9)</td>
<td>161 (8.7)</td>
</tr>
<tr>
<td>Other cancer death</td>
<td>93 (13.9)</td>
<td>64 (9.5)</td>
<td>143 (7.7)</td>
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**Conclusion:** We present two key findings. Firstly, prostate cancer remains a leading cause of death in men with prostate cancer, accounting for at least half of all deaths (51.2%) and followed by cardiovascular disease (17.0%). Secondly, data from the Death Registry overestimated the proportion of deaths attributable to prostate cancer (70% registry data versus 51% validated medical chart data). This potential misclassification bias should be taken into consideration in registry-based analyses of prostate cancer-specific mortality.


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**Keywords:** Epidemiology & Evaluation

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8. **MULTI-PARAMETRIC MAGNETIC RESONANCE IMAGING AND MAGNETIC RESONANCE GUIDED BIOPSIES AT ACTIVE SURVEILLANCE INCLUSION SELECTS PROSTATE CANCER PATIENTS FOR ACTIVE TREATMENT**

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**Introduction:** Active surveillance (AS) is an accepted alternative to active treatment in the management of patients with low-risk prostate cancer (PCa). However, when PCa diagnosis is based on the standard 10-12 core TRUS-guided biopsy (TRUS-bx), tumour aggressiveness has been shown to be underestimated in almost half of the cases (1). This dilemma can potentially be diminished as the use of multi-parametric magnetic resonance imaging (mpMRI) in the diagnosis and surveillance of PCa has improved over the last years.

**Objectives:** In a conventionally selected AS population, we investigated whether additional mpMRI and MRI-guided in-bore biopsy at AS inclusion would improve the overall selection of patients eligible for AS.

**Methods:** All patients enrolled in AS programs at two Danish centres, from October 2014 to January 2016, were offered an mpMRI 8-12 weeks after the initial diagnostic TRUS-bx. Candidates were defined as low risk (PSA <10 ng/mL, < cT2b, Gleason score (GS) < 7) patients in accordance with national guidelines. All prostate lesions detected by mpMRI were scored on a five-point scale (PIRADS classification). MRI-guided in-bore biopsies (MRGB) were performed on lesions scored as PIRADS 4 or 5. Significant cancer was defined as GS>6 or GS 6 (3+3) lesion with ≥6mm maximal cancer core length (MCCL).

**Results:** In total, 78 AS patients were scanned in the study. Among 21 patients, a total of 22 PIRADS-score 4 or 5 lesions were detected. MRGB pathology revealed that 17 (81%) of these and 22% of the entire AS population harboured significant cancers at the start of AS monitoring. In 8 cases (38%), the GS was upgraded. Also, 9 patients (43%) had GS 6 (3+3) foci with MCCL ≥6mm.

**Conclusion:** In an AS cohort based on TRUS and TRUS-bx diagnostic strategies, supplemental mpMRI and MRGB were able to efficiently reclassify a substantial number of patients as candidates for active treatment.


**Disclosure of Interest:** None Declared

**Keywords:** Localized: Active Surveillance, Value of Care: Cost and Outcomes Measures

9. **INCIDENTAL PROSTATE CANCER DOES NOT INCREASE OVERALL MORTALITY IN PATIENTS UNDERGOING RADICAL CYSTOPROSTATECTOMY – A POPULATION-BASED ANALYSIS**

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**Introduction:** Although incidentally diagnosed PCa (iPCa) is a common finding at radical cystoprostatectomy (RACP), the PCa recurrence rate remains low. However, conflicting results exist regarding the impact of concomitant PCa on survival in non-metastatic bladder cancer patients undergoing RACP (1, 2).

**Objectives:** To determine the prevalence of iPCa in patients undergoing RACP. Secondly, to estimate the impact of iPCa, stratified for Gleason score (GS) on survival following RACP.

**Methods:** A retrospective population-based study of all men who underwent RACP for non-metastatic bladder cancer in Denmark from 1995-2011. A total of 1,450 patients were identified in the Danish Prostate Cancer Registry – DaPCaR (3). Patients with known PCa prior to RACP were excluded, thus 1,404 patients were eligible for inclusion. Patients were stratified into two groups according to RACP-specimen histopathology; no PCa (nPCa) and iPCa. Data on vital status, GS, and cause of death were obtained from DaPCaR and manual review of patient charts. Cumulative incidences of mortality were calculated in a competing risk setting and compared using log-rank testing.

**Results:** The median follow-up time was 8.2 years (IQR 5.4-12.5). A total of 488 (34.8%) patients (median age 66.0 years (IQR 59.6-70.1)) had iPCa following RACP. No statistical difference in 10- and 15-year cumulative overall mortality (OM) was observed when comparing iPCa patients with Gleason Score (GS) ≤6, GS=7 and GS≥8, respectively; (p=0.70) or when comparing nPCa (64.8%) to iPCa patients (64.0%); p=0.60. According to patient charts only 0.82% of patients received postoperative PCa treatment.
Conclusion: To the best of our knowledge, this population-based cohort of patients undergoing RACP presents the longest follow-up time reported thus far. Our study confirms the high incidence of iPCa in patients undergoing RACP. When compared to nPCa, iPCa was not associated with an increased risk of OM. In addition, GS on RACP-specimen had no significant impact on OM. The need for PCa treatment during follow-up was negligible.

References:

Disclosure of Interest: None Declared

Keywords: Epidemiology & Natural History, Prostate & Genitalia

10. ASTHMA AND ALLERGY IN ADOLESCENCE AND RISK OF PROSTATE CANCER
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**Introduction:** The role of inflammation in prostate cancer has been widely discussed (1). Exploring the association between immunological or inflammatory conditions, that reflect immune response profile, and prostate cancer risk may provide clues to the type of inflammatory processes involved in the etiology of prostate cancer. Asthma and allergic conditions have been suggested to reduce the risk of prostate cancer, but data from large studies are currently scarce and results are conflicting (2, 3).

**Objectives:** To test if asthma, hay fever, or any allergic condition present in adolescence is associated with a decreased risk of prostate cancer later in life.

**Methods:** This study is based on a cohort of 243,309 men born in Sweden between 1952 and 1956 who underwent mandatory conscription assessments for military service around ages 18-19 years. At this time, a thorough assessment of the men’s health was performed, and conditions such as asthma, hay fever, and allergies were recorded. The cohort was followed for incident prostate cancer through linkage with the Swedish cancer- and population registers. Cox regression was used to estimate adjusted hazard ratios (HRs) and 95% confidence intervals (CIs) for the association between the selected conditions and prostate cancer incidence.

**Results:** A total of 1,654 men were diagnosed with prostate cancer during a maximum of 40.3 years of follow-up (median 36.7 years). At the time of conscription assessment, there were 11,754 men with hay fever, 4,943 with an asthma-diagnosis and 16,112 with any allergic condition. We observed no difference in prostate cancer risk for men with asthma (HR: 0.91, 95% CI: 0.63-1.3), hay fever (HR: 1.03, 95% CI: 0.82-1.28) or any allergic condition (HR: 0.98, 95% CI: 0.8-1.19) compared with men without these diagnoses. Small numbers precluded separate analyses of men with advanced or lethal prostate cancer (n=6 and n=3, respectively).

**Conclusion:** Our results do not support the hypothesis that presence of asthma or allergic conditions in late adolescence reduces the risk of prostate cancer later in life. If inflammatory processes are involved in the pathogenesis of prostate cancer, the immune response profiles likely differ from those reflected in clinical diagnoses of asthma or allergic conditions. The possibility that different risk patterns may be observed among older men with advanced or lethal prostate cancer, however, cannot be excluded.

**References:**

**Disclosure of Interest:** None Declared

**Keywords:** Epidemiology & Natural History, Prostate & Genitalia, Tumors, Trauma & Transplantation

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**11. LOW-INTENSITY EXTRACORPOREAL SHOCK WAVE THERAPY IMPROVES ERECTILE DYSFUNCTION - A PILOT STUDY WITH 2 YEARS FOLLOW-UP**

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**Introduction:** Erectile dysfunction (ED) is a common disorder among middle-aged men which profoundly affects their quality of life. For the past 15 years, oral treatment with phosphodiesterase-5 (PDE-5) inhibitors or intracavernosal injection therapy with vasodilating agents has been the preferred treatment for ED. However, the effect of these treatments remains limited to the sexual act and they have not been shown to improve spontaneous erections. Emerging literature suggests that LI-ESWT is a novel treatment modality that could have a rehabilitative or curative effect on ED.

**Objectives:** To investigate whether low-intensity extracorporeal shock wave therapy (LI-ESWT) can be used as a treatment for men with ED.
**Methods:** Fifteen men with ED were included in this pilot study. All the men, apart from one, have tried treatment with phosphodiesterase-5 inhibitors (PDE-5 inhibitors) or injection therapy. LI-ESWT was applied to 6 different locations on the penis to the distal, middle, and proximal part of each corpora cavernosa. Treatment was performed without local anaesthesia with 0.13 mJ/mm², frequency of 5 Hz, 3000 shock waves with a total energy of 12.8 J per treatment. The men received one ESWT treatment per week for five weeks. Assessment of erectile function was performed 1,6,12 and 24 months after treatment, by interview and by using two validated sexual function questionnaires: International Index of Erectile Function (IIEF) and Erection Hardness Scale (EHS).

**Results:** Mean age was 58 years (range 42-67). Ten men (67 %) had comorbidity and mean BMI was 25 (range 18-33). Nine men had tried PDE-5 inhibitors and five had tried injection therapy. One man had not received medical treatment. All completed the treatments and there were no observed side effects or pain during or after treatment. After treatment eleven men (73 %) were able to obtain erection and have sexual intercourse without the use of medication. IIEF and EHS questionnaires showed that the patients experienced significant improvement. After 24 months four men (36 %) still had “EHS point 4” without medication.

**Conclusion:** Eleven men (73 %) had an immediate effect of ESWT treatment for ED. After 24 months four men (36 %) were still able to have intercourse without medication. This study shows a possible cure in some cases of erectile dysfunction and indicates the need for an additional treatment in others.

**Disclosure of Interest:** None Declared

**Keywords:** Male, Non-invasive, Therapy

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12. **PATIENT-PERCEIVED EFFECTIVENESS AND IMPACT ON QUALITY OF LIFE OF SOLIFENACIN IN COMBINATION WITH AN α-BLOCKER IN MEN WITH OVERACTIVE BLADDER IN DENMARK: A NON-INTERVENTIONAL STUDY**

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**Introduction:** Overactive bladder (OAB) has a profound impact on quality of life (QoL). Men treated with an α-blocker (α-B) for lower urinary tract symptoms (LUTS) often have OAB symptoms. Evidence suggests that combining an antimuscarinic with an α-B may improve LUTS more effectively than either agent alone. Solifenacin succinate is a potent muscarinic receptor antagonist that was developed for the treatment of OAB symptoms.

**Objectives:** Primary objective: to determine if solifenacin combined with an α-B improves patients’ impression of urinary problems using the Patient Perception of Bladder Condition (PPBC) questionnaire. Secondary objectives: to investigate the effect of combination therapy on self-perceived QoL (using the 6-item bother scale and 13-item QoL scale of the OAB-questionnaire short form [OAB-q SF]), urgency and urge incontinence episodes (using a 24-hour voiding diary), and urinary symptoms (using the International Prostate Symptom Score [IPSS]).

**Methods:** This non-interventional, multicentre study was undertaken in daily clinical practice. Men aged ≥40 years with OAB were included after a decision to initiate treatment with solifenacin 5 or 10 mg daily combined with an α-B for LUTS. Men treated with an α-B for ≥6 wks (αB experienced) and those starting simultaneous α-B treatment with solifenacin (α-B naïve) were eligible. Evaluations were based on the IPSS and two OAB-q SF subscale questionnaires, and a voiding diary completed at Baseline (BL) visit and at home after 2, 4, and 6 m. Adverse drug reactions (ADRs) were recorded at BL and each follow up.

**Results:** Enrolment did not reach the planned sample size (200 patients). Data were available for 40 patients at BL (α-B experienced n=17; α-B naïve n=23) and 21 patients (α-B experienced n=8; α-B naïve n=13) at 6 m. Both groups had similar demographic data. Over the study duration, modest improvements in PPBC score (Fig 1), OAB-q SF measures and urinary symptoms (Fig 2) were observed for both groups. At BL and 6 m, a majority of patients were categorised as having ‘above normal’ urgency (9–14 episodes/24 h) and urge
incontinence (9–<15 leakages) but data were missing in >50% patients. Nine patients reported ADRs; no new safety issues were noted.

**Graphics:**

**Figure 1.** PPBC questionnaire scores at Baseline and Months 2, 4 and 6 (full analysis set*)

![Graph showing PPBC questionnaire scores](image)

*α-B, α-blocker; PPBC, Patient Perception of Bladder Condition; SD, standard deviation

* Full analysis set includes all patients enrolled into the study who provided data at Baseline and at the 2-month follow-up

**Graphics:**
Conclusion: No differences were observed between groups although there was a perceived improvement in urinary problems and QoL after solifenacin and α-B combination treatment. The results should be interpreted cautiously due to the low number of enrolled patients and high amount of missing data.
13. LONG-TERM DATA ON EFFICACY AND SAFETY OF BOTULINUM TOXIN A FOR TREATMENT OF OVERACTIVE BLADDER

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Introduction: Botox has been approved for the treatment of overactive bladder (OAB) for a number of years but few data are available as to the long-term efficacy and safety of this treatment

Objectives: To study the efficacy and safety of long-term treatment of OAB including both idiopathic and neurogenic OAB with intra detrusor Botox injections in the bladder and patients’ adherence to treatment.

Methods: A consecutive series of 121 patients who received an injection of 100-200 U Botox (Allergan Inc., Irvine, CA, USA) into the detrusor and then evaluated retrospectively. Data of subjective satisfaction, bladder diary data and urodynamic data from the latest (6-10 weeks after Botox injection) and earliest available urodynamic investigation was compared.

Results: In total, 121 patients, 27 men and 94 women were included. The median age was 55 years (range 12-88). Of all patients, 98 (81%) continued Botox treatment at last follow-up (success). Of the 23 (19%) patients who discontinued treatment, some was lost in follow-up, decided to quit or had insufficient effect due to tolerability issues (e.g., urinary retention, self-catheterization, voiding LUTS). Of all patients, 55 patients (46%) had to use intermittent catheterization (de novo) at some point during the follow-up. Fifteen patients (12%) were previously diagnosed and treated in other departments. Sixty-five patients (54%) had a follow-up with an urodynamic evaluation. Comparing urodynamic showed an overall increase in bladder capacity on approximately 100 ml from 157 ml [range 29-653] to 250 ml [ range 50-567]. The detrusor pressure was only reduced with 10 cmH2O (median value from 37 to 27). Fifty-seven (86%) patients showed benefited from the treatment on urodynamic investigation after injection. Three patients had complications requiring hospitalization (2 with bleeding postoperatively and one had sepsis). No systemic side effects were observed.

Conclusion: Botox injections into the detrusor muscle significantly decreased the incidence of symptomatic overactive bladder. This effect seems to be related to improvement in urodynamic parameters, reflecting improved reservoir capacity at low pressure. The treatment is effective and with few complications. From this study there is no need for urodynamic investigations after treatment for every patients, but it is still recommended in complicated cases.

Disclosure of Interest: None Declared

Keywords: Incontinence: Evaluation (Urodynamic Testing), Neurogenic Voiding Dysfunction, Therapy

14. ADULT URETHROPLASTY SURGERY IN DENMARK 2014-2017. ANALYSIS OF RESULTS AND COMPLICATIONS.

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Introduction: In Denmark urethral stricture surgery in adults has been nationally centralized to one single hospital; Aalborg University Hospital. A close co-operation with a specialist from an English centre of high excellence was established in 2014 to assure the highest level of expertise in the treatment of urethral strictures in Denmark.

Objectives: The study aim was to evaluate outcome and complications after bulbar or distal urethroplasty performed at Aalborg University Hospital since the international co-operation started.
Methods: Retrospective review of patients undergoing bulbar or distal urethroplasty at Aalborg University Hospital from February 2014 to December 2016. Data of patient age, origin of stricture, type of surgery, 30 days postoperative complications and 3 and 12 months follow-up were registered.

Results: During the defined period, 113 patients underwent urethroplasty due to urethral stricture. 89 bulbar and 44 distal interventions were performed. 20 patients with distal strictures had a 2-stage procedure. Most bulbar strictures were performed as dorsal onlay reconstructions using buccal mucosa grafts. Seven patients – all trauma patients – had membranous anastomotic reconstructions; of these two augmented anastomotic procedures were performed. The etiologies were multiple, most common idiopathic and iatrogenic. 22 procedures were reoperations due to recurrent strictures after former urethroplasties. Postoperative complications as perineal haematoma/infection needing surgery were registered after seven procedures (5%). One patient had bleeding from the donor site in the mouth requiring suturing. Failure, defined as any post operative result followed by dilatation, urethrotomy or repeat urethroplasty, was diagnosed in fourteen patients (12%). Seven of these patients were repeat urethroplasties after failed previous urethral reconstruction. The average urinary flow improvement was 18.6 ml/sec. At follow-up complications were in general few and mild. Most commonly reported were post-void dribbling (12%) and bothersome tightness or scar tissue at the transplant donor site in the mouth (10%).

Conclusion: The number of urethral reconstructive procedures are limited in Denmark. The co-operation with a specialist from a high volume centre assures treatments at the highest level. In general, long-term complications after urethroplasty were few and mild. Post-void dribbling and donor site morbidity were the most common complications. We found a failure rate of 12% in this unselected patient cohort.

Disclosure of Interest: None Declared

Keywords: Neuropathic Bladder & Reconstruction, Penis/Testis/Urethra: Benign Disease & Malignant Disease, Surgical Therapy

15. A PROSPECTIVE STUDY TO VALIDATE AN ALGORITHM USING URINE AND PLASMA BIOMARKERS FOR PREDICTING HIGH-RISK PROSTATE CANCER ON BIOPSY

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Introduction: Definitive diagnosis of prostate cancer (PCa) is still based on prostate biopsies (Bx) – a procedure associated with possible side-effect ranging from discomfort and pain to bleeding, severe infection and sepsis. The use of biomarkers in blood or urine could potentially help clinicians to better select patients in whom biopsies are needed to decrease the risk of side-effects and over-diagnosis in patients with non-aggressive PCa.

Objectives: The aim of the study was to validate the robustness of well-known plasma and urine markers test in detecting high risk PC in a new algorithm taking clinical parameters into account.

Methods: From July 2014 to October 2015 plasma and urine samples were collected on 41 patients undergoing prostate biopsy or transurethral resection of the prostate (TUR-P). Samples were collected prior to biopsy/TUR-P and again after approximately 2 months. Gene expression of UAP1, PDLIM5, IMPDH2, HSPD1, PCA3, PSA, TMPRSS2, ERG, GAPDH, B2M, AR and PTEN in urine and plasma was tested in a local laboratory in Denmark. The testing was originally validated in the USA (NeoGenomics Laboratories, California, USA), but the procedure was transferred to the local laboratory in Denmark. Clinical information (age, serum prostate specific antigen, family history, prior biopsy history and prostate volume) were used in the algorithm for prediction of aggressive cancer (Gleasonscore >6) in biopsy/resection specimen.

Results: When using current algorithm on pre-Bx samples sensitivity was 100% [95% CI: 63% - 100%] and according specificity was 63% [44% - 78%]. Negative predictive value (NPV) and positive predictive value (PPV) on pre-Bx samples was 100% [23% - 66%] and 43% [23% - 66%], respectively. When using same algorithm on post-Bx samples sensitivity, specificity, NPV and PPV was 89% [51% - 99%], 34% [19% -
53%, 28% [13% - 47%] and 92% [60% - 100%], respectively. Mean time between samples was 69 days (range 52-99 days). Finally, a significant difference (P<0.05) in predicting biopsy results was observed when comparing pre-Bx samples with post Bx-samples. The applied algorithm performed significantly better on pre-Bx samples.

**Conclusion:** Current test and algorithm is proved to be highly useful and robust in predicting the presence of high grade prostate cancer and in detecting patients in whom biopsies might not be warranted. However, the test should be performed prior to performing biopsy and most likely biopsy procedure may influence the balanced biomarkers in the urine and plasma.

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**Keywords:** None

16. DETECTION OF PROSTATE CANCER BY DNA ANALYSIS OF FILTRATION-CAPTURED CELLS FROM URINE

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**Introduction:** Analysis of tumor-specific markers in DNA from voided urine has shown potential for non-invasive detection of prostate cancer. However, previous studies have reported low sensitivities, primarily due to the small numbers of tumor cells released into the urine, the low analytic sensitivity of detection methods and technical aspects of urine collection. We have previously developed a filtration device for capture and size-based enrichment of tumor cells from urine (Andersson et al., 2015). Using this device in combination with downstream testing for tumor-specific DNA biomarkers, we achieved a sensitivity of 97% for detection of urothelial bladder carcinoma in a prospective blinded study of patients with macroscopic hematuria (Dahmcke et al., 2016).

**Objectives:** To develop a urine-based test for detection of prostate cancer based on collection of cells from urine by filtration in combination with highly sensitive droplet digital PCR (ddPCR) for evaluation of tumor-specific DNA-methylation biomarkers.

**Methods:** Urine from 164 men referred for TRUS-guided biopsy of the prostate was collected prior to digital rectal examination (DRE; n=99), after DRE (n=58) or from a urinary catheter (n=7). Sufficient DNA was obtained from 120 patients. DNA was analysed for five DNA-methylation biomarkers (APC, C1orf114, GSTP1, PITX2 and RASSF1A) using ddPCR.

