

Appendix 2: Urology Syllabus

WBA

Formative WBAs may be used to assess and provide feedback on any areas of clinical activity. However, other than for the critical conditions, index procedures or where they have been identified to address a concern, WBAs are optional and trainees, therefore, do not need to use WBAs to evidence their learning against each syllabus topic.

Standards for depth of knowledge during intermediate and final years surgical training

In the two phases of specialty training the following methodology is used to define the relevant depth of knowledge required of the surgical trainee. Each topic within a stage has a competence level assigned to it for knowledge ranging from 1 to 4 which indicates the depth of knowledge required:

- 1 - knows of
- 2 - knows basic concepts
- 3 - knows generally
- 4 - knows specifically and broadly

Standards for clinical and technical skills

The practical application of knowledge is evidenced through clinical and technical skills.

Each topic within a stage has a competence level ascribed to it in the area of technical skills ranging from 1 to 4:

1. Has observed

Exit descriptor; at this level the trainee:

- Has adequate knowledge of the steps through direct observation.
- Demonstrates that he/she can handle instruments relevant to the procedure appropriately and safely.
- Can perform some parts of the procedure with reasonable fluency.

2. Can do with assistance

Exit descriptor; at this level the trainee:

- Knows all the steps - and the reasons that lie behind the methodology.
- Can carry out a straightforward procedure fluently from start to finish.
- Knows and demonstrates when to call for assistance/advice from the supervisor (knows personal limitations).

3. Can do whole but may need assistance

Exit descriptor; at this level the trainee:

- Can adapt to well- known variations in the procedure encountered, without direct input from the trainer.
- Recognises and makes a correct assessment of common problems that are encountered.
- Is able to deal with most of the common problems.
- Knows and demonstrates when he/she needs help.
- Requires advice rather than help that requires the trainer to scrub.

4. Competent to do without assistance, including complications

Exit descriptor, at this level the trainee:

With regard to the common clinical situations in the specialty, can deal with straightforward and difficult cases to a satisfactory level and without the requirement for external input.

Is at the level at which one would expect a UK consultant surgeon to function.

Is capable of supervising trainees.

At certification, all Urologists will be able to:

Manage the patient presenting with stone disease

- Be familiar with the presentation of stone disease
- Recognise the patient presenting with acute ureteric colic, urinary obstruction and sepsis and manage appropriately
- Manage appropriate investigation (CT, IVU , MRI and ultrasound) in such situations, involving other specialists as appropriate.
- Treat straightforward ureteric stones safely and appropriately, referring more complicated cases to specialist colleagues as appropriate
- Treat straightforward bladder stones safely and effectively referring more complicated cases to specialist colleagues as appropriate.
- Treat straightforward renal stones, by means of extracorporeal shock wave lithotripsy referring more complicated cases to specialist colleagues as appropriate
- Undertake appropriate metabolic assessment and treatment of straightforward urinary tract calculi

Manage the patient presenting with acute or chronic abdominal pain referable to the urinary tract

- Diagnose the underlying cause of renal pain
- Manage the patient presenting with acute or chronic loin pain
- Refer onwards to other specialists if appropriate.
- Manage the patient presenting with upper urinary tract obstruction
- Be familiar with the modes of presentation of upper tract obstruction (retroperitoneal fibrosis, ureteric stricture) and manage appropriately, involving other specialists as appropriate.
- Undertake cystoscopy and stenting when appropriate

Manage patients presenting with lower urinary tract symptoms (LUTS)

- Manage the patient presenting with LUTS from presentation to completion
- Manage the patient presenting with acute or chronic retention from presentation to completion
- Competently perform diagnostic cystoscopy, urodynamics, bladder neck incision and TURP using various energy sources in patients with bladder outflow obstruction.
- Competently insert a suprapubic catheter, with ultrasound guidance as appropriate

Manage the patient presenting with haematuria

- Diagnose and manage the common causes of haematuria using appropriate radiological and endoscopic techniques and supervise effective resuscitation.
- Competently perform diagnostic cystoscopy, bladder biopsy and TURBT in patients with bladder lesions.
- Competently evaluate and manage of patients with ureteric obstruction
- Be familiar with the indications for referral to specialist units and other colleagues for patients with muscle invasive bladder cancer.

Manage the patient presenting with urethral stricture

- Evaluate and manage patients with urethral stricture and refer onwards to other specialists as appropriate
- Competently perform urethral dilatation and optical urethrotomy in patients with urethral stricture where indicated
- Competently insert a suprapubic catheter, with ultrasound guidance as appropriate

Manage urinary tract infections

- Manage pyelonephritis, renal and peri-renal abscess from presentation to completion
- Manage patients presenting with recurrent UTI from presentation to completion
- Competently diagnose, assess and manage patients with different forms of cystitis (interstitial cystitis etc) and to refer onward where appropriate
- Competently diagnose, assess and manage men with different forms of prostatitis and epididymitis
- Competently diagnose, assess and manage men with different forms of gonococcal and non-gonococcal urethritis and other STDs seeking advice and onward referral as and when appropriate

Manage benign & malignant lesions of male genitalia skin

- Recognise the common malignant and potentially malignant conditions of the penis, including phimosis, paraphimosis, viral lesions, squamous carcinoma and be familiar with current management protocols and their implications for early management.
- Diagnose and excise, biopsy or treat conservatively common swellings of the skin and subcutaneous tissues of the penis and genitalia
- Apply straightforward plastic surgical techniques for primary wound closure.
- Recognise the indications for and to perform a circumcision

Manage patients presenting with a scrotal swelling

- Diagnose and manage patients presenting with scrotal symptoms such as hydrocele, epididymal cyst, varicocele, post vasectomy pain, testicular torsion, abscess etc, involving other specialist colleagues appropriately.
- Diagnose and manage initially, neoplastic conditions of the testis and refer onwards to other specialists as appropriate
- Diagnose, assess and manage serious infections such as acute necrotising fasciitis, seeking advice and onward referral as and when appropriate.
- Competently undertake surgery for benign and malignant scrotal conditions including hydrocele repair, excision of an epididymal cyst, ligation of a varicocele, treatment of testicular torsion, and to perform an orchidectomy for benign and malignant indications

Manage the patient presenting with urinary incontinence

- Competently diagnose investigate and manage patients presenting of urinary incontinence
- Be able to undertake urodynamic studies, where needed, to investigate patients with urinary incontinence
- Treat straightforward patients with urinary incontinence including the provision of operative intervention including Botulinum toxin and mid-urethral tape insertion while referring more complex cases onward as and when appropriate.
- Be familiar with the presentation