**Results:** The sensitivity of the test was influenced by i) collection method (pre-DRE: 60%, post-DRE: 81%, and catheter: 100%); and ii) Gleason score (GS6: 40%, GS7: 72%, GS8: 80%, GS9: 100%, and GS10: 0%). In a prediction model including PSA, age and the result of the urine-DNA test, an AUC of 0.91 (95% CI, 0.82-0.99) was obtained for post-DRE samples.

**Conclusion:** We provide proof-of-principle, that prostate cancer can be detected by DNA testing of enriched urinary cells, with high sensitivity for high-grade (GS≥7) tumors.


**Disclosure of Interest:** None Declared

**Keywords:** Non-invasive, Prostate & Genitalia
17. **PATIENT-REPORTED OUTCOME MEASURES IN PROSTATE CANCER: RESULTS FROM THE DANISH PROSTATE CANCER DATABASE (DAPROCA DATA)**

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2Department of Urology, Aarhus University Hospital, 3Department of Public Health, Aarhus University, Aarhus, Denmark, 4Cancer Epidemiology, King’s College London, London, United Kingdom

**Introduction:** The Danish Prostate Cancer Database (DAPROCAdata) is a nationwide clinical database of prostate cancer patients in Denmark with extensive data on patient-reported outcome measures (Nguyen-Nielsen et al. 2016). Prospective data collection of key clinical variables at urological and oncological departments and linkage to nationwide health registries has been ongoing since February 2010. Hereunder, patient-reported outcome measures based on the validated Expanded Prostate Cancer Index Composite (EPIC) questionnaire (Wei et al. 2000) have been routinely collected at time of prostate cancer diagnosis, at 1-year and at 3-year follow-up since May 2011.

**Objectives:** We investigated patient-reported outcome measures in prostate cancer from a nationwide cohort of Danish men with newly diagnosed PC and developed a summary PROM-index score for quality of life in prostate cancer.

**Methods:** We compared patient-reported outcome measures in n=15,465 men from DAPROCAdata. We computed a novel PROM index score for quality of life in prostate cancer based on 8 key measures for urinary incontinence, fecal incontinence, sexual dysfunction, and general cancer-related symptoms.

**Results:** In total, 15,465 questionnaires were collected from May 2011 to December 2016, corresponding to an overall participation proportion of 72.1 % (15,465 completed questionnaires out of 21,440 men with prostate cancer). Among these, n=7,613 reported measures at time of prostate cancer diagnosis (baseline), n=7,852 reported measures at time of prostate cancer diagnosis (baseline), and n=992 reported measures at baseline, 1-year, and 3-year follow-up. Overall, the mean and median PROM index scores were 13.9 and 13.0, respectively.

**Table 1. PROM index score for quality of life in prostate cancer**

<table>
<thead>
<tr>
<th>Scoring for 8 core cancer-related symptoms</th>
<th>1: No problems or symptoms</th>
<th>2: Very few problems or symptoms</th>
<th>3: Few problems or symptoms</th>
<th>4: Moderate problems or symptoms</th>
<th>5: Many problems or symptoms</th>
<th>Total points: 0-40</th>
</tr>
</thead>
</table>

**Table 2. PROM index score at diagnosis, 1-year and 3-year follow up**

<table>
<thead>
<tr>
<th>Follow-up</th>
<th>N</th>
<th>Mean</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosis</td>
<td>15327</td>
<td>13.92</td>
<td>13.00</td>
</tr>
<tr>
<td>1-year</td>
<td>7768</td>
<td>15.00</td>
<td>14.00</td>
</tr>
<tr>
<td>3-year</td>
<td>976</td>
<td>14.94</td>
<td>14.00</td>
</tr>
</tbody>
</table>

**Conclusion:** PROM index score for prostate cancer is a novel summary measure to facilitate comparison of changes in quality of life after prostate cancer. Our analyses showed that Danish men with prostate cancer report a worsening of symptoms after 1-year of follow-up (from a mean of 13.9 to 15.0 index score), but overall, patients reported a low level of symptoms (mean index score of 13.9).


**Disclosure of Interest**: M. Nguyen Nielsen Grant support from: The Movember Foundation, A. Tjønneland : None Declared, H. Møller: None Declared, M. Borre: None Declared

**Keywords**: Practice Patterns, Quality of Life and Shared Decision Making

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18. **USE OF PALLIATIVE MEDICATIONS BEFORE DEATH FROM PROSTATE CANCER: A POPULATION BASED STUDY**

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**Introduction**: Undertreatment has previously been reported among cancer patients for both cancer-induced pain and mood disorders. Population-based studies describing the use of palliative medications in advanced prostate cancer are scarce.

**Objectives**: To assess the use of palliative medications in men with prevalent prostate cancer during the three years before death from prostate cancer. Our hypothesis was that older men, with lower education, and without near relatives might be disadvantaged.

**Methods**: All Swedish men who died between 2009 and 2012 with prostate cancer as main cause of death in the Swedish Cause of Death Register were included. The men were followed from diagnosis or from three years prior to death from prostate cancer, whichever came last. We used the Prostate Cancer data Base Sweden (PCBaSe) to measure the proportion who filled a prescription of androgen deprivation therapy (ADT), paracetamol, opioids, antidepressants, anxiolytics, and sedative-hypnotics. We also assessed the differences in treatment related to age, time since diagnosis, educational level, close relatives, and comorbidities.

**Results**: We included 8516 men. The proportion receiving opioids increased from 30 to 71% during the last year of life, and 68% received a strong opioid at time of death. Accordingly, the use of antidepressants, anxiolytics and sedative-hypnotics increased from 13 to 22%, 9 to 27%, and 21 to 33%, respectively. Older men had lower probability of receiving ADT (adjusted odds ratio 0.78 for >85 years versus <70 years, 95% confidence interval 0.61 - 0.99), opioids (0.56 for > 85 years, 0.47 - 0.66), and anxiolytics (0.74 for > 85 years, 0.63 - 0.88). Men without close relatives had lower probability to receive ADT (0.64 for unmarried men without children versus married men with children, 0.52 - 0.80) and opioids (0.77 for unmarried men without children, 0.66 - 0.90). The probability of receiving opioids was increased for men with low education (1.43 for low versus high education, 1.25 - 1.64).

**Conclusion**: Older men and men without close relatives had lower probability of receiving opioids, indicating that these men need more attention from health care providers. The increased use of antidepressants, anxiolytics, and sedative-hypnotics during the last year of life could be a sign of distress and highlights the importance to identify mood disorders in the terminal stages of prostate cancer. In contrast to our hypothesis, men with low education were not disadvantaged with respect to prescriptions of opioids.

**Disclosure of Interest**: None Declared

**Keywords**: Epidemiology & Evaluation, Medical, Hormonal & Non-surgical Therapy, Prostate & Genitalia
19. **CHOLESTEROL SYNTHESIS PATHWAY GENES IN PROSTATE CANCER ARE DOWNREGULATED**

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**Introduction:** A diet high on fat and cholesterol promotes prostate cancer, while statins directly targeting the cholesterol synthesis pathway are associated with improved clinical outcome. The relationship between cholesterol and prostate cancer has been extensively studied for decades, where high levels of cellular cholesterol are generally associated with cancer progression and less favorable outcomes. However, the role of in vivo cellular cholesterol synthesis in this process is unclear, and data on the transcriptional activity of cholesterol synthesis pathway genes are inconsistent. A common problem with cancer tissue data from patient cohorts is the presence of heterogeneous tissue which confounds molecular analysis of the samples. When the confounding effect of tissue components are accounted for, features otherwise hidden in the data can be revealed, leading to new and important information on tumor biology.

**Objectives:** In this study we hypothesized that the confounding effects of stroma tissue could be the reason for the inconsistent results observed for cholesterol synthesis pathway genes in previous studies.

**Methods:** Based on histopathological assessment of sample tissue components, we developed a sample stratification strategy to minimize systematic confounding signals from stroma tissue in cohorts consisting of prostate cancer and normal samples. The strategy was extended for additional use in cohorts where no information about tissue composition was viable. We applied the strategy for gene expression analysis on 1943 samples (1713 cancer and 230 normal) from seven prostate cancer patient cohorts where the confounding effect of stroma is under control.

**Results:** When confounding was minimized, differential gene expression analysis over all cohorts showed consistent downregulation of nearly all genes in the cholesterol synthesis pathway. Based on analysis of gene ranks and gene ontology, the alterations in cholesterol synthesis pathway genes were far more significant than any other pathway alterations in prostate cancer.

**Conclusion:** Transcriptional downregulation of genes in the cholesterol synthesis pathway is a prominent and consistent molecular feature of prostate cancer. This surprising observation is important for our understanding of how prostate cancer cells regulate cholesterol levels in vivo. Moreover, confounding from stroma tissue explains the lack of consistency in previous expression analysis of cholesterol synthesis genes in prostate cancer.

**Disclosure of Interest:** None Declared

**Keywords:** Basic Research & Pathophysiology, Localized: Surgical Therapy, Prostate & Genitalia

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20. **BONE HEALTH AND BODY COMPOSITION CHANGES IN MEN TREATED WITH ANDROGEN DEPRIVATION THERAPY FOR PROSTATE CANCER**

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**Introduction:** Treatment and prognosis of prostate cancer necessitate management of long-term consequences of androgen deprivation therapy (ADT) including accelerated bone loss, changes in fat and muscle composition, which may lead to both morbidity and mortality.

**Objectives:** To analyze the bone health and body composition in men treated with ADT for prostate cancer.

**Methods:** Patients with prostate cancer awaiting initiation of ADT were consecutively included between January 2010 and March 2012. Half the patients had localized disease and were referred for curative intended radiation, whereas the remaining patients had disseminated disease. ADT was given as LHRH agonists, LHRH antagonists, or orchiectomy. We collected questionnaire, blood samples, performed DXA scan and bone scintigraphy prior to initiating ADT and during the following two years of ADT. The study was approved by the local ethical committee. None of the patients had received prior androgen deprivation nor osteoporosis treatment.

**Results:** A total of 105 individuals were included. The mean age of the participants was 70 (range 53-91, SD 6.3) years. The median PSA level was 30.5 (range 1-5714) µg/L. The median Gleason score was 7 (range 5-10, SD 1.1). Changes in body composition over a two year period were decreases in lean body mass of 3.1%, increase in fat body mass of 18.4%, and a decline in bone mineral density of 4.2-5.2%. The ten year fracture risk score rose from 5.8% to 13.7%. The prevalence of osteoporosis was 10% and the prevalence of osteopenia was 58% prior to initiating ADT, and after two years of ADT it changed to 22% and 57%, respectively. In multivariate analysis smoking and presence of disseminated disease were significantly associated with an increased risk of osteoporosis, whereas a high body mass index was significantly associated with a decreased risk of osteoporosis.

**Conclusion:** Osteoporosis was present among patients with prostate cancer and evolved rapidly during two years of ADT, meanwhile the body composition change markedly and fracture risk more than doubled.

**Disclosure of Interest:** None Declared

**Keywords:** None

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21. **ADVERSE WEIGHT GAIN AND FAT ACCUMULATION AFTER ORCHIECTOMY COMPARED WITH LUTEINIZING HORMONE-RELEASING HORMONE AGONISTS: A RANDOMIZED CLINICAL TRIAL**

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**Introduction:** Men with prostate cancer undergoing androgen deprivation therapy (ADT) have an increased risk of developing metabolic syndrome, type 2 diabetes and cardiovascular disease. Recent experimental data suggest that follicle stimulating hormone (FSH), which rapidly increases after orchiectomy and is conversely suppressed by luteinizing hormone-releasing hormone (LHRH) agonists, promotes fat accumulation.

**Objectives:** The aim of this trial was to compare changes in body fat distribution and glucose metabolism between patients treated with the LHRH agonist Triptorelin (Trip) and patients undergoing subcapsular orchiectomy (SO).

**Methods:** 58 consecutive hormone naïve non-diabetic men with advanced prostate cancer commencing ADT were randomized to SO (n=29) or continuous Trip (n=29) administered as 22.5mg/24 weeks depot injections for 48 weeks. The main outcomes were overall change in weight and body composition by Dual X-ray absorptionometry, fasting plasma glucose and insulin resistance (HOMA-IR and Matsuda Index). Patients were
measured at baseline and 12, 24 and 48 weeks after commencing treatment. Between group mean differences during the study period were analyzed using a repeated measures approach adjusting for baseline body mass index (BMI) and age. The study was approved by the Danish Medicines Agency.

**Results:** Patients were comparable in age and baseline BMI and all achieved castrate levels of serum testosterone <1.7 nmol/L. Men undergoing SO gained significantly more weight with a mean difference in weight gain between groups of 3.30 kg (95% CI 0.74; 5.87) (p=.02). Concurrently, the SO group experienced significantly greater increases in fat mass (+2.06 kg, 95% CI 0.55; 3.56), subcutaneous fat volume (+133 cm³, 95% CI 22; 243) and body fat percentage (+1.30%, 95% CI 0.24; 2.36) compared with Trip (all p<.05). Fasting plasma glucose and insulin resistance also increased in the SO group compared with men receiving Trip, but the between group differences were not statistically significant.

**Conclusion:** Subcapsular orchiectomy causes a clinically and statistically significant weight gain and increase in fat accumulation compared with the LHRH agonist Triptorelin. These findings are potentially explained by increased levels of FSH after surgical castration.

**Disclosure of Interest:** None Declared

**Keywords:** Male, Medical, Hormonal & Non-surgical Therapy, Prostate & Genitalia

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22. **NATIONWIDE ANALYSIS: DIAGNOSTIC CHARACTERISTICS OF PATIENTS WITH LETHAL PROSTATE CANCER.**

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**Introduction:** Prostate-specific antigen (PSA) based screening increases the number of men diagnosed with early localized prostate cancer (PCa). In addition, curative therapies have been demonstrated to reduce PCa mortality in randomized trials. However, the overall impact on PCa mortality is less clear. Men who die from PCa may have either adverse histopathological characteristics and/or clinically advanced disease at diagnosis. The clinical characteristics at diagnosis for men who eventually die from PCa are largely unknown. We retrieved clinical characteristics of all men dying from PCa in Denmark during an 18-year period.

**Objectives:** To determine diagnostic characteristics of men with lethal PCa.

**Methods:** All men who died of PCa during the period 1995 to 2013 were identified in the Danish Causes of Death Registry. Age, Gleason score (GS), tumor stage classification, and PSA were retrieved from the Danish Prostate Cancer Registry (DaPCaR)¹. For validation, manual revision of patient charts was performed. Patients were divided into 3 clinical phenotypes: distant metastatic disease (M+), locally advanced/lymph node positive disease (La/N+), and localized disease (Loc). Patients with Loc were further grouped according to GS and PSA. To investigate trends, two subgroups were selected – a pre-PSA era group (dead during 1995-1999) and a PSA era group (dead during 2009-2013).

**Results:** A total of 19,487 men died of PCa in the period 1995-2013. In total, 52.7%, 18.9% and 28.4% of men presented with M+, La/N+, or Loc, respectively. A total of 2.1% (0.5% of all men dying from PCa) only, presented with lower risk Loc (PSA<20 and GS≤6) at the time of diagnosis. During the period studied, age and PSA at diagnosis significantly decreased and the proportion of patients diagnosed with M+ decreased by 23.5% (p<0.0001) and the proportion of patients having La/N+ and Loc increased by 17.6% (p<0.0001) and 6.0% (p<0.0001), respectively, Figure 1.

**Graphics:**
Conclusion: The majority of men (70.6%) who died from PCa had either La/N+ or M+ at diagnosis. Among men with Loc at diagnosis, the majority of men subsequently dying from PCa had either PSA>20 ng/ml and/or adverse histopathological characteristics with GS≥7. Patients with Loc, PSA<20 ng/ml and GS≤6 amounted for only 0.5% of all patients dying from PCa. However, significant stage migration was observed indicating some impact of early detection strategies on the clinical presentation of men harboring lethal PCa in Denmark.

References:

Disclosure of Interest: None Declared

Keywords: Detection & Screening, Epidemiology & Evaluation/Staging, Prostate & Genitalia

23. IS BLADDER TUMOUR FULGURATION UNDER LOCAL ANAESTHESIA MORE PAINFUL THAN CYSTOSCOPY ONLY?

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Introduction: We present findings of pain perception during biopsy and fulguration of the bladder, compared to cystoscopy only.

Objectives: To prospectively register self-reported pain levels associated with office cystoscopy with or without bladder tumour biopsy and fulguration.

Methods: During a 15-month period, patients examined with cystoscopy under local anaesthesia graded their pain level using the Visual Analog Scale (VAS). All patients were examined in the lithotomy position and lidocaine gel was used in all. A bladder instillation or a submucosal injection of lidocaine was given mainly in patients treated with extirpation of larger tumours.

Results: The pain perception was graded by the patients as none (VAS=0) or mild (VAS=1-3) in 86% of the 1314 cystoscopies. Fewer patients (65% out of 258) reported VAS 0-3 when cystoscopy with biopsy and fulguration of bladder tumour was performed. More than 97% of all patients stated that they would prefer treatment under local anaesthesia in case of a future recurrence.
**Conclusion:** The VAS scores after diagnostic cystoscopy are in accordance with those previously reported, with the absolute majority reporting no or mild pain. Patients treated with extirpation of bladder tumours reported higher levels of pain but still within acceptable limits. This confirms the potential of treating most patients with small-sized bladder tumour recurrences under local anaesthesia.

**Disclosure of Interest:** None Declared

**Keywords:** Instrumentation & Technology, Kidney & Bladder

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24. **LATE URINARY MORBIDITY AND QUALITY OF LIFE AFTER RADICAL PROSTATECTOMY AND SALVAGE RADIOTHERAPY FOR PROSTATE CANCER**

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**Introduction:** Lower urinary tract symptoms (LUTS) are prevalent in patients treated for prostate cancer (PC) with either radical prostatectomy (RP), radiotherapy (RT) or a combination of RP and salvage RT (SRT) and LUTS may have a major impact on the patients’ quality of life (QoL). With a high number of patients undergoing curative treatment for PC, and improved long-term survival, we have to consider the severity of LUTS and the potentially impact on QoL (1).

**Objectives:** The purpose of this study was to assess late urinary morbidity and potentially impact on quality of life (QoL) in patients treated with RP plus SRT and to compare with patients treated with RP alone.

**Methods:** Long-term morbidity and quality of life was evaluated using a cross sectional design with validated questionnaires in urinary morbidity (DAN-PSS) and in QoL (EORTC QLQ-C30). A total of 227 patients treated with SRT and 192 treated with RP in the period from 2006-2010 and 2005-2007, respectively, were included.

**Results:** Weak stream, straining, frequency and nocturia were significantly more prevalent in patients treated with RP+SRT compared with patients treated with RP alone. Patients treated with RP+SRT, suffered in general from more severe urinary symptoms. There was no statistically significant difference in quality of life scores between the two treatment groups, but high level of urinary morbidity was significantly related with a decreased quality of life ($p=0.000$).

**Conclusion:** Patients treated with salvage radiotherapy do have a higher rate of urinary morbidity, when compared with patients treated with radical prostatectomy alone. Severe urinary morbidity were statistical significant related with a decreasing level of quality of life, but it was not different in the two treatment groups.


**Disclosure of Interest:** None Declared

**Keywords:** Localized: Radiation Therapy, Prostate & Genitalia, Surgical Therapy
DETECTION RATE OF LYMPH NODE METASTASIS IN PATIENTS UNDERGOING SURGICAL TREATMENT FOR PROSTATE CANCER USING A MODIFIED D’AMICO RISK CLASSIFICATION SYSTEM

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Introduction: Extended lymph node dissection (ePLND) is recommended as part of the treatment for intermediate and high risk prostate cancer (PCa), but how to select the proper patients for ePLND is debatable. Furthermore, whether or not adding this extra procedure to the operation, results in longer operations and more complications, is disputed.

Objectives: To assess the detection rate of lymph node metastases (LN+) of our modified D’Amico grading system, the rate of biochemical recurrence (BCR) one year after the procedure and the complication risk associated with ePLND.

Methods: All patients operated at Haukeland University Hospital within the period 2010-15 were included. The intermediate risk group was divided into two. The intermediate-low risk (ILR) group was defined as those with only one intermediate D’Amico criterion, whereas the intermediate-high risk (IHR) group was defined as those with two or more intermediate D’Amico criteria, or whenever the Gleason grade was 4+3. High risk (HR) and Low risk (LR) prostate cancer groups remained unchanged. ePLND was intended in patients for the IHR and HR groups, using the Studer template. Complications were graded according to Clavien-Dindo (C-D) system.

Results: Of 812 patients, 804 were gradable using our system and had PSA data >1 year after surgery. Number of performed / not performed ePLND and frequencies of LN+ are shown in the table below. Operative times were significantly longer in the group who had ePLND performed (median 2h24m vs. 3h08m, p<0.01), but there was no difference in blood loss (median 200mL vs 200 mL, p=0.24). The complication rate (C-D ≥3) of those who underwent ePLND was 7.6% vs. 3.0% for those who did not (p<0.01). Of the patients who didn’t have positive surgical margins (PSM) (n=676), irrespective of pT-stage, BCR within one year or persistent disease was seen in 0, 2.5, 2.6 and 6.6 % of patients in LR, ILR, IHR and HR groups respectively.

Conclusion: Our system of predicting LN+ seems accurate and only 2.5% in the ILR group without PSM had early BCR. Further studies are planned to refine this model and reduce the use of resources and morbidity associated with ePLND without compromising the oncological outcome.

Disclosure of Interest: None Declared

Keywords: None

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<td>IH (231)</td>
<td>49</td>
<td>162 (87.7)</td>
<td>20 (12.3)</td>
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<td>High (137)</td>
<td>8</td>
<td>109 (81.6)</td>
<td>20 (18.3)</td>
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26. TRANSITIONAL UROLOGY & COMPLEX STAGED HYPOSPADIAS REPAIR
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Introduction: The emerging field of transitional urology, the watershed between paediatric and adult urology, was born out of the necessity to continue highly specialized care for young men and adults born with congenital urological anomalies. Our transitional clinic provides refuge for patients with a wide variety of diagnoses one of which is hypospadias.

Objectives: To describe our experience and results with regards to complex hypospadias repair in patients seen at our referral center.

Methods: Retrospective analysis of data collected prospectively on all hypospadias related referrals in the period 2009-16 with special reference to patients who underwent staged repair. Results are given in median (range).

Results: Out of 143 referrals 24 needed complex staged repair. Age at referral was 31.6 (16.4-66.3) years. Indications for surgery were severe chordee 3, fistula 2, stricture 16, stricture and chordee 3. At stage one the scarred urethra was removed, the penis straightened, and the resultant ventral defect was grafted with; buccal mucosa 13, prepuce 7 posterior auricular skin 1 and composite grafts in 3. After 10 months the graft was tubularised, and covered with a second layer of tunica vaginalis or dartos, where after the glans was reconstructed together with shaft skin. Twenty one patients have completed both stages, with a single patient needing the first stage redone due to keloid formation. Follow up was 17.5 (2-34) months. Overall flow increased significantly from 7.5 ml/s to 20 ml/s (p < 0.01) pre to postoperatively at last follow up. One of the patients was put on CIC due to restricting and ultimately needed an inlay graft. Two others needed internal urethrotomy with good results. There were no urethrocutaneous fistulae and the patients were generally happy with the cosmetic outcome and functionality. Three patients needed orchiopexy on the side of tunica vaginalis harvest due to fibrosis of the tunic.

Conclusion: The staged hypospadias repair, as a primary and redo procedure, offers excellent functional and cosmetic outcomes with a relatively low complication rate. The expertise attained from paediatric urology has thus been adopted in adult patients with excellent outcomes provided this occurred in the setting of a transitional clinic comprising the combined surgical and nursing knowhow from both the paediatric and adult urological worlds, in addition to free and easy access to fine paediatric and standard adult surgical instruments and scopes.

Disclosure of Interest: None Declared

Keywords: Hypospadias (Penis), Surgical Therapy

27. INTERLEUKIN-6 AND RENAL CELL CARCINOMA WITH PARTICULAR REFERENCE TO PROGNOSIS
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Introduction: To understand the immunology of renal cell carcinoma (RCC) may be a key to further development in tumor biology and management options.

Objectives: Our objective is to study to what extent serum interleukin-6 (IL-6) levels have prognostic value in patients who were treated for RCC.

Methods: The patient group consisted of 118 consecutively diagnosed patients with an RCC that was surgically removed by nephrectomy or nephron-sparing surgery at Haukeland University Hospital in the period from 2007-2010. All subtypes and all stages were included. Preoperative blood samples were taken in the morning of the day of the surgery, and the samples were prepared and frozen at -80 °C. The level of s-IL-6 and vascular endothelial
growth factor (VEGF) in serum was analyzed using the Luminex immuno-bead technology. The patients were followed until death, or to March 2016.

**Results:** Measurable s-IL-6 at diagnosis was associated with a present metastasis at diagnosis. A high s-IL-6 (p=0.039) predicted a worse cancer-specific survival rate as did age (p=0.031) and clinical stage (p<0.001), studied both with univariate and a multivariate analysis. In univariate analyses, studying recurrence, age (p=0.037), s-IL-6 (p=0.018) and clinical stage (p<0.001) were significant predictors. With a multivariate analysis, age (p=0.038) and clinical stage (p=0.001) were significant, while s-IL-6 was borderline statistically significant (p=0.051). A high VEGF (p=0.035) and high s-IL-6 (p=0.029), together with stage (p=0.016), predicts a worse overall survival within a multivariate analysis.

**Conclusion:** Serum IL-6 appears to be able to predict metastasis at diagnosis, as well as subsequent recurrence and survival in a group that was assumed to be radically treated for RCC. VEGF and s-IL-6 play a central role in RCC, to some extent through different biological mechanisms.

**Disclosure of Interest:** None Declared

**Keywords:** Basic Research & Pathophysiology, Kidney & Bladder, Markers

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**28. METASTASECTOMY FOR RENAL CELL CARCINOMA: A SINGLE CENTER EXPERIENCE OF MULTIMODALITY TREATMENT**

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**Introduction:** Targeted agents for renal cell carcinoma (RCC) have been reported to improve progression-free survival. Multimodality treatments that combine surgery for primary tumor with metastasectomy, systemic therapy and radiotherapy may be beneficial for patients with metastatic RCC.

**Objectives:** This study was conducted to evaluate the efficacy of metastasectomy accompanied with modern targeted therapies when feasible.

**Methods:** Seventy consecutive patients with metastatic RCC underwent metastasectomy in Helsinki University Hospital between June 2006 and March 2012 in this retrospective study. The primary end-point was overall survival.

**Results:** The histology of the primary tumor was clear cell RCC, papillary RCC and other RCC in 86%, 10% and 4%, respectively. All primary tumors were solid. Lymph-node involvement (N1) was observed in 8 patients (11%) at the time of diagnosis. Lymph node dissection was performed in 12 patients (17%). Ten primary tumours (14%) showed features of sarcomatoid differentiation and 41 necrosis (59%). Of 70 patients, 24 (34%) had tumor thrombus: 12 (17%) with renal vein involvement, 11 (16%) with subdiaphragmatic vena cava involvement and one (1%) with supradiaphragmatic vena cava involvement. Macroscopic surgical radicality was achieved in 29 patients (40%). However, no patients maintained remission in the long term. Pulmonary metastasectomy was performed in 23 patients (33%), brain metastasectomy in 14 patients (20%), osseous metastasectomy in 10 patients (14%), subcutaneous metastasectomy in 7 patients (10%), peritoneal metastasectomy in 5 patients (7%) and pancreatic metastasectomy in 2 patients (3%). Adrenalectomy was performed in 11 out of 70 patients (16%). Systemic targeted therapies were offered to 38 patients (54%). Radiotherapy was offered to 32 patients (46%). Of 70 patients, 39 had died of RCC, 1 patient of ischemic heart disease and 30 were alive with disease. The overall 5-year survival rate was 49% (Figure 1). The median follow up time was 59 months (range 0─116).

**Graphics:**
Conclusion: Moderate 5-year survival is achievable in RCC patients with metastasis treated by multimodality treatment including metastasectomy. Surgery with metastasectomy should be considered for selected RCC patients with metastases.

Disclosure of Interest: None Declared

Keywords: Kidney & Bladder, Surgical Therapy

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29. BODY MASS INDEX IN YOUNG MEN AND RENAL CELL CARCINOMA

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Introduction: The incidence of renal cell carcinoma (RCC), accounting for more than 90% of all renal malignances, has increased globally during recent decades. Obesity is a well-established risk factor for RCC, but earlier research has largely focused on adult exposure to risk. Little is known about the role of overweight and obesity during late adolescence.

Objectives: Our objective was to test whether body mass index (BMI) during late adolescence is associated with subsequent risk of RCC.

Methods: We used data from a cohort of 238 788 Swedish men who underwent mandatory military conscription assessment between 1969 and 1976 (at a mean age of 18.5 years). At the conscription assessment, physical and psychological tests were performed, including measurements of height and weight. Participants were followed for a diagnosis of RCC until 1 January 2010 through record linkage with the Swedish Cancer Registry. The association between BMI at conscription and subsequent RCC was evaluated using multivariate Cox regression analysis to estimate adjusted hazard ratios and corresponding 95% confidence intervals.

Results: During follow-up over a mean of 35.4 years, 266 diagnoses of RCC were identified. We observed a higher RCC risk with increasing BMI in adolescence, where a one unit increase in BMI was associated with a 5% increased risk in RCC (95% CI 1.00-1.10, p <0.049). Compared with normal weight men (BMI 18.5 to <25 kg/m²), men with overweight (BMI 25 to <30 kg/m²) and obesity (BMI ≥30 kg/m²) had a 1.69 (95% CI 1.12-2.57) and 2.74 (95% CI 1.26-5.96) time higher risk of RCC, respectively.
**Conclusion:** Data from this large population-based cohort study of men show an association between higher BMI in adolescence and a subsequently increased RCC risk, suggesting that overweight and obesity may already begin playing a role in RCC pathogenesis during adolescence. Prevention of childhood and adolescent obesity may thus be a target in efforts to decrease the burden of RCC in the adult population.

**Disclosure of Interest:** None Declared

**Keywords:** Epidemiology & Evaluation/Staging, Kidney & Bladder

30. **FASTTRACK INTEGRATED CANCER PATHWAY FOR TESTICULAR CANCER – A REVIEW OF ALL PATIENTS REFERRED TO AARHUS UNIVERSITY HOSPITAL IN A THREE YEAR PERIOD**

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**Introduction:** Testicular cancer is the most common cancer in men in the age group of 15-35. In 2010-2014 284 cases were reported every year in Denmark, corresponding to an incidence of 9.9/100,000[1]. In 2009, the national fasttrack integrated cancer pathway (NFICP) was introduced as a programme designed to decrease the delay from referral from the primary sector to diagnosis and treatment at a specialised unit. Today, the pathway for testicular cancer implies a maximum of 6 days from referral to the start of the diagnostic programme. The NFICP was initially thought to spur 1800 out-patient visits a year, with a hit-rate around 1/3 [2]. This has placed the hospital units under a substantial amount of pressure to accommodate the demands.

**Objectives:** In testicular cancer, there has never been a systematic review of the efficiency of the pathway. Our objective was to evaluate the NFICP for testicular cancer. We wanted to evaluate the demographics of the referred patients, and the efficiency of the programme.

**Methods:** A retrospective systematic review of all patients referred to our unit in 2014-16 under the NFICP was performed. The patients’ year of birth, age and final diagnosis as registered in the electronic file was noted. If no diagnosis was registered, the file was read, and a diagnosis was drawn from analysing the text. The patients were stratified into 5-year agegroups for analysis.

**Results:** In the three year period, 486 patients were seen in our out-patient clinic under suspicion of testicular cancer. There were 65 cases of testicular cancer, corresponding to a hit-rate of 14%. In 26.7% (n=124) of the cases, the suspicion was rejected with no other diagnosis. Other common diagnoses were spermatocele (26.2%, n=122) and hydrocele (12.3%, n=58).

19.4% (n=91) of all referred patients were above the age of 60 with only 4 cases of testicular cancer. This corresponds to a hit-rate of 4.4%.

**Graphics:**
Conclusion: The number thought to be referred for evaluation under NFICP is grossly underestimated. Testicular cancer is regarded as a disease that primarily affects young adults. Yet a substantial part of the referred patients is well outside this age group. A revision of the criteria that triggers the activation of the NFICP, lowering the number of older patients may relieve the pressure on the specialized urological departments’ out-patient clinics in accommodating the demands set by the national integrated pathway.


Disclosure of Interest: None Declared

Keywords: Penis/Testis/Urethra: Benign Disease & Malignant Disease, Value of Care: Cost and Outcomes Measures

31. HUMAN PAPILLOMAVIRUS AND SQUAMOUS CELL CARCINOMA OF THE URINARY BLADDER
- THE DABLAÇA10 STUDY
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Introduction: In Denmark, the incidence of urinary bladder cancer (BC) is ~1800/year [1]. Around 95% of BCs are urothelial carcinomas (UC), 2% are squamous cell carcinomas (SCC), whilst the remaining are adenocarcinomas and mesenchymal tumors [2]. Human papillomavirus (HPV) has been hypothesized as a potential cause of SCC BC. Previous studies have found HPV prevalence in SCC BC of 0-17% [3-4]. SCC BC is noted for an unfavorable prognosis compared to UC BC [5].

Objectives: We aimed to explore a possible causal association between HPV and SCC BC.
Methods: From the four pathological departments (Aarhus University Hospital, Herlev Hospital, Rigshospitalet, and Odense University Hospital) identification from the local databases was performed. Patient journals and the national patoweb were looked through. Inclusion criteria were pure SCC. Exclusion was made upon following criteria: >70 years of age, previous radio therapy against the pelvis, urinary bladder diverticulum, > 2 years of chronic urinary tract infection or catheter usage, Schistosoma hematobium infection, neurogenic bladder, and urolithiasis (Figure 1).

Tumor tissue was analyzed for HPV using the INNO-LiPA HPV Genotyping Extra (Fujirebio®, Belgium) which allows the detection of 32 HPV genotypes, including all high risk (HR) HPV genotypes. Furthermore, immunological staining against p16 (Ventana®, Arizona USA) will be performed.

Results: Eight of fifty (16 %) of patients with SCC BC tested positive for HPV with:

- HPV6-low risk detected in 4 patients
- HPV16-HR detected in 3 patients
- HPV 51-HR detected in 1 patient

A significant difference (p = 0.027, Fischer’s exact test) in HPV prevalence was observed when looking at civil status “married/living with partner” vs. “single/widow/divorced”. There was a higher prevalence of HPV positivity among the patients who were “single/widow/divorced”.

Furthermore, a significant difference (p = 0.0345, Mann-Whitney test) was observed when looking at a possible association between HPV prevalence and BC TNM-stage. A higher HPV prevalence in BC of lower stage was observed (HPVneg-tnmmean 2.6 vs. HPVpos-tnmmean 1.8, p = 0.0256, unpaired sample t test).

Graphics:
**Conclusion:** In this group of SCC BC, HPV was identified in a small proportion of the patients but nevertheless a higher percentage than previous studies on UC BC. Our results together with other studies on the topic could make for production of new research into the possible causality of HPV in SCC BC, and may stimulate the discussion on HPV vaccination strategy.

**References:**

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**Disclosure of Interest:** None Declared

**Keywords:** None

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**32. PERIOPERATIVE SYSTEMIC SURGICAL INFLAMMATORY RESPONSE FOLLOWING ROBOT-ASSISTED LAPAROSCOPIC CYSTECTOMY VS OPEN MINI-LAPAROTOMY CYSTECTOMY - A PROSPECTIVE STUDY**

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**Introduction:** Primary management of muscle invasive bladder cancer (MIBC) or refractory none-muscle invasive bladder cancer (NMIBC) is cystectomy [1]. Cystectomy is a major procedure and associated with a certain extent of trauma. All traumas to the body, including major surgery induces a surgical inflammatory response (SIR) [2]. SIR plays an important role controlling the human immune system, which is important in the postoperative recovery period [3]. SIR can potentially be reduced by minimal invasive surgery and thus, in theory reduce the risk of postoperative infections and possibly influence long term oncological survival [4]. SIR can be measured by surrogate immunologic markers which therefore indirectly can be used to quantify the degree of tissue trauma [5].

**Objectives:** To evaluate and compare the systemic inflammatory response (SIR) in robot-assisted laparoscopic cystectomy (RALC) to open mini-laparotomy cystectomy (OMC) with a urinary diversion (UD). Comparison was based on a broad selection of immunologic surrogate markers of SIR.

**Methods:** A total of 42 male patients diagnosed with bladder cancer were enrolled in this prospective study from September 2012 to February 2015. All underwent radical cystectomy with an ileal conduit, performed with either OMC (n=20), RALC with extracorporeal UD (EUD) (n=13), or RALC with intracorporeal UD (IUD) (n=9). Blood samples included CRP and 27 different cytokines and were obtained preoperatively (PREOP), immediately after surgery (POD0), 24 hours (POD1), and 48 hours postoperatively (POD2). Clinical parameters were collected from medical records including demographics, co-morbidity, tumour stage and perioperative outcomes.

**Results:** Estimated blood loss and blood transfusion volume was higher in OMC (p’s <0.001). Operative time was longer in RALC groups (p<0.001), but no difference was found between robotic groups. On POD0, IL-6 showed significant lower level in RALC-IUD compared to OMC (p=0.016), no difference was seen between OMC and RALC-EUD. IL-10 level was higher at POD0 (p=0.029) and POD1 (p=0.038) in OMC vs RALC-EUD. MCP-1 levels for RALC-IUD were significantly lower compared to RALC-EUD (P=0.027), no difference was seen for OMC vs robotic groups.

**Conclusion:** The present study found that overall postoperative SIR was less pronounced in RALC, thus depicting reduced tissue trauma. No major clinical differences between RALC-IUD and -EUD were found.

**References:**


**Disclosure of Interest:** None Declared

**Keywords:** Kidney & Bladder, Markers, Surgical Therapy

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33. **SIGNIFICANTLY MORE DOWNSTAGING IN PATIENTS RECEIVING PREOPERATIVE (NEOADJUVANT AND INDUCTION) CHEMOTHERAPY PRIOR TO CYSTECTOMY FOR MUSCLE-INVASIVE BLADDER CANCER.**

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**Introduction:** Downstaging to pT0N0 in cystectomy specimen is considered a surrogate marker for improved overall survival in patients receiving neoadjuvant chemotherapy.

**Objectives:** To analyze clinical and pathological tumour and nodal stages in the national population-based Swedish cystectomy registry for patients operated between 2011 and 2015 stratified by use of preoperative chemotherapy or not.

**Methods:** Perioperative parameters and early 90 day postoperative complications according to Clavien are registered in the national registry since 2011. The coverage, according to the Swedish National Board of Health and Welfare, was 85 percent during the study period. Of the 1909 patients registered, 1353 had muscle invasive disease and of these 525 (39%) received preoperative chemotherapy. The use of preoperative chemotherapy increased nationwide over the study time from 32 percent 2011 to 44 percent 2015.

**Results:** The distribution of clinical T-stages in patients receiving chemotherapy or not were cT2 in 69 and 76, cT3 in 21 and 17 and cT4 in 9.5 and 6.7 percent, respectively (p<0.0001), thus more advanced tumors in the group receiving chemotherapy. Pathological T-stages distribution in the same groups were downstaging to pT0 in 34 and 10 percent respectively (p<0.0001) and remaining pT2-pT4 in 52 and 80 percent, respectively (p<0.0001). The percentage of clinical pre-operative node positive patients were 17 and 8 percent in the groups receiving chemotherapy (induction or neoadjuvant chemotherapy) or not, respectively (p<0.0001) and corresponding figures in the lymphadenectomy specimen was 21 and 28 percent, respectively (p<0.040).

There were no significant differences in the reported number of complications at 90 days among patients treated with chemotherapy or not, the highest Clavien grade complication I-II in 25 and 22 percent, grade III in 18 and 17, grade IV in 2.5 and 3.2 percent and grade V in 1.0 and 2.7 percent, respectively (p=0.089).

**Conclusion:** There was a selection of patients with more advanced tumors receiving preoperative chemotherapy but the rate of downstaging to pT0 was significantly higher. Regarding nodal stage, the proportion clinically node positive patients was higher in the group receiving chemotherapy, whereas the relation was reversed when comparing pathological nodal stages.

**Disclosure of Interest:** None Declared

**Keywords:** None

34. **RAT MODEL FOR STUDY OF ERECTILE DYSFUNCTION**

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**Introduction:** Stimulation of the cavernous nerve and recording of the pressure in the cavernous bodies has been used for a long time to investigate possible treatments of erectile dysfunction. However, the methods used vary between laboratories, making comparison between results difficult.

**Objectives:** The goal of this study is to develop and describe in detail, a reproducible method of cavernous nerve stimulation and recording of the intracavernous pressure.

**Methods:** We focused our research on developing the minimally invasive dissection technique to provide exposure of cavernous body and the isolation of the cavernous nerve. Subsequently we tested the optimal method for securing the contact between the electrode and the nerve and their isolation from surrounding tissues. As a last aim of this study we tested optimal neurostimulation parameters.

**Results:**

- **Crus exposure:** 1.5 cm skin incision was made laterally and just above the base of the penis. Using blunt dissection through the fascia and adipose tissue, we exposed the centrally located bulbospongious muscle, and the ischiocavernous muscle lying caudal and lateral. Microforceps and microscissors were used to expose the tunica albuginea at the point of its attachment to the ischial bone.

- **Isolation of the cavernous nerve for electrostimulation:** Using lower midline abdominal incision and blunt dissection, the cavernous nerve was visualized on the dorsolateral aspect of the prostate. Fascia on the top of the nerve was incised to allow for placement of the electrode under the nerve. After elevating the nerve and drying the area, biocompatible silicon glue was applied. It dried in 2-3 minutes while nerve-electrode remained elevated, isolating the nerve and electrode from the surrounding tissues. We completed the literature search and identified following optimal stimulation parameters: 1.5 mA, 20 Hz, 8 V, pulse width 0.2 milliseconds and duration 50 seconds.

**Conclusion:** We describe a reliable way to dissect the structures and stimulate the nerve with the use of a biocompatible glue as an isolator. This allows for reproducible way of preserving the integrity of the nerve, and minimizes manipulation which could lead to subsequent neuropraxia. The silicone glue guarantees a constant contact between the nerve and the electrode, thereby allowing for repeated stimulation of the nerve without the risk of causing electrical leakage. Based on these experiments we are proposing a standardized rat model for study of erectile function.

**Disclosure of Interest:** None Declared

**Keywords:** None

35. APPLICATION OF TLR2 ANTIBODY INCREASES AKT-MEDIATED APOPTOSIS IN MURINE RENAL ISCHEMIA AND REPERFUSION INJURY

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**Introduction:** Acute kidney injury remains an important cause of renal dysfunction and occurs during kidney transplantation, surgical revascularization of the renal artery or partial nephrectomy. In this regard Toll-like receptors have been demonstrated to play a critical role in the induction of innate and inflammatory responses (1). Among these, Toll-like Receptor 2 (TLR-2) is constitutively expressed in tubular epithelial cells of the kidney and is also known to mediate ischemia reperfusion injury (IRS). In this context, a reno-protective effect could be demonstrated in TLR-2 knockout mice (2)

**Objectives:** In the following study we investigated the effect of TLR-2 antibody (clone T2.5) application in the time course of IRS in a murine model of ischemia-reperfusion injury.
Methods: Adult male C57BL/6 mice were randomized into 7 groups (n = 8): a non-operative control group (CTRL) and 6 interventional groups in which the mice were subjected to a 30-minute bilateral renal ischemia followed by reperfusion for 3h, 24h and 48h. Mice were treated either with NaCl or TLR2 ab at each time point.

Results: In kidney homogenates TLR2 mRNA was significantly upregulated after 24h of IR injury in NaCl as well as in TLR2 ab treated mice (p≤0.001) vs. control mice. In western blot analyses TLR2 ab treated mice showed significantly decreased levels of TLR2 protein after 3h of IR compared to WT animals (p≤0.5) and hereafter increasing levels at 24h and 48h of IR, which however did not differ to NaCl treated mice. Accordingly the degree of Akt1 phosphorylation was significantly decreased after 3h of IR compared to WT animals (p≤0.01), which equally increased in the time span from 24h and 48h of IR to the same level as NaCl treated mice. In addition a strong and significant positive correlation between TLR2 protein expression and phosphorylation of Akt1 could be observed (r²= 0.233; p=0.003). However no differences in phosphorylation of PI3K or ERK could be observed. In the TUNEL-staining TLR2 ab treated animals showed significant higher apoptosis rate than NaCl treated mice after 3h IR (p≤0.001) and after 24h IR (p≤0.001). Notably the number of TUNEL positive cells correlated negatively with the TLR2 protein expression (r²= 0.089; p=0.045).

Conclusion: Inhibition of TLR-2 and its signaling pathway by means of TLR-2 antibodies appears to result in increased cumulative IRS via reduced phosphorylation of Akt and counter-regulatory TLR-2 activation.

References:

Disclosure of Interest: None Declared

Keywords: Basic Research & Pathophysiology, Renal Transplantation & Vascular Surgery

36. SIMULATION-BASED TRAINING FOR FLEXIBLE CYSTOSCOPY – A PATIENT TRANSFER RANDOMIZED TRIAL

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Introduction: Flexible cystoscopy is one of the first procedures trainees in urology are required to master. The majority of urologists learn the procedure by performing it on patients without prior simulator training 1. The classical Halstedian surgical apprenticeship “see one, do one, teach one” needs to be supplemented by additional forms of training. Simulation-based training in surgical procedures prior to performing them on patients, is becoming more widespread and is an essential component of modern surgical education 2,3. Simulators in flexible cystoscopy have been available for more than a decade, and previous studies have demonstrated the impact of training on both low fidelity and high fidelity simulators 4.

Objectives: To determine if a simulation-based training program including directed self-regulated learning (DSRL) and post-testing improves clinical outcomes compared to a traditional simulation-based training program for cystoscopy.

Methods: A randomized trial was conducted involving 32 participants without prior experience in endoscopic procedures or simulators. The intervention group received DSRL simulator training followed by a post-test, and the control group received a traditional lecture prior to simulator training. Three weeks after the intervention, participants were assessed with the performance of cystoscopy on two patients. The primary outcome was clinical performance, which was determined using an assessment tool: global rating scale (GRS). Independent samples t-test, Cronbach’s α, Pearson’s r and paired samples t-test were used for statistical analysis.
Results: There was no significant difference between the two study groups with respect to mean GRS of performance (p=0.63, 95 % CI; -2.4 - 3.9). The internal consistency of GRS was high, Cronbach’s α=0.91. The Pearson’s r=0.68 (p<0.001). Participants from both study groups demonstrated significant improvement between the first and second clinical procedures (p=0.004, 95 % CI, 0.8 – 3.5). A limitation was the relatively small number of participants.

Conclusion: No significant differences were found on clinical transfer when comparing a novel training program with a traditional program. The novice participants in this trial had not reached a plateau phase on their learning curve before progressing to supervised procedures on patients in flexible cystoscopy.

References:

Disclosure of Interest: None Declared

Keywords: Evaluation, Training & Skills Assessment

37. INDIVIDUAL IMMUNOPROTEOMICS IDENTIFIES IL-16 PROCESSING IN TREGS AS A FACTOR IN BLADDER CANCER TUMOUR IMMUNITY

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Introduction: Muscle-invasive urothelial bladder cancer (MIBC) carries a poor prognosis, and no effective curative treatments exist for disseminated disease. Immunotherapy being an attractive option, there is a need to understand the pathways of immune evasion. Since the sentinel node (SN) is key to MIBC dissemination, and regulatory T-cells (Tregs) play a central role in creating a tumour-promoting immunosuppressive microenvironment, we wanted to study Treg signalling in lymph nodes of MIBC patients.

Objectives: To characterise the CD4+ T effector cell (Teff) and Treg proteome in SNs and non-SNs (nSNs) in order to find differentially activated signalling pathways and proteins in these cell subsets and anatomical sites.

Methods: Six MIBC patients were prospectively included at three Swedish urological centres. At radical cystectomy, peripheral blood samples were collected and lymph nodes were excised after perioperative sentinel node detection. Tregs (CD4+CD25hiCD127lo) and Teffs (CD4+CD25lo) were sorted by FACS. Cells from two patients underwent LC-MS/MS proteomics while cells from four others were used for validation and downstream analysis including flow cytometry, PCR and immunoblotting.

Results: 526 proteins were identified in all T-cell subsets for both patients. Network analysis found proteins overexpressed in SN-Tregs alone to represent growth and immune signalling pathways. Centrality analysis identified the cytokine IL-16 as central to the SN-Treg network. Functional studies showed Tregs in direct contact with tumoral factors to exhibit increased processing of the precursor IL-16 into its bioactive form,
which attracts and enriches Tregs. This effect was associated with an increase of FOXP3-expression within FOXP3+ cells (Tregs).

**Conclusion:** Generally, we prove that proteomics can be used to map the tumour-immune cross-talk in individual patients. Linking these data to survival data could be a successful approach for identifying targets for personalized immunotherapy. Specifically, we show that IL-16 is central to Treg signalling in SN, and that IL-16 processing in SN-Tregs is changed, producing more of its bioactive isoform with immunosuppressive properties. Thus, IL-16 processing may be a treatment target in MIBC.

**Disclosure of Interest:** None Declared

**Keywords:** Basic Research & Pathophysiology, Invasive, Kidney & Bladder

38. SENTINEL NODE DETECTION IN MUSCLE INVASIVE UROTHELIAL BLADDER CANCER IS FEASIBLE AFTER NEOADJUVANT CHEMOTHERAPY IN ALL PT-STAGES

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**Introduction:** Previous published series of SNd in MIBC have not included patients undergoing NAC, and systematic reports of pT0-patients w/wo NAC were absent. Translational immunological tumor research on MIBC focusing on SNd, in the era of NAC-therapy, requires technical feasibility. Additionally, SNd in MIBC requests further evaluations as a method for nodal staging.

**Objectives:** To determine if sentinel node detection (SNd) in muscle-invasive urothelial bladder cancer (MIBC) can be performed in patients undergoing neoadjuvant chemotherapy (NAC) and determine if SNd is feasible in all pT-stages, including pT0.

**Methods:** 99 patients with suspected urothelial MIBC were prospectively selected from six urological centers. After TURb and primary staging, 65 MIBC-patients qualified for radical cystectomy (RC). Pre-cystectomy staging was cT2a-T4aN0M0, including 47 NAC-patients and 18 chemo naïve patients. All 65 patients underwent intraoperative SNd by peritumoral injection of 80 Mbq Technetium and Geiger probe detection. Postcystectomy staging was pT0-T4aN0-N2M0. SNs were defined by two calculations; SNdef1 and SNdef2.

**Results:** Totally 1063 lymph nodes were removed (total SNs; 222-227). NAC-patients with pT0 (n=24) displayed a true positive detection in 91.7% by either SNdef, with a median of 3.0 SNs. NACpT>0-patients had a true positive detection in 87% (SNdef1) and 91.3% (SNdef2). In a univariate analysis, neither patient group, NAC nor tumor downstaging influenced detection rates, regardless of SN-definition. In totally eight patients 4/22 metastatic nodes were SNs while 18/22 were non-SNs.

**Conclusion:** Sentinel node detection in MIBC is feasible also in NAC-patients, regardless of pT-stage. SNd played no role in nodal staging.

**Disclosure of Interest:** None Declared

**Keywords:** Invasive, Kidney & Bladder, Surgical Therapy & New Technology
39. PHOTODYNAMIC DIAGNOSIS (PDD) IN FLEXIBLE CYSTOSCOPY - IMPACT ON EFFECTIVENESS AND COSTS. A RANDOMIZED CONTROLLED TRIAL

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Introduction: Non-muscle-invasive bladder cancer (NMIBC) is one of the costliest cancers per patient. After the primary transurethral resection of the bladder (TURB), patients are regularly examined at the outpatient clinic with a white light (WL) flexible cystoscopy as the gold standard. Photodynamic diagnosis (PDD) is an optic technique that enhances visualization of pathologic tissue. The use of PDD at the primary TURB is associated with a lower recurrence rate within the first years.

Objectives: This study investigates impact on effectiveness and costs when PDD is used in addition to WL flexible cystoscopy at first follow-up after a TURB.

Methods: A total of 219 patients were enrolled at three Danish urological departments during the period from February to September 2016. All patients had been diagnosed with either pTa low grade or pTa high grade at a TURB four months earlier. Patients were randomized to a normal WL cystoscopy (N=112) or to a cystoscopy with PDD in addition to WL (N=107). The same urologist performed all cystoscopies. Costs of cystoscopies and TURBs were estimated with a bottom-up technique and include estimated lifetime, sterilization and repair of equipment as well as the expenditure of time and all utensils.

Results: Tumor recurrences that needed a TURB were found in 33.9% and 17.8% of WL and PDD patients, respectively (p<0.01). Recurrences that were treatable at the outpatient clinic were found in 28.6% and 45.8% of WL and PDD patients, respectively (p<0.01). No difference in the total number of patients with recurrence was observed (p=0.872).

Mean cost per PDD patient was €932 whereas mean cost per WL patient was €470. Average costs related to a TURB amounts to €896. Thus, a mean reduction of 0.52 TURBs per patient is needed within the next year to compensate the costs of PDD used during the first cystoscopy after the TURB.

Graphics:
Conclusion: The results suggest that PDD in addition to WL flexible cystoscopy initially augments both costs and effectiveness. Significantly more patients from the PDD group were treated at the outpatient clinic. A one-year follow-up is needed to evaluate the possible reduction of TURBs and costs own to PDD.

Disclosure of Interest: None Declared

Keywords: Kidney & Bladder, Surgical Therapy & New Technology, Value of Care: Cost and Outcomes Measures

Table 1. Results of flexible cystoscopies at the outpatient clinic (OPC)

<table>
<thead>
<tr>
<th>Results of examination in OPC</th>
<th>WL group</th>
<th>PDD group</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No recurrence</td>
<td>42</td>
<td>39</td>
<td>0.872</td>
</tr>
<tr>
<td>Coagulation</td>
<td>4</td>
<td>9</td>
<td>0.059</td>
</tr>
<tr>
<td>Biopsy</td>
<td>28</td>
<td>40</td>
<td>0.048</td>
</tr>
<tr>
<td>Treatment in OPC</td>
<td>32</td>
<td>49</td>
<td>0.008</td>
</tr>
<tr>
<td>New TURB</td>
<td>38</td>
<td>19</td>
<td>0.006</td>
</tr>
<tr>
<td>Total</td>
<td>112</td>
<td>107</td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Costs per patient

<table>
<thead>
<tr>
<th>Costs per patient</th>
<th>WL group (EUR)</th>
<th>PDD group (EUR)</th>
<th>Difference (EUR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>469.7 (393.8 ; 545.6)</td>
<td>931.9 (869.6 ; 994.2)</td>
<td>462.2</td>
</tr>
<tr>
<td>No recurrence</td>
<td>132.8</td>
<td>721.7</td>
<td>588.9</td>
</tr>
<tr>
<td>Recurrence</td>
<td>671.9 (578.4 ; 765.4)</td>
<td>1052.5 (966.4 ; 1138.6)</td>
<td>380.6</td>
</tr>
</tbody>
</table>

Conclusion: The results suggest that PDD in addition to WL flexible cystoscopy initially augments both costs and effectiveness. Significantly more patients from the PDD group were treated at the outpatient clinic. A one-year follow-up is needed to evaluate the possible reduction of TURBs and costs own to PDD.

Disclosure of Interest: None Declared

Keywords: Kidney & Bladder, Surgical Therapy & New Technology, Value of Care: Cost and Outcomes Measures

40. EXOSOMES IN URINE RETAIN A MALIGNANT PROTEIN PROFILE AFTER PRIMARY TUMOUR ABLATION IN PATIENTS WITH INVASIVE URINARY BLADDER CANCER

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Introduction: Invasive urothelial bladder cancer (UBC) patients have a poor prognosis due to early metastatic dissemination, with high recurrence rates after cystectomy even for patients with organ-confined disease.
Exosomes, nano-sized vesicles important to cell-cell communication, are produced by cancer and immune cells, and are believed to impact carcinogenesis and metastasis. Their role in UBC is yet unexplored, and could potentially explain rapid dissemination in UBC.

**Objectives:** Explore the role of exosomes in UBC through characterising the proteome of tissue and urinary exosomes, in order to understand the underlying biology and providing biomarkers for treatment and diagnosis.

**Methods:** Nine patients with invasive UBC, scheduled for cystectomy after TUR-B w/wo neoadjuvant chemotherapy (NAC), were prospectively recruited for the study in 2014-2015 at five Swedish departments of urology. At cystectomy, exosomes were isolated from the tumour site, healthy tissue, and from urine either collected from the ureter or the bladder. Protein expression was quantified by mass spectrometry. Principal component analysis (PCA) was applied to identify protein clustering based on exosomal site of origin. Network set enrichment analysis identified enriched signalling pathways in protein clusters.

**Results:** Urinary exosomes separated significantly (p=0.03) on PCA based on whether they came from the bladder, where the urine had been in contact with the tumour site, or the ureters without tumour contact (Fig. 1A). Furthermore, tumour site tissue separated significantly from healthy tissue (p=0.01)(Fig. 1B). Proteins overrepresented in bladder urine showed enrichment of many carcinogenic signalling pathways, including glycolysis, platelet aggregation, migration and growth.

**Graphics:**
Conclusion: Despite most patients being tumour-free at cystectomy, the bladder urine contains exosomes with a malignant profile. This suggests continuous release of carcinogenic exosomes from the bladder even after complete downstaging due to TUR-B w/wo NAC. These findings challenge the standard concept of complete histopathological downstaging after primary tumour ablation and emphasise the need to limit time to cystectomy.

Disclosure of Interest: None Declared
41. IS DETRUSOR OVERACTIVITY NECESSARY FOR LEAKAGE IN LUTS CHILDREN?

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Introduction: Ambulatory urodynamics (AU) register the effect of natural filling of the bladder. More detrusor activity is recorded than during conventional. However, tracings become more complicated and interpretation remains unclarified.

Objectives: To analyse detrusor activity in LUTS children using AU to identify the relation to leakage.

Methods: AU recordings from 68 children (median recording time 25.31 hours) were analysed. The children were divided into two groups, with or without leakage. Episodes of urgency, leakage, detrusor overactivity, detrusor pressure during detrusor overactivity and voiding, opening pressure, voided volume, voids during day or night were analysed. The lowest amplitude of opening pressure in each patient was used to categorised each episode of detrusor overactivity. The episode number of the high amplitude of detrusor overactivity (HDO), of which the detrusor pressure exceeded the lowest opening pressure in individual patient, and the low amplitude of detrusor overactivity (LDO), of which detrusor pressure didn’t exceed the lowest opening pressure, were recorded and analysed.

Results: Patients in leakage group have more numbers of HDO and LDO both in day time and night time. Difference of HDO episodes between day and night were significantly higher in leakage group, while difference of LDO episodes between day and night were similar in two groups. When considering possible reasons leading to leakage, in the leakage group (38 patients), no HDO were registered immediate before leakage occurred in 23 patients, while no LDO were register immediate before leakage occurred in 27 patients. Similarly, no detrusor overactivity were found in 25 patients before urgency were registered.

Conclusion: Children with leakage have more frequent episodes of detrusor overactivity, although detrusor overactivity seems to less involved into leakage.

Disclosure of Interest: None Declared

Keywords: Incontinence: Evaluation (Urodynamic Testing), Non-neurogenic Voiding Dysfunction

42. DOES "SECURING THE CATHETER" MAKE ANY DIFFERENCE?

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Introduction: Indwelling Urethral Foley Catheters (IDC) are used in up to 25% of hospital inpatients. Although the balloon acts to prevent dislodgment of the catheter past the bladder neck, it does not prevent the balloon moving relation to the bladder neck. Movement induced trauma has been associated with discomfort, irritation, and pain [1]. It has also been implicated in UTIs [2]. However, there is comparatively little research into the non-infectious complications of IDCs [3]. Although “securing the IDC” is a common order and guidelines exist [1], these tend to be based on habit rather than science [2]. There is no literature on whether IDC securement works.

Objectives: To determine whether commonly used methods of securing an IDC decrease the force transmission along the IDC to the bladder neck in response to an externally applied force

Methods: A test apparatus was constructed to simulate key features of a catheter drainage system (Figure 1). A “bladder neck” was suspended from a force gauge, with an IDC inserted
through it. The system was tensioned with a drainage bag of a known weight suspended over a pulley.

Following calibration, various methods of securement were trialled, with the force transmitted to the bladder neck recorded. The methods of securement trialled included: adhesive tape taped with a number of commonly observed methods, and three commercially available devices.

**Results:** Table 1 shows the results of the trials conducted.

Some securement devices were able to completely eliminate force transmission to the bladder neck. We also note that the taped mesentery performed well, especially at higher weights, reducing the transmitted force by up to 85%.

As this was an idealised *ex vivo* test, the forces described above would not necessarily be reproducible in humans, however by simplifying the system as far as practical we believe that we have minimised sources of variability (e.g. the effect of different skin types on the adhesive and their elastic properties) and thus allow for a valid comparison between the various securing methods.

**Graphics:**

![Diagram of the system](image-url)
Conclusion: Within the limitations of this study we were able to demonstrate that some of the commonly used methods of securing IDCs do work. We were also able to show that although not as effective as commercially available devices, adhesive tape was still effective.


Disclosure of Interest: None Declared

Keywords: Basic Research & Pathophysiology, Quality Improvement & Patient Safety, Value of Care: Cost and Outcomes Measures

43. TREATMENT OF MEATAL STENOSIS WITH A NEW SURGICAL TECHNIQUE.
EXPERIENCE FROM SAHLGRENSKA UNIVERSITY HOSPITAL.

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Introduction: In 2004 Malone et al described a new surgical technique for relief of meatal stenosis without causing the appearance of a hypospadia (1). This surgical technique was introduced in 2010 at Sahlgrenska University Hospital in Sweden. It involves a dorsal meatoplasty and, when required, an inverted V-shaped relieving incision resulting in a roof improving the cosmetic outcome.

Objectives: The aim of this study was to evaluate the surgical result in terms of patient satisfaction and number of failure.

Methods: A retrospective medical chart review including all 32 patients who underwent this operation at Sahlgrenska University Hospital between 2010 and 2015 was conducted. Data about patient satisfaction was gathered through medical chart review. Failure was defined as reoperation or dilatation.

Results: 24 of 32 patients (75 %) reported satisfaction in the medical chart review. Failure occurred in 4 of 32 patients (12,5%) including one case of intermittent self-dilatation and three cases of reoperation. Data regarding satisfaction among the remaining patients was missing in the medical charts.

Conclusion: This technique of meatoplasty relieved meatal stenosis successfully with high patient satisfaction and low number of failure in this group of patients during the follow-up.


Disclosure of Interest: None Declared

Keywords: Penis/Testis/Urethra: Benign Disease & Malignant Disease, Practice Patterns, Quality of Life and Shared Decision Making, Surgical Therapy

Methods: A test apparatus was constructed to simulate key features of a catheter drainage system (Figure 1). A “bladder neck” was suspended from a force gauge, with an IDC inserted through it. The system was tensioned with a drainage bag of a known weight suspended over a pulley. Following calibration, various methods of securement were trialled, with the force transmitted to the bladder neck recorded. The methods of securement trialled included: adhesive tape taped with a number of commonly observed methods, and three commercially available devices.

Results: Table 1 shows the results of the trials conducted. Some securement devices were able to completely eliminate force transmission to the bladder neck. We also note that the taped mesentery performed well, especially at higher weights, reducing the transmitted force by up to 85%.

As this was an idealised ex vivo test, the forces described above would not necessarily be reproducible in humans, however by simplifying the system as far as practical we believe that we have minimised sources of variability (e.g. the effect of different skin types on the adhesive and their elastic properties) and thus allow for a valid comparison between the various securing methods.

Graphics:
Conclusion: Within the limitations of this study we were able to demonstrate that some of the commonly used methods of securing IDCs do work. We were also able to show that although not as effective as commercially available devices, adhesive tape was still effective.

Disclosure of Interest: None Declared  
Keywords: Basic Research & Pathophysiology, Quality Improvement & Patient Safety, Value of Care: Cost and Outcomes Measures  

44. FORESKIN TRANSPLANT BETWEEN DISCORDANT MONOZYGOTIC TWINS FOR REDO SALVAGE HYPOSPADIAS REPAIR  
Yazan F. Rawashdeh’  

Introduction: Salvage hypospadias repair procedures are restricted by the paucity of donor sites for harvest of non-hair bearing skin and or mucosa especially when foreskin and buccal mucosa have been used or in cases that require extensive urethral replacement.  

Objectives: To detail the medium term results of a novel urethral replacement procedure for managing a case of severe hypospadias.  

Methods: A 33 year old patient born with severe hypospadias and operated upon more than 20 times since childhood, presented with urinary retention. Initial management comprised an extensive meatotomy with removal of urethral calculi. The reconstructed urethra was severely scarred and strictured. On follow-up it transpired that the patient had a monozygotic twin with discordance for the urethral anomaly who was willing to donate his foreskin. Preoperative genetic and virology testing confirmed monozygosity and excluded any infectious risk. A standard circumcision was performed on the brother where after the index patient underwent the first of a two stage procedure. The scarred neourethra was removed in its entirety down to the penoscrotal junction. The resulting defect was covered with the donor foreskin. On dressing removal 7 days later there was 100% take. Eleven months later stage two was completed by tubularising the graft, with tunica vaginalis cover.  

Results: Recovery after both procedures and for both the donor and recipient was uneventful. At follow-up 12 months postop there was good cosmesis and the index patient reported being able to void standing with a good stream. There were no fistulae, break down or meatal stenosis.  

Conclusion: Despite an extreme rare occurrence, isogenic grafts can be used in hypospadias repair.  

Disclosure of Interest: None Declared  
Keywords: Hypospadias (Penis), Surgical Therapy  

45. LAPAROSCOPIC AND ROBOTIC NEPHROURETERECTOMY: DOES LYMPHADENECTOMY HAVE AN IMPACT ON THE CLINICAL OUTCOME? ON BEHALF OF UROLAP GROUP  
Nessn H. Azawi1,2, Kasper D. Berg2, Andreas Thamsborg2, Jan V. Jepsen3, Bjarne Kromann-Andersen3, Johan Poulsen4, Helle H. Petersen4, Henning Olsen5, Jørgen B. Jensen5  
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Introduction: A combination of extended lymphadenectomy (LND) and cystectomy in muscle-invasive, urothelial tumors within the bladder shows a better five-year recurrence-free survival compared to cystectomy with only limited lymphadenectomy. However, information regarding indications, extent and possible curative potential is currently lacking for LND in conjunction with nephroureterectomy for upper urinary-tract transitional-cell carcinoma (UTUC).

Objectives: To evaluate LND in conjunction with nephroureterectomy on overall survival (OS) for patients who have had muscle invasive disease in UTUC.

Methods: This is a retrospective, multicenter study for patients with UTUC cN0cM0 who underwent a nephroureterectomy between January 2008 and December 2014.

Results: In total 298 patients underwent robot-assisted or laparoscopic radical nephroureterectomy with final histological reports of UTUC. Male: female ratio 63%:37%. LND was performed in 46 (15.4%). 172 patients (62%) had non-muscle invasive disease (NMID); 105 patients (38%) had muscle-invasive disease (MID). Median time of follow-up was 43.5 months (95% CI: 36.0-47.2). For patients with MID, the 5-year cumulative incidence of all-cause mortality and cancer specific mortality (CSM) were 73.5% (95% CI: 60.4-86.6) and 52.4% (95% CI: 38.9-65.9), respectively (p < 0.0001). There was no significant difference in OS between patients with N1 and patients with N0 disease (p = 0.53). The 5-years OS rates were 30.5% (95% CI: 6.6-54.4) and 25.7% (95% CI: 10.9-40.5), respectively. Likewise, no difference in CSM was observed between N1 and N0 patients with muscle invasive disease (p = 0.26) with 5-years cumulative incidences of CSM of 28.9% (95% CI: 7.3-50.4) and 57.2% (95% CI: 41.9-72.6).

Conclusion: 5-year OS and CSM are comparable between patients with N1 and N0 in MID. This evidence may supports the use of the LND procedure in patients with MID.

Disclosure of Interest: None Declared

Keywords: Upper Tract Transitional

46. PRIMARY TREATMENT AND RECURRENCE RATES IN PATIENTS WITH NON-MUSCLE INVASIVE BLADDER CANCER IN ICELAND

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Introduction: Non-muscle invasive bladder cancer (NMIBC) is a common disease in the elderly population. Despite good long term prognosis a high recurrence rate results in repeated surgical interventions and makes strict follow-up with multiple cystoscopies necessary. This is a burden for the patients as well as the community.

Objectives: The objective of this study was to investigate the treatment pattern of newly diagnosed patients in Iceland and recurrence rate after surgery. The objective was also to see how well adjuvant treatment in Iceland correlates with clinical guidelines.

Methods: All patients newly diagnosed with NMIBC who underwent primary trans-urethral resection of bladder tumour (TURBT) during 2013-2014 were included. Information on patient, surgical factors, use of adjuvant treatment, pathology report, risk factors for recurrence and confirmed recurrences at follow-up was obtained retrospectively. Patients were categorized into three risk groups according to their T-stage, grade, size and number of tumours according to the EAU guidelines.

Results: Overall, 111 patients with newly diagnosed NMIBC underwent primary TURBT during the study period. The majority were male (84%) and the mean age was 70.4 years. Twelve surgeons performed the
primary TURBT’s in two hospitals. Eighty-five patients (76%) had Ta stage tumour, 24 (22%) had T1 stage tumour and 2 (2%) had Tis stage tumour, that is isolated carcinoma in situ (CIS). Four patients (4%) had concomitant CIS. Patients in the low-risk group were 43 (39%), intermediate-risk group 40 patients (36%) and 28 patients (25%) in the high-risk group. In the high-risk group 12 patients (43%) received intravesical BCG treatment. No patient received repeated intravesical Mitomycin as a primary adjuvant treatment. One T1 patient underwent primary cystectomy. Fifteen (63%) of patients with T1 tumours underwent second-look resection. Overall, 50 patients (48%) suffered recurrence during the follow-up period (median: 2.5 years). Early recurrence rate, that is recurrence at first control cystoscopy, was 16% and one-year recurrence rate was 26%.

**Conclusion:** Recurrence rate after primary TURBT for newly diagnosed patients with NMIBC in Iceland 2013-2014 was substantial. Limiting the number of operative surgeons, improving and standardizing the surgical technique and increased use of adjuvant intravesical treatment in concordance with international guidelines might reduce tumour recurrence rate.

**Disclosure of Interest:** None Declared

**Keywords:** None

47. **THE DANISH BLADDER CANCER DATABASE: ESTABLISHMENT AND PRELIMINARY RESULTS**

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**Introduction:** The Danish Bladder Cancer Database (DaBlaCa-data) is a national quality database that monitor the treatment and survival of all patients diagnosed with invasive (T1-T4) bladder cancer (BC) in Denmark (DK). The database was established in 2013 with the first yearly report published February 1st 2016.

**Objectives:** To avoid extensive manual registration, the DaBlaCa-data is largely based on secondary data from the Danish National Registry of Patients (DNRP) and the Danish National Pathology Register (DNPR). A dedicated and highly validated algorithm was generated to subtract the secondary data to be able to include all patients nationwide.

**Methods:** Results presented in this abstract represent the results from the second yearly report published February 10th 2017. All patients diagnosed with invasive BC in DK from September 1st 2014 to August 31st 2015 were registered and included in this analysis. To identify patients, the algorithm subtract patients from DNPR and DNRP using the pathology code for BC in DNPR and the diagnose code for BC in DNRP. Tumor stage and lymph node stage were identified using the specific pathology codes in DNPR. The variables cystectomy and curative intended radiation therapy were identified using the specific procedure codes in DNRP. The variable chemotherapy was identified using the procedure code in DNRP whereas the purpose of the chemotherapy was manually registered. Cause of death were registered manually.

**Results:** During the inclusion period, 970 patients were diagnosed with BC in DK. Patients with a T1 tumor accounted for 47.5% whereas 49.4% of the patients had muscle invasive disease and 3.1% with unknown tumor stage. Cancer specific survival one year after the BC diagnose was 78% (95% CI: 75-80). Of the included BC patients, 310 (32%) underwent cystectomy as primary treatment. Cancer specific survival one year after cystectomy was 87% (95% CI: 82-90). The number of patients who received curative intended radiation therapy (RT) against their BC was 103 (11%). Cancer specific survival one year after RT was 75% (95% CI: 66-83).

**Conclusion:** The DaBlaCa-data is able to identify all Danish BC patients and monitor treatment and mortality including complete follow-up nationwide. When longer follow-up is available, clearer impact on disease specific survival of treatment modality is expected.
In the future, DaBlaCa-data will be a valuable data source for expansive observational studies on BC.

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Disclosure of Interest: None Declared

Keywords: Epidemiology & Evaluation

48. SIDE EFFECTS OF AMBULANT MITOMYCIN INSTILMENT IN THE BLADDER GIVEN AS WEEKLY TREATMENT AFTER TRANSURETHRAL RESECTION OF THE BLADDER (TURB) IN COMPARISON WITH SIDE EFFECTS OF MITOMYCIN INSTILMENT GIVEN WITHIN 24 HOURS AFTER TURB.

Annette Hjuler*

Introduction: Mitomycin (MC) is a cytostaticum which can be used locally in the bladder after transurethral resection of the bladder (TURB) of non-invasive bladder cancer. The treatment is applied to superficial T1 tumors with the purpose of reducing relapse to the formation of tumors. The treatment can be applied within 24 hours postoperatively before the patient leaves the hospital, or installed in the outpatient clinic in a series of 8 treatments performed once weekly.

Objectives: The aim of the study was to compare side effects between the two types of treatments.

Methods: The study was retrospective and based on a survey conducted among 65 patients who received TURB at Randers Regional Hospital (DK) and who had MC instilled in the bladder within 24 hours. The data was collected as we commenced the treatment. The day after installation of MC the patient was contacted by telephone and side-effects were documented by ways of using a standardized questionnaire. In 2016 11 patients at AUH started installation of MC over a period of 8 weeks. The MC procedure was conducted in the outpatient clinic. During every consultation we discussed the condition since last installation regarding urination, side-effects and whether the patient had been able to contain the MC for the prescribed 2 hours.

Finalizing the study, the medical files of each patient were examined in order to compare side effects of both treatments.

Results: From the comparison between the two modalities of treatment it appears that skin irritation was more frequent with the patients who were treated with 8 weekly installations in the outpatient clinic. Urgency was seen in around 50% of the cases in both groups and infection was only observed with patients who had the 8 weekly treatments. The ability to contain MC was higher among patients who had the treatment within 24 hours compared to weekly installations. The overall experience was that the number of side effects increased and correlated with time of treatment.

Graphics:
Table 1 Comparison of side-effects between two modalities of MC installation therapy reported by proportions.

<table>
<thead>
<tr>
<th>Side effects</th>
<th>MC instilled within 24 hours after TURB*</th>
<th>%</th>
<th>MC instilled in outpatient clinic <em>8 with 1 week’s interval</em>*</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin irritation</td>
<td>3</td>
<td>4,6</td>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td>Urgency</td>
<td>30</td>
<td>46</td>
<td>7</td>
<td>50</td>
</tr>
<tr>
<td>Infection</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>29</td>
</tr>
<tr>
<td>Ability to contain Mitomycin in the bladder for 2 hours</td>
<td>33</td>
<td>51</td>
<td>6</td>
<td>43</td>
</tr>
</tbody>
</table>

*65 patients: 20 women and 45 men

**11 patients: 6 women and 5 men

Conclusion: This study suggests, although based on limited data, that patients who only received one-time treatment have less self-reported side-effects compared to those having received 8 weekly treatments in the outpatient clinic. However, it would require further research and more data to qualify a comparison between treatment modalities.

Disclosure of Interest: None Declared

Keywords: None

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49. KIUROLOGYX – THE FIRST CLINICAL MOOC IN UROLOGY

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Introduction: The aim of a massive open online course (MOOC) is to spread knowledge online to as many as possible free of charge. There are only few clinical MOOCs. Karolinska Institutet offered KIUrologyX during the autumn of 2015 on the platform, edx.org.

Objectives: The main objectives were to spread basic urological knowledge and at the same time construct material usable for blended teaching and learning for interested students and professionals.

Methods: The urological learning outcomes for medical students at KI were used as a template for the web-course. Four learning sections covered the material: A. Lower Urinary Tract Symptoms (LUTS), B. Hematuria, C. Pain/Lumps in the external genitals and D. Erectile Dysfunction. Totally 52 video lectures between 1 and 17 min were produced, and all lectures were followed by 3-5 formative MCQ (multiple choice questions). Two virtual patient cases were developed where students could practice their clinical reasoning by choosing treatment options followed by feedback. The course ended with a final examination covering the entire course content. Learners completing the course received an honour certificate.
**Results:** Total enrollment for KIUrologyX during the six week course, was 4925 students. The completion rate was 10.4% (514). The gender distribution (M/F) were 62 vs 38%. Totally 161 countries (82%) where represented with the majority of learners from the United States 940 (19.1%). 70.5% had a college degree or more and 25% had a high school diploma or less. The median age was 28 ranging between 15 and 88 years. 287 of the students answered optional questions about their background, which was used to divide them into healthcare/non healthcare professional. The healthcare group consisted of medical students, medical doctors and people working with healthcare. The healthcare group had lower video activity, 51% compared to 63%, but the same completion rate 58.5% vs 60% compared to the non-healthcare group. Out of the 240 learners answering the course evaluation 87% reported having achieved the learning outcomes to a large/very large extent. Ninety-eight percent would likely/very likely recommend the course.

**Conclusion:** Basic clinical urology can be taught online to healthcare as well as non-healthcare populations from all over the world, with very high satisfaction and successful rate. Learners with different ages, gender, educational background, countries and professional background took the course and the completion rate was high considering it is a MOOC, 10.4%.

**Disclosure of Interest:** None Declared

**Keywords:** None

50. **THE PREVALENCE AND OUTCOMES OF FRAILTY IN ELDERLY PATIENTS UNDERGOING CURATIVE SURGERY FOR UROLOGIC MALIGNANCY – A PILOT STUDY.**

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**Introduction:** It is a known challenge for health professionals to assess whether elderly patient is suitable to undergo surgery or not (1). An operation can potentially provide more years of life, but also cause a risk of reduced quality of life due to perioperative complications (2,3). These challenges are well known in the urological specialty, especially in relation to the most common oncological operations in urology; prostatectomy, cystectomy, nephrectomy and nephroureterectomy (4).

**Objectives:** This pilot study aimed to describe the prevalence of frailty and the association of frailty and length of hospital stay, perioperative complications and post-operative in hospital mortality in elderly patients undergoing curative surgery for urologic malignancy.

**Methods:** Edmonton Frail Scale (EFS) was used preoperatively to identify frailty among 50 patients undergoing cystectomy, prostatectomy, nephrectomy or nephroureterectomy aged 65 years or older in the clinical setting of the Department of Urology, Aalborg University Hospital, from October 2015 to June 2016. EFS is a brief and user-friendly instrument for measuring frailty among older patients (5). In addition, the strength of the lower extremities and the functional mobility was measured by the 30-Second Chair Stand Test (30-s CST). Baseline demographic data, length of hospital stay, perioperative complications and post-operative in hospital mortality were collected through a combination of patient interviews and the Patient Administration System. The collected data was analyzed using the statistical program SPSS 23.

**Results:** The pre-operative data collection was completed in 37 patients with a mean age of 72.3 (SD ±5.1 years) and 75.7% were men. The EFS was dichotomized at the mean value within this study population. 32.4% of the patients were found frail (EFS score ≥5) and 14.0% were at high risk of loss of functional mobility (30-s CST ≤ 8). Frail patients had longer length of hospital stay (mean [SD], 5.6 days [±5.2] vs. 2.5 days [±2.2]) and higher post-operative in hospital mortality (9.0% vs. 0.0%) than non-frail patients. Non-frail patients reported more post-operative complications than frail patients (32.0% vs. 16.7%). None of the results achieved statistical significance.
Conclusion: Frailty is common in elderly patients undergoing curative surgery for urologic malignancy. The study showed a tendency that frail patients have longer hospital stay and higher post-operative in hospital mortality than non-frail patients.


Disclosure of Interest: None Declared

Keywords: Training & Skills Assessment

51. COMPARISON OF SEMEN QUALITY BETWEEN UNIVERSITY AND PRIVATE CLINIC LABORATORIES

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Introduction: Obtaining an ejaculate and performing a semen analysis (SA) is an essential first step in evaluating the infertile man. Based on the SA the physician determines the nature of further evaluation and treatment. Multiple treatment options are available and range from simple counseling to the more complicated and expensive assisted reproduction techniques (ART).

Objectives: The objective of this study was to investigate inter-laboratory variation in semen quality between private ART laboratories and university-based ART laboratories respectively.

Methods: Internal review board approval was obtained to retrospectively evaluate patients who had undergone a SA at both the University of Michigan Center For Reproductive Medicine and private practice ART laboratories. When more than one SA was available from both clinics the first SA at each clinic was selected for analysis. Comparison of major semen parameters were performed using Wilcoxon signed-rank test.

Results: A total of 28 men aged 33 ± 5 (mean ± SD) years were included in the study. Motility was statistically significant higher at the private ART laboratories when compared to the University of Michigan ART laboratory (53% (1·81%) vs. 40% (1·50%), median (range), p = 0·002). Percent normal morphology was statistically significant higher at the University of Michigan ART laboratory compared to the private ART laboratories (8·2% (6·0-11·0%) vs. 2·9 (0·0-9·0%), p < 0·001). No differences were found in volume, concentration and total motile sperm count.

Conclusion: In this small series, motility was significantly higher at private ART laboratories. However mean motility was above the WHO 5th edition lower reference limit at both the private- and university-based ART laboratories and no differences were found in total motile sperm counts. Sperm morphology was significantly lower in semen analyses performed at private ART laboratories and was below the WHO 5th edition lower reference limit. Since sperm morphology under 5% is commonly used to recommend IVF with ICSI,
underestimation of sperm morphology at private laboratories may lead to over-utilization of high level assisted reproductive techniques at these sites.

Disclosure of Interest: None Declared

Keywords: Male

52. HAND-ASSISTED LAPAROSCOPIC VERSUS LAPAROSCOPIC NEPHRECTOMY AS OUTPATIENT PROCEDURE-A PROSPECTIVE RANDOMIZED STUDY.
Nessn Azawi1,2, Tom Christensen3, Claus Dahl3, Lars Lund1,4
1Clinical institute of Public Health, University of Southern Denmark, Odense, 2Department of Urology, 3Zealand University Hospital, Zealand University Hospital, Roskilde, 4Department of Urology, Odense University Hospital, Odense, Denmark

Introduction: Recovery and duration of hospital stay are important benchmarks of surgical success; several approaches have been used to reduce length of hospital stay after surgery (LOS).

Objectives: To compare hand-assisted laparoscopic nephrectomy (HALNo) to laparoscopic nephrectomy (LNo) as outpatient procedures.

Methods: A prospective, randomized study including 30 patients fit the inclusion criteria out of 102 patients with renal tumor between November 2014 and February 2016 see figure 1. Primary end-point is hospital stay.

Inclusion criteria
To be eligible, patients had to be between 30 and 75 years of age, be able to read and understand Danish, be diagnosed with renal tumor, and be undergoing planned laparoscopic radical nephrectomy. Each patient was required to have relatives at home for the first 24 hours after discharge.

Results: Male: female ratio 2:1. Mean age was 60 year for HALNo and 64 year for LNo (p = 0.62). All patients discharged within the first 6 hours. Mean operation time was 65 min (SD = 24 min; 95% CL [51 – 79]) and 69 min (SD = 24 min; 95% CL [56 – 83]) for HALNo and LNo patients, (p = 0.95). The mean LOS was 220 min (SD = 96 min; 95% CL [155 – 284]) and 272 min (SD = 80 min; 95% CL [224 – 320]) for HALNo and LNo, (p = 0.53). Tumor size 84 mm (SD = 33.5; 95% CL [64 – 104]) for HALNo and 75 (SD = 29.3; 95% CL [59 – 92]) for LNo (p = 0.62). BMI 28 (SD = 3.3; 95% CL [26 – 30]) for HALNo and 29 (SD = 5; 95% CL [26 – 32]) for LNo (p = 0.16). Two patients underwent extended lymphadenectomy in HALNo. 3 patients had metastatic disease in HALNo and one in LNo. 10 patients had ≥pT2 tumor in HALNo and 2 patients in LNo. Charlson Index 2.7 (SD = 2.7; 95% CL [1.2 – 4.3]) in HALNo & 2.3 (SD = 1.9; 95% CL [1.2 – 3.3]) for LNo (p = 0.16).

Graphics:
Conclusion: Hand assisted laparoscopic nephrectomy compared to standard laparoscopic nephrectomy is safe and feasible as outpatient procedure for a well-informed and selected patient.

Disclosure of Interest: N. Azawi Research support from: Region Zealand Research Foundation, T. Christensen: None Declared, C. Dahl: None Declared, L. Lund: None Declared

Keywords: Kidney & Bladder, Localized: Surgical Therapy

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53. MICROWAVE ABLATION OF RENAL CELL CARCINOMA: INITIAL SAFETY AND EVALUATION OF LOSS OF FUNCTION IN THE TREATED KIDNEY

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¹Urologisk, Herlev Hospital, Copenhagen, Denmark

Introduction: Microwave ablation is a treatment option for Renal Cell Carcinoma (RCC) in patients, not suited for partial or radical nephrectomy, due to comorbidity or impaired renal function.

Objectives: This is an initial study of the 34 first patients with RCC, treated with microwave ablation (MWA) in this institution

Methods: Prospectively collected data from 34 patients treated in a period of 31 months (June 2014 to January 2017).

All patients had RCC, verified by renal mass biopsy. All tumors, but one were Ø<5cm (T1a or T1b), measured by Computer Tomography (CT)
The tumors were treated with MWA. The antenna was connected to a generator, Amica (n=17) or MicroThermX (n=17). The energy delivered to the tumors ranged from 3.6Kj to 90Kj/tumor (Mean 18Kj/tumor, 20W-100W spanning from 3 to 17 minutes).

25 patients were treated percutaneously guided by ultrasound (n=20) or CT (n=5), with a hospital stay of <24 hours (n=15), <48 hours (n=8) or <72 hours (n=1).
Nine patients were treated as a part of a laparoscopic (n=6), or open (n=3) procedure, with a median hospital stay of 3 days (range 0-23 days).

**Results:** Median patient age was 71 years (38-94) and 74% were males.
RCC subtypes included clear cell (n=23), papillary (n=8) and chromophobe (n=3).
Median tumor diameter was 3 cm (range 0.8-5.0).
Complications recorded: Clavien 1: n=2, Clavien 2: n=3. Clavien 3 or greater; 1 patient.
29 patients have been followed up with CT, 33 patients have been followed up with eGFR, 13 patients have been followed up with renography with selective Cr-51-EDTA clearance of the treated kidney.
The postprocedure eGFR in 33 patients dropped 7% from median 60ml/min*1.73m2 (range 20-113), to median 56ml/min*1.73m2 (range 7-97).
The postprocedure Cr-EDTA clearance of the treated kidney dropped 22% from median 36ml/min*1.73m2 (range 22-43), to median 28ml/min*1.73m2 (range 22-47).
24/29 patients had no local recurrence or metastasis at the latest CT follow-up (Median: 12 months, range 4-26 months)
3/29 patients had verified local recurrence 8-12 months after MWA and was retreated with no recurrence after.
1/29 patients had a tumor that did not respond to MWA, and had partial nephrectomy 4 months after the MW treatment.

**Conclusion:** Use of Microwave ablation for the treatment of T1a and T1b RCC is safe and efficacious with short-term follow up. It is a nephron-sparing, minimally invasive procedure. A longer follow-up in a larger population is warranted to evaluate oncologic outcomes.

**Disclosure of Interest:** None Declared

**Keywords:** None

54. RENAL CELL CARCINOMAS MASS OF LESS THAN 4 CM ARE NOT ALWAYS INDOLENT

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**Introduction:** The incidence of incidentally detected small (less than 4 cm) asymptomatic renal tumors have increased dramatically due to an increase in CT scans for other indications [1]. This has prompted an increase in kidney surgeries, however, mortality from kidney cancer has not decreased, probably due to the fact that a large proportion of these tumors are slow-growing / indolent [2]. Due to the potential morbidity associated with surgery, active surveillance (AS) may therefore be applied in elderly patients with severe comorbidities and small renal masses [3]. This conservative approach is recommended in selected patients in both European and Danish guidelines [4]. The rate of progression to metastatic disease in patients undergoing AS varies in the literature between 1% and 8% [5, 6].

**Objectives:** To examine the incidence of metastasis in small renal tumors of less than 4 cm in a Danish cohort.

**Methods:** Data on 106 patients who were diagnosed with renal cancer (RCC) of less than 4 cm by CT scan from January 2008 to December 2013 were collected retrospectively in January 2016 from patient charts and analyzed.

**Results:** The mean age was 62 years (range 40 – 84 years). Two patients (1.9%) had metastases at the time of diagnosis. Radical nephrectomy was performed in 74 patients (70%); of them one patients (1.4%) experienced late metastasis (LM). Partial nephrectomy was performed in 30 patients (28%); of them two patients (6.7%) experienced LM. The mean time to LM was 27±12 months (95% CI: 4-56). Cancer specific survival (CSS)
rates were 98%, 97% and 97% for 1, 3 and 5 years, respectively, while overall survival (OS) rates were 96%, 92% and 86% for 1, 3 and 5 years, respectively. On multivariate analysis, tumor size (p=0.04), pT3a (p=0.0017) and patient's age (p=0.02) at the time of diagnosis were significant predictors of LM.

**Conclusion:** Even small renal carcinomas may be aggressive and caution should be taken when offering AS. New methods are needed to characterize the aggressiveness of renal masses in order to offer the optimal management.

**References:**

**Disclosure of Interest:** None Declared

**Keywords:** Detection & Screening, Kidney & Bladder, Surgical Therapy

55. A RANDOMIZED CONTROLLED STUDY OF SPINAL ANALGESIA SHOW IMPROVED SURGICAL OUTCOME AFTER OPEN NEPHRECTOMY FOR RENAL CELL CARCINOMA AS COMPARED WITH EPIDURAL ANALGESIA

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**Introduction:** To evaluate if a more effective perioperative analgesia can be used to minimize morbidity and improve postoperative management after open surgery in renal cell carcinoma (RCC).

**Objectives:** To determine if high spinal anesthesia with clonidine can enhance postoperative analgesia, increase mobilization and reduce length of hospital stay (LOS).

**Methods:** Between 2012 and 2015, 135 patients with RCC were randomized, to receive either spinal analgesia with clonidine or epidural analgesia, stratified to surgical technique. Inclusion criteria: ASA score ≤ III, age > 18 years, and no chronic pain medication or cognitive disorders.

**Results:** The median LOS was 4 days in the spinal group compared with 6 days LOS for patients in the epidural group (p= 0.001). No differences regarding duration of surgery, blood loss, RENAL score and tumor size and in complications between the given anesthesia methods, was found. One limitation was that different anesthesiologists were responsible for the spinal or epidural anesthesia, as in a real word clinical situation. This was also a strength for the study.

**Conclusion:** In this clinical randomized study, spinal analgesia with clonidine was superior to continuous epidural analgesia in patients operated with open nephrectomy. This was based on shorter LOS for the patients. A shorter LOS in the study group indicates faster mobilization and improved analgesia. Spinal analgesia was not afflicted with more complications.

**Disclosure of Interest:** None Declared

**Keywords:** Surgical Therapy & New Technology
56. USE OF VENOUS-THROMBOTIC-EMBOLIC (VTE) PROPHYLAXIS IN PATIENTS UNDERGOING SURGERY FOR RENAL TUMORS IN NORDIC COUNTRIES (THE NORENCA-II STUDY)
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Introduction: Development of venous thromboembolism (VTE) is due to a homeostatic imbalance in the interaction between the vessel wall, flow and blood composition. Reduced flow is a well-known risk factor for VTE. Cancer patients often have reduced flow, particularly associated with prolonged immobilization or by direct compression of the veins by a growing tumor.

Objectives: The purpose of the study is to examine whether renal cancer patients in the five Nordic countries undergoing surgery receive VTE prophylactic treatment (VTEP).

Methods: A 21-question internet based questionnaire on renal tumor management before and after surgery was mailed to all Nordic departments performing renal cancer surgery. The questions were subdivided into the different surgical modalities and the use of VTEP. Descriptive statistics were performed.

Results: The questionnaires were posted to 91 institutions of which 6 did not perform renal surgery in 2016. We received responses from 45 of 85 hospitals performing renal surgery (response rate 53%). None of the centers used VTEP before surgery unless the patient had a vena caval tumor thrombus. Overall, VTEP in the hospital for patients undergoing renal surgery included 47% using early mobilization, 53% compression stocking and 88% low molecular weight heparin (LMWH). In patients undergoing open radical or partial Nx, 79 % received VTEP (24% compression stockings, 2% subcutaneous heparin and 94% LMWH). After leaving the hospital the proportion of patients received VTEP for differing periods (6% for one week, 35% for 2 weeks, and 59% for four weeks). In patients undergoing robotic radical Nx 19% received VTEP for one week, 44% for 2 weeks and 37% for 4 weeks. For those who underwent lap/robotic partial Nx, 69% received VTEP. In these, in total 30% had compression stockings, 10% subcutaneous heparin and 87% received LMWH. VTEP was continued for one week, 2 weeks and four weeks for 20%, 50% and 30% of the patients respectively. Five centers performed lap/robotic thermal ablation of tumors and overall 57% used compression stockings and 71% LMWH. Two centers continued VTEP for one week (40%) and three for 2 weeks (60%). Two centers performed percutaneous ablation.

Conclusion: We found differences in duration of VTEP use by type of operation and across differing facilities. Given the highly varied approach to VTEP, the presented data suggests a need for national and international guidelines to help reduce the variations in care regarding VTE prophylaxis in renal surgery.

Disclosure of Interest: None Declared

Keywords: Evaluation, Kidney & Bladder, Therapy

57. RECURRENCE OF RENAL CELL CARCINOMA AFTER KIDNEY SURGERY FOR LOCALIZED DISEASE – FIRST DANISH EXPERIENCE
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Introduction: The abstract aims to contribute to the understanding of recurrence of primary non-metastatic renal cell carcinoma.
Objectives: To present the occurrence of recurrences in primary non-metastatic patients with renal cell carcinoma (RCC) and the treatments given in a Danish cohort.

Methods: This is a retrospective study including primary non-metastatic RCC patients who underwent partial nephrectomy (PN), nephrectomy or microwave ablation who subsequently developed recurrent disease. The patients were identified in connection with MDT conferences. Patients were risk stratified by Leibovich score in low, intermediate and high risk groups. Site of recurrence, time to recurrence, and treatment were documented.

Results: Over a 2 year period, 50 patients were identified, 34 men and 16 women. Median follow up time was 51 months. 7 patients died during follow-up (7-75 months). The Leibovich score could not be established in 4 (7%) patients. 8 (16%) patients were in the low risk group, 26 (52%) intermediate risk group, 12 (24%) in the high risk group. 9 (18%) had partial nephrectomy, 2 patients had micro wave ablation. Median time to first recurrence in the low risk group was 19 months, intermediate risk group 25 months, high risk group 10 months. Median time after PN was 13 months (5 low risk and 4 intermediate risk patients). Metastasectomy at first recurrence with curative intent was performed in 52% of the patients. The most common site of local recurrence was the lungs in 28 (54%) of all cases.

15 patients had recurrence in multiple organs, 33% were low risk tumors, who represented 16 % of the cohort. 6 patients of those patients received targeted therapy.

11 patients (21%) were not diagnosed with relapse after metastasectomy for first recurrence. The median follow up time in this group was 16 months.

18 patients had a second recurrence, 11 patients a third, and 4 patients a fourth recurrence. 3 out 4 patients with a fifth recurrence were high risk patients.

Graphics:
Conclusion: Our study shows that low risk tumors seem to often have recurrences in multiple sites, and high risk tumors have multiple recurrence rates. Median time to first recurrence was shortest in the high risk group. The time to first recurrence after PN was shorter than expected. This cohort is relatively small and further investigation of RCC patients is needed in order to establish a more adequate overview of recurrence rate and treatment results.


Disclosure of Interest: None Declared

Keywords: Kidney & Bladder, Surgical Therapy

58. DO WE NEED A POST-BIOPSY OBSERVATION PERIOD FOLLOWING ULTRASOUND GUIDED BIOPSIES OF RENAL MASSES?

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Introduction: Ultrasound guided biopsies plays an important role in the immediate diagnosis of renal tumours, but there exists no consensus regarding the extent of the post-biopsy observation period.

Objectives: To assess the short-term complication rate following ultrasound guided biopsies of renal masses performed in an outpatient setting. Furthermore, to evaluate the onset of complications following this procedure.

Methods: Between March 2012 and March 2014 a total of 287 ultrasound guided renal mass biopsies were performed in an outpatient setting at Aarhus University Hospital, Denmark. A retrospective review of all patient records was undertaken in order to identify post-biopsy complications according to the Clavien-Dindo classification.
**Results:** The overall complication rate was found to be 3.8% (11 patients). Major complications occurred in 1.0% of all cases (3 patients); one case of on-going haemorrhage requiring endovascular intervention and two cases of septicaemia. Minor complications occurred in 2.8% of all cases (8 patients); six cases of self-limiting gross haematuria, one case of asymptomatic subcapsular haematoma and one case of vasovagal syncope. The onset of these complications ranged from the time of biopsy and up to four days after the procedure.

**Conclusion:** Ultrasound guided biopsy of renal masses appears to be a very safe procedure with only few complications. The procedure can be performed in an outpatient setting with a short or no post-biopsy observation period.

**Disclosure of Interest:** None Declared

**Keywords:** Kidney & Bladder

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59. **ALTERING EXPRESSIONS OF NOD1 AND NOD2 (NUCLEOTIDE-BINDING OLIGOMERIZATION DOMAIN) RECEPTORS IN HUMAN CLEAR CELL RENAL CELL CARCINOM**

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**Introduction:** Members of the Toll-like Receptor Family (TLRs) of the congenital immune system have been extensively investigated with regard to oncogenesis1. Recently, however, a second protein family, the NLR/NOD/Caterpiller family, has found to be associated with the innate immune system2. These NOD (nucleotide-binding oligomerization domain)-like receptors are intracellular receptors and belong to the family of Pattern Recognition Receptors (PRRs). In a study using a mammary carcinoma xenograft model in the mouse it could be demonstrated, that the absence of NOD1 correlated with tumor growth and NOD1-dependent apoptosis. In contrast NOD2 did not induce apoptosis3. Furthermore it is of relevance that NOD1 and NOD2 are present in both murine and human renal tubular cells and are upregulated in ischemia4.

**Objectives:** Hence, we aimed at investigating the role of NOD1 and NOD2 in the tumor-associated local immune response in human clear cell renal cell carcinoma (ccRCC) and adjacent non-tumorous tissue.

**Methods:** Tumor and corresponding adjacent healthy tissues were obtained from 31 patients with a histopathological diagnosis of ccRCC. Additionally cell culture assays were performed with the ccRCC cell line 786-O.

**Results:** The mRNA expression of NOD1 and NOD2 relative to the RPL-PO expression was measurable in both tumor and adjacent healthy tissue. Regarding NOD1 there was a significantly lower expression in tumor tissue compared to healthy tissues (p<0.001). In contrast NOD2 although overall markedly lower expressed displayed a significant higher expression in tumor tissue compared to healthy tissues (p<0.01). NOD1 mRNA did not correlate with the gene expression of CAIX, IL-6 nor TNFα in both tumor and adjacent healthy tissue, in contrast NOD2 correlated with TNFα in both tumor and adjacent healthy tissue. However, no association with tumor stage, tumor differentiation, nor metastasis could be revealed. 786-O cells were stimulated with 1, 10 and 20μg M-TriDAP (NOD1/2 ligand) for 15min, 30min, 1, 4, 8 and 24h. Here protein expression of RICK, a kinase implicated in NOD signaling was constitutively expressed and differently regulated in the time course.

**Conclusion:** We conclude that differing gene expression of NOD1 and NOD2 in ccRCC tissue and adjacent healthy tissue could be involved in the pathogenesis of renal cell carcinoma and might therefore provide a molecular therapeutic approach.

**References:**
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4 Nod1 and nod2 are expressed in human and murine renal tubular epithelial cells and participate in renal ischemia reperfusion injury. A. Shigeokaand D. B. McKay, J Immunol2010

Disclosure of Interest: None Declared

Keywords: Basic Research & Pathophysiology, Kidney & Bladder

60. A DESCRIPTIVE STUDY OF EXPERIENCED BURDEN BY SPOUSES LIVING WITH MEN UNDERGOING ANDROGEN DEPRIVATION THERAPY FOR PROSTATE CANCER
Jeanne L. Avlastenok*, Kirsten Rud1, Helle Køppen1, lillian Føns1, Peter Østergren1
1Urology , Herlev Hospital, Herlev, Denmark

Introduction: Since 2013 men with prostate cancer undergoing androgen deprivation therapy (ADT) have been offered a supervised group-based exercise program as standard of care at our department. The intervention consists of an educational session of 1½ hours followed by group-based supervised exercise 2 times a week for 12 weeks. While this program focuses on patient experienced QoL previous studies have shown that a cancer disease may negatively impact QoL of the entire family

Objectives: The objective of this study was to investigate the prevalence of experienced burden by the partners of men with prostate cancer undergoing ADT and attending a hospital based exercise program

Methods: Spouses of men with prostate cancer undergoing ADT and participating in our exercise program were invited to participate. Burden was evaluated by 6 selected questions of an 18-questions family burden questionnaire. 2 of the questions investigated if the partner felt his or her QoL changed during the exercise program and if time spent on the partners disease changed. The questionnaire has been validated for relatives of patients undergoing liver transplant. The relatives were given the questionnaire: at baseline, 12 weeks and 24 weeks after start of the exercise program. Questionnaires were only included in the final analysis if they had been filled out at least at baseline and 24 weeks

Results: 70 spouses participated from August 2014 to October 2015. Questionnaires from 56 were available for the final analysis. They were all women with a mean age of 69 years. 26 out of 56 (46%) spouses reported at some point during follow-up that their partner’s disease affected their own health (mentally or physically) and 28 out 56 (50%) reported that it affected their daily mood. 23 out 56 (41%) of the women reported to have a worsened QoL and 25 out 56 (45%) said they were burdened with more practical work because of their partner’s disease. Conversely, 13 out 56 (24%) of the women reported to have reduced the time spend on their partner’s disease after the exercise program and at 24 weeks 11 out 56 (20%) of the spouses reported to have a better QoL than 3 months before (13% reported worse QoL

Conclusion: The main finding of this study is that an overwhelming proportion of spouses >40% experience that their partner’s prostate cancer disease affects their own health, daily mood and overall QoL. Group based exercise (for patients) may be one way to support the spouses. However, further studies on partner experiences are needed to make this claim

Disclosure of Interest: None Declared

Keywords: Evaluation

61. PATIENT REPORTED QUALITY IN FAST-TRACK NEPHRECTOMY ON RENAL CANCER PATIENTS – DEVELOPMENT AND VALIDATION OF A QUESTIONNAIRE
Theresa Junker"
**Introduction:** 800-900 new cases are diagnosed with renal cancer per year in Denmark. Many undergo nephrectomy. Fast-track surgery is an evidence-based multimodal regime of treatment which reduces the period of convalescence.

**Objectives:** The aim of the study was to develop and test a questionnaire to explore the quality reported by patients who had a fast-track nephrectomy at Odense University Hospital with a particular focus on information and patient involvement in fast-track surgery.

**Methods:** The survey was designed as a cross-sectional study. Data was collected by using a questionnaire developed specifically to the context of this study. The questionnaire consisted of both specific questions developed for this study and questions from other health scientific surveys. A test-retest was done to address the reliability of the questionnaire. From 1/2-16 to 15/4-16 patients answered the questionnaire when they were discharged from the department of urology. Two days later they replied the questionnaire. The results were reported in proportions and analysed primarily by using the Fisher’s exact test.

**Results:** The questionnaire was completed by 19 patients, generating a 95% response rate. The response rate in the retest was 89%. There was respectively 95% and 79% of the patients in the pre- and postoperative period that indicated a high degree of knowledge about the constituent elements of fast-track nephrectomy. There was a significant association between the degree of knowledge about the constituent elements of fast-track nephrectomy in the postoperative period and the quality reported by the patients. A large percentage of the patients experienced pain that required treatment during the hospitalisation. There wasn’t found any association between pain and the patient reported quality. A significant association was found between high quality reported by the patients and whether the patients considered a match between the information preoperatively and the experience postoperatively. There was also found a significant association between the evaluation of oral information under hospitalisation and the quality reported by the patients postoperatively.

**Conclusion:** The study showed a high quality reported by the patients in fast-track nephrectomy on renal cancer patients. The majority of the patients considered the information sufficient and felt appropriately involved in the treatment decisions.

**Disclosure of Interest:** None Declared

**Keywords:** None

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### INGESTING A SPECIALLY DESIGNED ICE CREAM EARLY AFTER SURGERY – A PILOT STUDY

Lene Lehmkuhl*

**Introduction:** It is well known that the need for energy and protein shortly after surgery is crucial in order to prevent the catabolic state following surgery and reduce peripheral insulin resistance. It is also known to improve the patient’s postoperative physical function, reducing the number of postoperative complications and may result in earlier discharge from the hospital.

**Objectives:** The aim of this prospective pilot study is to show that patients early after surgery in general anesthesia are able to ingest a specially designed ice cream with an acceptable incidence of PONV evaluated on objective and subjective criteria’s.

**Methods:** This survey includes 30 patients having elective surgery on benign indication in general anesthesia at OUH Svendborg Hospital. They are asked for informed consent and to choose between strawberry or lemon ice cream flavors on the day of surgery.

**Results:**
- 30 patients participate, 57% male and 43% female
- Type of surgery: 50% gastroenterology, 26.5% orthopedics, 16.5% urology and 7% otology.
- Two patients withdrew due to of changed-of-mind and severe pain.
- The strawberry flavored ice cream was ingested in a variation from all to non and all of the lemon flavored ice cream was ingested.
The patient’s subjective impression was that the ice cream taste good, and that it was nice ingesting something cold and sweet.

The staff found it easy to handle and serve for the patients.

**Conclusion:**
- Patients are able to ingest a specially designed ice cream early after surgery
- 90% ingested all or more than half of the 75ml ice cream
- 100% of the patients having PONV prophylactic treatment had no PONV (score 0) at the time of discharge. This is a reduction from before ingesting the ice cream, where 75% having lemon flavored ice cream and 82% having strawberry flavored ice cream had no PONV (score 0)
- The incidence of PONV is assessed acceptable for patients with non-prophylactic treatment due to no PONV, 100% for lemon and 88% for strawberry at the time of discharge. This with no change before and after ingesting both flavored ice creams.
- Overall the patients liked the ice cream and both the patients and staff felt the ice cream was possible to handle within the Recovery room
- The pilot study indicates beneficial outcome due to PONV and patient wellbeing after ingesting the specially designed ice cream, especially the lemon flavored.
- A larger scale research is needed to explore the beneficial outcome due to reducing postoperative complications and and earlier discharge from the hospital.

**Disclosure of Interest:** None Declared

**Keywords:** Medical & Dietary Therapy, Quality Improvement & Patient Safety

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63. **RE-OPERATION RATE AFTER PREPUTIOPLASTY OR CIRCUMCISION FOR PHIMOSIS IN BOYS**

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1Urologi, Herlev & Gentoft Hospital and OUH, 2Urologi, Herlev & Gentoft Hospital, 3Urologi, Herlev hospital, Herlev, Denmark

**Introduction:** Preputioplasty may be preferred as an alternative procedure to circumcision for the treatment phimosis in boys, as it maintains the physical foreskin appearance intact and is supposed to reduce postoperative pains.

**Objectives:** The aim of this study was to evaluate the re-operation and complication rates of preputioplasty compared to circumcision in boys with symptomatic phimosis.

**Methods:** Total 223 boys mean age 8.08 years (2-17) operated for phimosis during the period 2009 to 2012 were rewired, complications noted until October 2014 were recorded.

**Results:** Preputioplasty was performed in 149 children and 74 underwent circumcision. The re-operation rate was 7% and 8% respectively. Total 3.4% (5 boys) had minor complications following preputioplasty and none after circumcision.

**Graphics:**

<table>
<thead>
<tr>
<th>Age distribution</th>
<th>2-5 yrs. 51</th>
<th>6-9 yrs. 70</th>
<th>10-13 yrs. 66</th>
<th>14-17 yrs. 36</th>
<th>Total 223</th>
</tr>
</thead>
<tbody>
<tr>
<td>Re-op. after</td>
<td>3/29</td>
<td>2/50</td>
<td>6/47</td>
<td>0/23</td>
<td>11/149</td>
</tr>
<tr>
<td>preputioplasty</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rate in % &amp;</td>
<td>10</td>
<td>4</td>
<td>6</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>95% CI</td>
<td>4-26</td>
<td>1-13</td>
<td>6-25</td>
<td>0-14</td>
<td>4-13</td>
</tr>
<tr>
<td>Re-op. after</td>
<td>1/22</td>
<td>3/20</td>
<td>2/19</td>
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<td>6/74</td>
</tr>
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<tr>
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</tr>
<tr>
<td>95% CI</td>
<td>1-22</td>
<td>5-36</td>
<td>3-31</td>
<td>0-23</td>
<td>4-17</td>
</tr>
</tbody>
</table>

Table 1: Distribution of age in relation to surgical procedure and re-operation rate.

**Conclusion:** The re-operation rate was the same after preputioplasty and circumcision, which was in the range of what could be expected from previously published reports in the literature.
References:

Disclosure of Interest: None Declared

Keywords: Male, Penis/Testis/Urethra: Benign Disease & Malignant Disease, Surgical Therapy

64. DOES OZONE ADMINISTRATION HAVE A PROTECTIVE EFFECT AGAINST CISPLATIN-INDUCED HISTOLOGICAL CHANGES IN RAT TESTIS?

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Introduction: In children and young adults, testicular cancer, acute leukemia and lymphoma are the common malignancies. These patients can be treated effectively with surgery, chemotherapy or radiotherapy (RT). Therefore, reducing the long-term toxicity of treatment is important to maintain quality of life.

Objectives: We investigate the protective and therapeutic effects of ozone therapy (OT), on cisplatin (CP) induced testicular damage.

Methods: Thirty healthy adult male Wistar rats divided into five groups consisting of 6 animals each. (1) control (C), (2) CP, (3) OT, (4) OT+CP and (5) CP+OT group. Histopathological findings and Johnsen scores were evaluated.

Results: High Johnsen scores (8.7±0.34) were detected in C group. In the OT group, rat testes showed mostly same morphological characteristics as the C group, but a few seminiferous tubules were showed slightly impaired spermatogenesis. There were no significant difference between OT and C groups for Johnsen scores (9.0±1.50 vs. 8.7±0.34, p=0.053).

The Johnsen scores were significantly decreased in CP group compared to the C (7.3±1.61 vs. 8.7±0.34, p=0.005) and OT (7.3±1.61 vs. 9.0±1.50, p=0.036) groups. In the pre- and post-radiotherapy CP groups, rat testes showed mild interstitial edema and tubules with incomplete maturation arrest. Most of the seminiferous tubules were preserved spermatogenesis. The Johnsen scores were significantly increased in CP+OT and OT+CP groups compared to the CP group (9.7±0.17 vs. 7.3±1.61, p<0.004; 9.9±0.08 vs. 7.3±1.61, p=0.002, respectively). Meanwhile, no significant difference was found in Johnsen scores when compared with CP+OT vs OT+CP groups (p=0.065).

Conclusion: The present study showed that ozone therapy is protective in cisplatin-induced testicular damage. Ozone therapy may be beneficial to patients who underwent cisplatin chemotherapy.

References:

Disclosure of Interest: None Declared

Keywords: Basic Research & Pathophysiology, Testis, Varicocele & Stones

65. THE ACCURACY OF HYPOSPADIUS DIAGNOSES IN THE DANISH NATIONAL PATIENT REGISTRY

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Introduction: A rising number of Danish studies examining temporal trends and etiology of hypospadias rely solely on diagnosis and surgical treatment registrations in the Danish National Patient Registry (DNPR). The validity of these data has, however, not been given much attention.

Objectives: We therefore aim to examine diagnostic accuracy of diagnosis and surgical treatment registrations in the DNPR, using medical records descriptions from the time of diagnosis and surgical intervention as the gold standard.

Methods: A random sample of 500 in 3,700 live born males receiving a main discharge diagnose of hypospadias in DNPR between 1995 and 2012 was drawn. The medical records have been reviewed by two independent investigators according to a standardized protocol and subsequently compared to correct for errors and disagreements. Positive predictive values (PPVs) will be used to describe the diagnostic accuracy of hypospadias registrations in DNPR. The impact of different characteristics like age at diagnosis, year of registration and type of hypospadias on PPVs will be assessed.

Results: We successfully reviewed medical records for 93% of our sample. The overall PPV of a registry diagnosis of hypospadias was 97 (95 CI %: 94 - 98) using the physicians descriptions from the outpatient clinics and operation theatres as our gold standard. Data is being further processed.

Conclusion: Our preliminary results indicate that data on hypospadias in DNPR are quite accurate and continues to serve as a valuable research resource. Further analyses will reveal whether caution shall be performed studying e.g. types of hypospadias or geographical differences. In general, our study will be an important tool discussing to what extent hypospadias research in DNPR is limited by misclassification and to what extent and in which direction estimates of true associations are affected.

Disclosure of Interest: None Declared

Keywords: Epidemiology & Evaluation, Hypospadias (Penis)

66. A DANISH NATIONWIDE ANALYSIS OF CHANGES IN THE NATURAL HISTORY OF LOWER RISK LOCALIZED PROSTATE CANCER.

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Introduction: Increased use of prostate specific antigen PSA has introduced both an increase in prostate cancer (PCa) incidence and a lead time- and stage migration at diagnosis, altering the natural history of PCa. Contemporary PCa patients are likely younger and have smaller tumor burden at diagnosis.

Objectives: To investigate whether changes in the PCa landscape have altered the course of lower-risk localized PCa on a nationwide scale.

Methods: In the Danish Prostate Cancer Registry (DaPCaR), all patients diagnosed from 1995 to 2011 with localized (T1-2, N0/X, M0) PCa with Gleason score (GS)≤6 were identified. Patients were stratified into three periods of diagnosis; 1995-2000 (period 1), 2001-2005 (period 2) and 2006-2011 (period 3). Competing risk analysis was performed.

Results: A total of 5,660 patients were identified and of these 2,030 (35.9%) had undergone radical prostatectomy (RP). From period 1 to period 3, the median age at diagnosis decreased from 72.2 years (IQR: 65.7-78.2) to 66.0 years (IQR: 61.3-70.8), p<0.0001 and the median PSA decreased almost 50% from 16.2 ng/mL (8.0-32.3) to 8.6 ng/mL (IQR: 6.0-13.0), p<0.0001. The overall 5-year risk of PCa-death decreased from 14.3% (95%CI: 12.1-16.4%) to 1.3% (95%CI: 0.83-1.7%), p<0.0001, when comparing patients diagnosed in period 3 to those diagnosed in period 1. Other cause mortality decreased from 18.1% (95%CI: 15.8-20.5%) to 7.2% (95%CI: 6.2-8.2), p=0.0001.

In patients undergoing RP, the 5-year risk of PCa-death decreased from 0.67% (95%CI: 0.67-2.0%) for patients diagnosed in period 1 to 0.45% (95%CI: 0.0055-0.84) for patients diagnosed in period 3, p=0.92. For patients not undergoing RP, the 5-year risk of PCa death decreased from 16.6% (95%CI: 14.1-19.1) to 2.0% (95%CI: 1.2-2.7%), p<0.0001.

Conclusion: In a nationwide cohort of patients with lower risk localized PCa, the 5-year risk of PCa-specific mortality significantly decreased when comparing patients diagnosed during 2006-2011 to those diagnosed during 1995-2000. This was mainly driven by patients not undergoing RP. In the most recently diagnosed group, the difference in 5-year PCa-death between patients undergoing RP and patients not undergoing RP was very small (0.45% vs. 2.0%). Our data demonstrate that the impact of PSA-induced lead-time and stage migration has diminished the difference in the risk of 5-year PCa- mortality between patients undergoing RP and those managed without RP because contemporary lower-risk localized PCa patients have a significantly better prognosis.

References:

Disclosure of Interest: None Declared

Keywords: Epidemiology & Natural History, Localized: Surgical Therapy

67. LONG-TERM URODYNAMIC FINDINGS FOLLOWING RADICAL PROSTATECTOMY AND SALVAGE RADIOTHERAPY

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Introduction: Adjuvant radiotherapy (ART) or salvage radiotherapy (SRT) to the prostatic bed may potentially cure patients with residual cancer and patients with localized recurrence after RP. However, lower urinary tract symptoms (LUTS) are common in patients treated with radical prostatectomy (RP) or radiotherapy (RT) for localized prostate cancer (PC) (1) and even higher when the two treatments are combined. When considering ART or SRT after RP, the risk of morbidity should be considered(2, 3).
Objectives: The aim of this study was to elucidate the long-term LUTS after surgery and SRT.

Methods: Urodynamic parameters from sixteen patients treated with RP and subsequent SRT in the period 2000-2010 were evaluated with uroflowmetry, filling cystometry, pressure-flow and urethral pressure profile (UPP). In conjunction with the urodynamic examination, all patients participated with the Danish Prostatic Symptom Score (DAN-PSS) questionnaire evaluating the grade of LUTS.

Results: Median time from SRT to urodynamic examination was 7.7 (range, 5.8-10.0) years. The following urodynamic parameters were affected: bladder volume at maximal cystometric capacity, bladder compliance, bladder function, bladder outlet obstruction and UPP. The total DAN-PSS index combining all symptoms and their corresponding trouble were mild in six patients (≤ 7 points), moderate in seven patients (8-19 points) and severe in three of the patients (≥ 20 points).

Conclusion: The current urodynamic study is one of the first to evaluate long-term urodynamic characteristics in patients treated with SRT. Several urodynamic parameters were affected, indicating that SRT primarily affects the bladder compliance, maximal cystometric capacity and bladder outlet obstruction. The lower urinary tract symptoms were proven to be strongly related to urodynamic parameters.

References:

Disclosure of Interest: None Declared

Keywords: Incontinence: Evaluation (Urodynamic Testing), Localized: Radiation Therapy, Prostate & Genitalia

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68. RADICAL PROSTATECTOMY: INTRODUCTION OF THE DA VINCI ROBOT IN ICELAND

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Introduction: The primary objective of the study was to compare open radical prostatectomy and robotically assisted laparoscopic prostatectomy regarding safety and success.

Objectives: Open Radical Prostatectomy (ORP) has been the standard treatment for localized prostate cancer in Iceland for many years. From January 2015 it has been exclusively Robotically Assisted Laparoscopic Prostatectomy (RALP).

Methods: The study involves all patients (80) treated with ORP in 2013-2014 and all patients (80) treated with RALP in 2015 and early 2016. Follow-up time was one year. Complications were classified according to the Clavien Dindo classification system.

Results: Mean operation time was 129 minutes in ORP and 123 minutes in RALP (P=0.13). Mean blood loss was 600 mL in ORP and 100 mL in RALP (P

Conclusion: The introduction of robotic surgery for localized prostate cancer treatment in Iceland has been successful. The method is safe and less invasive than before and it is consistent with previously reported studies.

Disclosure of Interest: None Declared

Keywords: None
69. TRENDS IN THE INCIDENCE AND SURVIVAL OF MEN DIAGNOSED WITH DE-NOVO METASTATIC PROSTATE CANCER IN THE US AND DENMARK - A POPULATION-BASED ANALYSIS OF TWO NATIONAL COHORTS


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Introduction: During the past three decades, diagnostic strategies to detect prostate cancer (PCa) have changed significantly. In the light of these changes and because new and improved life-prolonging therapies have been approved for advanced PCa, a contemporary population-based analysis of survival in men diagnosed with metastatic (M+) PCa is needed. For comparison and to evaluate long-term effects, two nationwide cohorts of men diagnosed with de-novo metastatic (M+) PCa were analyzed.

Objectives: To investigate incidence- and 5-year mortality of patients diagnosed with M+ PCa.

Methods: From SEER1 and DaPCaR2, men diagnosed with M+ PCa in the periods 1980-2008 and 1995-2011, respectively, were identified. Patients were stratified in 5-year intervals according to the year of diagnosis, including groups diagnosed in the pre PSA-era. Incidence rates of M+ and other-stage PCa were calculated for both cohorts. Five-year mortality was calculated using competing risk analysis and multivariate Cox modeling was performed.

Results: A total of 37,674 and 6,874 men with M+ PCa were identified in SEER and DaPCaR, respectively. Following a stable period, the 5-year PCa-mortality increased by 6.5% (p<0.0001) from period 3 to period 6 in the SEER cohort and in the DaPCaR cohort, the 5-year PCa-mortality decreased by 17.0% (p<0.0001), Table 1. In both cohorts, the period of diagnosis remained significantly associated with the risk of 5-year PCa-death when adjusting for age, prostate-specific antigen (PSA) (DaPCaR only) and Gleason score at diagnosis. Compared to other-stage PCa, the proportion of patients diagnosed with M+ PCa decreased significantly in both cohorts and the total number of men diagnosed with M+ PCa decreased by 2.6 per 100,000 males (from 5.4 to 2.8 per 100,000 males) in the SEER cohort (Figure 1a) and increased by 3.4 per 100,000 males (from 9.7 to 13.1 per 100,000 males) in the DaPCaR cohort (Figure 1b).

Graphics:
Conclusion: The PCA-specific mortality decreased after introduction of PSA in both countries indicating an initial effect from lead time on survival whereas results from the SEER cohort indicate a long-term effect of length time selection on survival. Patients who historically were M+ patients with more favorable prognoses (i.e. oligometastatic disease) are presently diagnosed when being M0 leaving only patients with poor prognosis to be included in the later periods. This is underlined in the SEER cohort where the number of men

References:

Disclosure of Interest: None Declared

Keywords: Detection & Screening, Epidemiology & Evaluation/Staging
70. RESULTS OF 14 YEARS OF BRACHYTHERAPY IN DENMARK – THE HERLEV COHORT
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Introduction: Brachytherapy (permanent implantation of radioactive seeds) is an alternative curative treatment to radical prostatectomy or external beam radiotherapy to selected men with localised prostate cancer (PCa).

Objectives: To report biochemical recurrence-free survival (BRFS), metastatic-free survival (MFS) and PCa-specific mortality after brachytherapy stratified according to the D’Amico risk classification.

Methods: The study population comprised 502 consecutive men treated with brachytherapy for localized PCa in 1998-2012 at Herlev-Gentofte Hospital, Denmark. The primary endpoint was BRFS defined by the Phoenix criteria. Secondary endpoints included metastatic-free survival (MFS) and PCa mortality. Kaplan-Meier survival analysis was used to estimate BRFS and MFS. The cumulative PCa mortality was analysed using competing risk analyses. Multivariable Cox regression analysis was used to estimate risk of biochemical recurrence (BR).

Results: In total, 206 (40.9%) men were classified with low-risk PCa, 265 (52.6%) men with intermediate-risk PCa and 33 (6.5%) men with high-risk PCa. Median follow up was 6.6 years (95% CI 6.2-7.0). The 10-year BRFS in men with low-risk PCa was 90.0% (95% CI 83-97), 75.0% (95% CI 65-87) in men with intermediate-risk PCa and 75.0% (95% CI 59-92) in men with high-risk PCa. The 10-year MFS was 95% (95% CI 89-100) in men with low-risk PCa, 93% (95% CI 88-98) in men with intermediate-risk PCa and 78% (95% CI 57-99) in men with high-risk PCa. The 10-year cumulative incidence of PCa mortality was 3.2 (95% CI 1.7-6.6) for men with low-risk PCa, 6.5 (95% CI 3.3-12.9) for men with intermediate-risk PCa and 5.2 (95% CI 5.0-15.0) for men with high-risk PCa. Gleason score ≥7(4+3) was the only independent predictor for BR (HR 3.9; 95% CI 1.3-11.6).

Conclusion: Brachytherapy offers good short to intermediate-term cancer control in selected men with localised PCa. Further studies are needed for safety analyses and for comparison with other treatment modalities.

Disclosure of Interest: None Declared

Keywords: Localized: Radiation Therapy, Prostate & Genitalia, Surgical Therapy

71. MEN WITH INITIAL BENIGN PROSTATIC BIOPSIES ARE AT HIGH RISK OF OTHER-CAUSE MORTALITY: A POPULATION-BASED ANALYSIS WITH UP TO 20 YEARS OF FOLLOW-UP.
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Introduction: The risk of missing lethal prostate cancer (PCa) if the outcome of the first transrectal ultrasound-guided systematic biopsy set (TRUS-gb) is benign, is a much-debated problem in uro-oncology. Re-TRUS-gb or MRI-guided biopsies have been suggested to increase the sensitivity of detecting PCa, but the risk of disease-specific mortality in men who present with elevated PSA and a benign initial TRUS-gb has remained largely unknown. Furthermore, for men presenting with a benign initial biopsy set, the risk of death from PCa compared to other causes is not well described.

Objectives: In a non-screened population-based cohort of men evaluated for PCa with systematic TRUS-gb, we calculated the risk of both PCa-specific death and death due to other causes for men who presented with benign initial biopsy sets.

Methods: Data were extracted from DaPCaR, a comprehensive registry containing histopathological diagnoses and causes of death on every Danish man evaluated for PCa from 1995-2011. All men undergoing
primary evaluation with TRUS-gb of the prostate were identified, and the benign results were included. Risk of PCa-specific mortality was calculated in a competing risk setting, treating death due to other causes than PCa as the competing risk. PSA values at the time of referral were used for stratification of patients.

**Results:** A total of 63,454 initial biopsy sets were identified, of these, a total of 27,181 men presented with a benign initial biopsy set. Median age was 67 years (IQR 62-73) and the median PSA at the time of referral was 7.7 (5.5-12.0). For all men with initial benign biopsies, the 20-year risk of PCa-specific mortality was 5.2% compared to 59.9% for death due to other causes. When stratified by PSA at referral, patients with a benign initial biopsy set and a PSA ≤ 10 ng/ml had a 15-year risk of PCa-specific death of 0.7% compared to a 26.1% risk of death due to other causes. For patients with a PSA ≥ 20 ng/ml the 15-year risk of PCa-specific death was 17.6% compared to 56.2% for risk of death due to other causes.

**Graphics:**

![Risk of PCa mortality in men with initial negative biopsy](image)

**Conclusion:** Patients presenting with benign initial biopsies have a risk of death due to other causes than PCa that is 10 times higher than risk of PCa-specific death. PSA at the time of referral further adds to the prognostication.

**Disclosure of Interest:** None Declared

**Keywords:** Epidemiology & Evaluation, Prostate & Genitalia

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72. **SHARED CARE PROGRAM FOR STABLE PROSTATE CANCER: IS THE MODEL REPRODUCIBLE?**

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**Introduction:** A shared care program for patients diagnosed with stable prostate cancer (PC) was developed in Jutland, Denmark, which allowed the patients to transfer to a general practitioner (GP) after initial treatment had begun.

**Objectives:** This study investigates whether a same/similar program could successfully work in the wider geographic region, Region of Southern, Denmark.

**Methods:** The model was developed with health professionals in the steering committee, which consisted of GPs, urologists and nurses, people from the Department of General Medicine and patients. An action plan included (1) the development of a shared care model for follow-up and treatment, (2) implementation of a shared care model of cooperation between the parties involved, (3) ensuring specific re-referrals, and (4) evaluation of the effect, change processes and contextual factors. Inclusion criteria were patients with stable disease and exclusion criteria included unstable prostate-specific antigen (PSA) levels, pain, or any sign of tumor progression. The patients’ records were examined at follow-up 3 years later.

**Results:** Total 1079 patients with PC in 2013 were enrolled of which 292 patients (27%) were transferred to GP. We found 459 patients (43%) had metastatic disease, 388 patients (36%) were treated curatively, 65 patients (6%) in watchful waiting and 102 patients (9%) in active surveillance. At the 3 year follow-up 31 (11%) of the patients transferred to GP had died, 8 (26%) of which were re-referred prior to their death. Of all patients in the Shared Care program 71 (24%) were re-referred. Twenty-two patients (8%) in this study had changes in their treatment after transfer to their GP.

**Conclusion:** The shared care regime had a high rate of patient and GP compliance. Death rates and re-referral rates were low and the patients attend their regular controls at their GP. We found that the model was reproducible.

**Disclosure of Interest:** None Declared

**Keywords:** None

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73. **CELL CYCLE PROGRESSION SCORE IN MEN WITH PROSTATE CANCER MANAGED WITH ACTIVE SURVEILLANCE**

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**Introduction:** Recently a novel RNA expression signature from 31 cell cycle progression (CCP) genes for prostate cancer has been introduced. The test has been shown to be a stronger predictor of outcome in different prostate cancer cohorts than classical prognostic parameters.

**Objectives:** The objective of the study was to explore the use of the CCP score on prostate cancer patients in active surveillance.

**Methods:** Fifteen consecutive patients, with a newly set of prostate biopsies, and an age under 70 year, within our active surveillance cohort were identified, retrospectively. The CCP score was defined as the level of 31 CCP genes, normalized to 15 housekeeping genes. To assess the estimated 10-year mortality risk, the CCP score from each patient was combined with the individual Cancer of the Prostate Risk Assessment (CAPRA) score. The CCP scores were derived from the paraffin embedded biopsies.

**Results:** Fourteen patients had Gleason score of 6, one patient had a Gleason score of 7 (mean age 62 (range 51-69) years, median PSA 7.2 (range 0.97-40) ng/mL. The mean positive cores was three (range 1-8) and a total length of cancer was mean 4 (range 1-18) mm. the mean CCP score was -0.6 (range -1.9 to 2.1), the combined CCP score and CAPRA score 10-year mortality median was 2.0% (range 1-11%), based on this the patients could be stratified further than by using the traditional parameters. In one patient there was not enough cancer material to perform the CCP.

**Conclusion:** The CCP method is applicable to the daily routine and it appears that it may support the decision making especially in patients followed by active surveillance.
74. **INTERPRETING TRENDS IN PROSTATE CANCER MORTALITY IN THE FIVE NORDIC COUNTRIES FOR THE LAST 3 DECADES**

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**Introduction:** The diagnosis of prostate cancer has undergone profound changes over the past three decades, due primarily to use of PSA testing. This has resulted in more Nordic men being diagnosed and offered curative treatment for prostate cancer.

**Objectives:** The purpose of the study was to elucidate the temporal trends in prostate cancer mortality across the Nordic countries, after the introduction of PSA testing. Furthermore we wished to describe the temporal trends in prostate cancer within the different age groups for the Nordic prostate cancer patients.

**Methods:** Trends in mortality rates of prostate cancer were analyzed using data from the national cancer registries of Denmark, Finland, Iceland, Norway, and Sweden, jointed in Nordcan ©. Joinpoint regression models were used to quantify temporal trends for the period from 1982 to 2014.

**Results:** The mortality rates for the individual country follow the same upside down V-shape pattern. The maximum mortality rate was observed in the time period around the millennium. Mean annual declines in prostate cancer mortality for Denmark from 2001 to 2014 was 0.9% (95%CI 0.5%, 1.3%), Finland from 1997 to 2014 it was 2.6% (95%CI 2.3%, 2.8%), Iceland from 2001 to 2014 it was 2.2% (95%CI 1.0%, 3.3%), Norway from 1996 to 2014 it was 1.8% (95%CI 1.7%, 2.0%), Sweden from 2000 to 2014 it was 1.8% (95%CI 1.6%, 2.1%).

The mortality rate for all the Nordic countries in different age groups follow the same pattern as described above. Mean annual declines in prostate cancer mortality for the Nordic countries age 60 to 69 years from 1995-2014 was 3.2% (95% CI=2.9% to 3.4%), age 70 to 79 years from 1999-2014 was 2.9% (95%CI=2.5% to 3.2%), age above 80 years from 1999-2014 was 0.7% (95% CI=0.6 to 0.8).

The mortality rate of the different age groups for Denmark differ from other the Nordic countries for the men with age above 80 years, where a continuous rise in mortality was observed, although it slowed down from 1999-2014 at 0.4% (95% CI= 0.0 to 0.9).

**Conclusion:** Mortality rates within the Nordic countries follow the same pattern. The mortality rates go up until the millennium, and then decrease, parallel to the dissemination of PSA testing. Although other explanatory factors may be in operation, these trends are consistent with a moderate effect of increased curative treatment of early diagnosed prostate cancer and improved treatment of more advanced disease. The different mortality rates in Denmark may be driven by the more conservative approach to prostate cancer, seen earlier on.

**Disclosure of Interest:** None Declared

**Keywords:** None

75. **IMAGE ADJUSTED RISK STRATIFICATION IMPROVES PREDICTION OF PSA-RECURRENCE**

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Introduction: Biochemical recurrence (BCR) after radical prostatectomy (RP) is related to both the development of clinical recurrence and disease-related mortality. Modified D'Amico by NCCN-guidelines, separates the intermediate group in favorable and unfavorable intermediate-risk, where favorable only has one intermediate criteria.

Objectives: 1. The aim of our study was to identify multiparametric MRI (mpMRI) derived image-features as predictors of early biochemical recurrence after RP, to create an image adjusted (IA) risk-stratification model based on modified D'Amico criteria

Methods: From a total of 807 consecutive patients treated for prostate cancer by robotic RP, 600 patients were eligible for analysis. Independent predictors were first identified by stepwise backward likelihood ratio. Further, weighted p-reductive power differences between the variables were estimated by a nomogram based on the reduced logistic regression model by leave one out cross validation (LOOCV). The regression weight ratio were then applied to an (IA) scoring system using modified D'Amico, to create an IA-model. This IA-modified D'Amico model was finally tested against modified D'Amico.

Results: Categorical variables of WHO Grade Group 3, Likert's score of EPE at mpMRI & and apparent diffusion coefficient (ADC) were significant predictors. Tumor size and margins were both kept in the reduced model, but were not significance. The survival curves with our IA-model separated all risk-groups better than modified D'Amico alone and decision curve analysis showed a higher performance level for the proposed IA-model, for most of the risk thresholds.

Conclusion: ADC-value in index tumor and EPE at mpMRI used in an IA-model, improves risk-stratification for patients. The IA-model performs better than modified D'Amico alone and improves the separation of the different risk-groups.

Disclosure of Interest: None Declared

Keywords: Penis/Testis/Urethra: Benign Disease & Malignant Disease, Staging, Uroradiology

76. ERECTILE FUNCTION AFTER RADICAL PROSTATECTOMY: RETROSPECTIVE STUDY WITH 12-MONTH FOLLOW-UP.

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Introduction: Radical prostatectomy (RP) offers the best long-term cancer control for clinically localised prostate cancer. Quality of life and erectile function (EF) remain among the most important postoperative outcome measurements related to RP. Functional outcomes after RP reported in the literature vary widely with respect to sexual function depending on study design, extent of the follow-up, choice of the outcome, patient age and high versus low volume centres and the extent of appropriate penile rehabilitation.

Objectives: The aim of this study was to describe post-operative erectile function after radical prostatectomy (RP) in a Danish cohort.
Methods: The medical records of 1,127 patients undergoing RP between March 2003 and September 2014 were reviewed retrospectively with a 12-month follow-up after surgery. In all, 704 patients fulfilling the inclusion criteria were included in the final analysis. Recovery was defined as self-reported erection sufficient for intercourse (ESI) with or without usage of erectile aids.

Results: ESI with or without erectile aids was reported by 226 (32.1%), among whom 109 (48.2%) required erectile aids. Erectile dysfunction (ED) was reported by 478 (67.9%); in 121 (25.3%) cases despite use of erectile aids. Among men with ED; 155 (22%) stated not being interested in penile rehabilitation, 26 (3.7%) not having resumed their sex life 12 months after RP and 241 (34.2%) suffered from ED and were unsatisfied with the condition. Surprisingly, 134 men (30.1%) of 445 undergoing non-nerve-sparing radical prostatectomy had ESI 12 months after RP. Generally, NNSRPs patients are not considered candidates for penile rehabilitation, we recommend that a penile rehabilitation programme be offered to all patients who had EF prior to surgery, regardless of surgical technique used. Age over 60.5 years, a high BMI, comorbidity and a high ASA score were negative predictors of erectile function 12 months after RP. Our study compares well to similar studies [1-3] in terms of geographical area, flow of operations, age, preoperative PSA, pathological stage, BMI and proportion of cardiovascular morbidity.

Conclusion: Twelve months after RP, 32.1% of the men had sufficient erection for intercourse; half of these men required the use of erectile aids. Age over 60.5 years, a high BMI, comorbidity and a high ASA score were negative predictors for erectile function 12 months after RP.

References: References


Disclosure of Interest: None Declared

Keywords: Prostate & Genitalia

77. A PROSPECTIVE STUDY FOR OUT-PATIENT ONABOTULINUMTOXINA TREATED PATIENTS WITH OVERACTIVE BLADDER (OAB).

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Introduction: Intradetrusor injection with OnabotuluminotoxinA (Onabot) appears to be a highly effective treatment for patients with overactive bladder (OAB) [1, 2]. According to the European Association of Urology guidelines recommendations, Onabot intravesical injection is considered one of the third-line treatments for patients without response to second-line therapy [3].

Objectives: To investigate the effects and quality of life of onabotulinum toxin type A (Onabot/A) intravesical injections in patients with OAB before and after treatment

Methods: Between January 2015 and April 2016, 47 patients (7 men, 40 women) with OAB due to neurogen disease (nOAB) or idiopatic OAB (iOAB) were included. All patients had failed peroral treatment with anticholinergic and Mirabegron. They were assessed with bladder diaries, urodynamic investigation and cystoscopy. Some patients were newly diagnosed others had previously had Onabot in inpatient regimen. The questionnaires Urogenital Distress Inventory (UDI-6 range 0 to 18) and The Incontinence Impact...
Questionnaire (IIQ-7 range 0 to 21) were performed before Onabot injection and after 3 months. Injections of botulinum were performed as outpatient treatment under local anaesthetic (LA) using a rigid or flexible cystoscope. LA mixture of lidocaine and saline was installed into the bladder 30 minutes before the injection-time. OnaBot 100-200 U was dissolved and injected with 1-1.5 ml each. Three weeks later the patient was contacted regarding the need of clean intermittent catheterization (CIC), infections, other bothering symptoms or questions. Urodynamic investigation was performed after 6-10 weeks. At follow-up after 3 months the patient filled out and returned the UDI-6 and IIQ-7 questionnaires.

**Results:** Forty-seven patients, 19 nOAB and 28 iOAB were included. The group was equal in first-time (55%) and previous (45%) Botox treated patients. We found a significant decline in symptoms 3 months after treatment to a mean 4.26 regarding IUD-6 and 4.52 (mean) in IIQ-7 questionnaires with a p-value < 0.0001 using a Wilcoxon match-paired signed rank test. The average patient has a decline at almost 50% (8.9 to 4.5) in IUD-6 score and (10.7 to 6.1) in IIQ-7 score. In the group 60% (28/47) shows decline in symptom score at more than > 4 regarding IUD-6 og 55% (26/47) regarding IIQ-7.

**Conclusion:** Intradetrusor injection of Onabot significantly improves urgency and incontinence for patients with overactive bladder evaluated by IUD-6 and IIQ-7 and is feasible as an outpatient procedure.

**References:**

**Disclosure of Interest:** None Declared

**Keywords:** Incontinence: Evaluation (Urodynamic Testing), Neurogenic Voiding Dysfunction, Non-neurogenic Voiding Dysfunction

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**IS TRANSVESICAL OPEN PROSTATECTOMY AN ACCEPTABLE TREATMENT OPTION IN PATIENTS WITH SIGNIFICANT HYPERPLASIA OF THE PROSTATE?**

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**Introduction:** Following the introduction of transurethral resection of the prostate gland, transvesical open prostatectomy (TVP) a.m. Freyer are, in many centers, no longer used for Lower Urinary Tract Symptoms (LUTS) or urinary retention in patients with large prostatic volume. Moreover, TVP have previously been associated with high risk of bleeding requiring transfusions and an unacceptable postsurgical mortality. Recently, TVP was reintroduced at our department for bladder outlet obstruction in patients with very large prostate volumes.

**Objectives:** The aim of this study was to report our experience with TVP in a setup where the procedure was performed by only two experienced urologists.

**Methods:** All TVP performed because of LUTS, retention or hematuria between January 2014 and March 2016 were retrospectively identified. Outcome of interest was blood loss, surgical duration, postoperative complications assessed according to Clavien-Dindo and free of catheter assessed 30 days after the procedure.

**Results:** Thirty-two men with a median age of 70 years (range 55-88) underwent TVP. The median prostatic volume assessed by transrectal ultrasound was 187 ml (96-344). Fourteen patients underwent prostate biopsy prior to the procedure with benign histopathology. Median PSA was 7.5 µg/l (2.2-51). Preoperative hemoglobin was 9.0 mmol/L (6.0-10.3). The median blood loss was 300 ml (50-900) and the median duration of the procedure was 54 min (35-135). The median weight of the specimen removed was 133 g (25-260). Median postoperative hemoglobin was 7.0 mmol/L (5.2-8.9). Postoperative complication Clavien Dindo
classification: Grade 1: 17 patients (53.1%), Grade 2: 13 patients (37.5%, 7 because of blood transfusion), Grade 3b: one patient (3.1%) (re-operation because of continued hematuria), and Grade 4a: one patient (3.1%) (acute uremia and hemodialysis). The median admission time was 7 days (3-29). None of the patients had bladder catheter or used self-catheterization 30 days after surgery.

**Conclusion:** TVP is a safe procedure when performed by few dedicated surgeons and all patients were free of catheter 30 days following the procedure. TVP should be considered in patients with bladder outlet obstruction with very large prostate glands.

**Disclosure of Interest:** None Declared

**Keywords:** Prostate & Genitalia, Surgical Therapy

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**79. TRANSURETHRAL RESECTION OF THE PROSTATE IN MEN WITH BOTHERSOME LUTS AND IN MEN WITH URINARY RETENTION. A COMPARATIVE STUDY OF EFFICACY FROM A REGIONAL BASED HOSPITAL IN SWEDEN**

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**Introduction:** Transurethral resection of the prostate (TURP) remains the surgical reference standard for the treatment of BPE. Technical improvements of the procedure in the past decades may have had an improved effect regarding postoperative voiding outcomes. A systematic literature review of BPE by the Swedish Council on Health Technology Assessment from 2011 identified areas in need of further research. We need real world contemporary data for men undergoing TURP. This data should be compared with data from well-known trials of the past. Additionally, there is a need for a universal definition of a “responder” following TURP.

**Objectives:** To disclose the response rate in voiding parameters in two distinctly different categories of men undergoing TURP. The first category comprising men with bothersome LUTS and the second category comprising men with urinary retention in need of a permanent catheter or utilising clean intermittent self-catheterisation (CISC).

**Methods:** An observational cohort study of 355 men who underwent TURP during 2010-2012 at Skövde Hospital in Sweden. Inclusion criteria were men with a known BPE with secondary bothersome LUTS or with urinary retention. Exclusion criteria were men with urogenital cancer or a previous TURP procedure. 128 men (38%) were catheterised before surgery and 28 men (8%) used CISC. Follow up was scheduled 3 months postoperatively. Outcome measures included the International Prostate Symptom Score (IPSS) and urinary flow (Qmax). Responders were defined according to modified de Wildt criteria with an IPSS of 7 or less and/or a minimal 50% gain from baseline or a Qmax of 15 ml/s or greater or a minimal 50% gain from baseline.

**Results:** 337 patients were available for final analysis (95%). For the entire patient cohort the median age was 70 years (IQR 63-76), BMI 26 (24-29), prostate volume 51 ml (37-66), resected weight 24 g (14-36), OR time 64 min (48-84), hospital stay 2 days (1-3) and catheter time 19 hours (16-39). In all 85% and 91% were catheter-free at discharge and at follow-up respectively. Postoperative outcomes showed a median IPSS of 7 (4-11), botherscore 2 (1-3), Qmax 13 ml/s (8-20) and PVR 36 ml (8-92). In total >90% were characterised as responders.

**Conclusion:** In our study we found varying response rates in men undergoing TURP depending on which outcome variable was used. Outcomes on group level were comparable to results from previous trials. Significant differences in outcome were found between catheterised and non-catheterised men.

**Disclosure of Interest:** None Declared

**Keywords:** Non-neurogenic Voiding Dysfunction, Prostate & Genitalia, Surgical Therapy
LONG TERM FOLLOW-UP OF HIGH-ENERGY FEEDBACK MICROWAVE THERMOTHERAPY: A RETROSPECTIVE STUDY OF 319 PATIENTS WITH PROSTATE VOLUMES OF 80-320 MILLILITERS

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Introduction: Transurethral resection of the prostate (TURP) and simple prostatectomy (SP) are considered gold standard treatments (1, 2) in patients with moderate to severe lower urinary tract symptoms (LUTS), caused by benign prostatic hyperplasia (BPH) with benign prostatic obstruction (BPO). The experience of the surgeon, prostate volume assessment, the physical status and of the patient and other factors influence the method of choice.

Objectives: The primary aim of this study was to evaluate the long term efficacy of high-energy (H-E) feedback microwave thermotherapy in patients with prostate volumes of ≥80 ml.

Methods: Between 1999 and 2016 a total of 319 patients with baseline prostate volumes of 80-320 ml were treated with H-E feedback microwave thermotherapy. All patients had moderate to severe LUTS due to BPH with BPO, or had an indwelling catheter. Pre-treatment evaluation, treatment and follow-up was performed in an outpatient setting and data was extracted retrospectively. In the first 16 cases H-E feedback microwave thermotherapy was performed. In the following 303 cases the CoreTherm® concept, defined as H-E feedback microwave thermotherapy after intraprostatic injections of mepivacaine and adrenaline was used. Pre-treatment evaluation and follow-up three months after treatment included the international prostatic symptom score (I-PSS) and/or the Madsen-Iversen score, bother score/quality of life question (QoL) and prostate volume assessment. Flow-metric analyses, measuring maximum flow rate (Q-max) and post void residual (PVR) was also included.

Results: In total, 273 patients (86%) were long term responders, requiring no retreatment, with a median follow-up of 84 months. At three months follow-up, I-PSS and Madsen-Iversen score were reduced by 71% and 84% respectively (mean values). Furthermore, QoL increased by 82%, Q-max by 73%, and PVR was reduced by 73% (mean values). Moreover, 93 patients had an indwelling catheter due to chronic urinary retention and 86 patients (94%) were able to void spontaneously after treatment, requiring no catheter. Long term results were comparable, regardless of baseline prostate volume or age.

Conclusion: This study shows that H-E feedback microwave thermotherapy with intraprostatic injections of mepivacaine and adrenaline is a minimally invasive outpatient treatment with excellent long term durability in patients with considerably (≥80 ml) enlarged prostates and should be therefore be considered an option to both TURP and SP.


Disclosure of Interest: None Declared

Keywords: Instrumentation & Technology, Medical & Non-surgical Therapy, Surgical Therapy & New Technology

ENERGY DEPOSITION AS AN ALTERNATIVE TREATMENT ENDPOINT IN HIGH-ENERGY FEEDBACK MICROWAVE THERMOTHERAPY WITH INTRAPROSTATIC INJECTIONS OF MEPIVACAINE AND ADRENALINE
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**Introduction:** High-energy (H-E) feedback microwave thermotherapy provides intraprostatic temperature measurements and a cell kill calculation in real time during treatment (1, 2). Intraprostatic injections of mepivacaine and adrenaline minimizes discomfort (3) and intraprostatic blood flow (4). The recommended primary treatment endpoint is a cell kill calculation of 20\% (5), achieved in the most treatments. But, in some clinical situations there is a need for an alternative solution.

The prerequisites for a reliable calculation of cell kill are dependent on two simultaneous conditions, firstly a correctly placed IP sensor thereby giving logical temperature curves and secondly a successful injection of MA hitting the anterior left quadrant of the prostate, where the IP sensor is located. Consequently, in two situations the cell kill calculation could be unreliable. Firstly, if the IP sensor was placed incorrectly the input temperature data will be wrong and therefore also the cell kill calculation. Secondly, if the intraprostatic infiltration of MA fails in the part of the prostate where the temperature is measured, the expected astringent effect on the prostatic arterial supply will be lacking.

**Objectives:** The primary aim of this study was to evaluate the possibility to introduce an alternative (secondary) treatment endpoint of appropriate energy deposition based on baseline prostate volume.

**Methods:** Baseline and treatment data from 283 consecutive treatments was extracted and evaluated retrospectively. In all cases, men with moderate to severe lower urinary tract symptoms and benign prostatic obstruction were treated with H-E feedback microwave thermotherapy after intraprostatic injections of mepivacaine and adrenaline. Data parameters included age, prostate volume, energy deposition and calculated cell kill. In addition, an assessment of temperature curves and calculated intraprostatic blood flow was made to define an optimal treatment. In total, 199 treatments assessed as optimal were included in the regression analysis.

**Results:** There was a significant correlation between pretreatment prostate volume and total energy deposition ($p<0.001$). Age also influenced energy consumption significantly ($p=0.038$).

**Graphics:**
**Conclusion:** The solid correlation between pre-treatment prostate volume versus total energy deposition implies that we strongly recommend that a pre-treatment calculation of an appropriate deposition based on baseline prostate volume is used in all treatments, as an alternative treatment endpoint.

**References:**

**Disclosure of Interest:** None Declared

**Keywords:** Instrumentation & Technology, Medical & Non-surgical Therapy, Surgical Therapy & New Technology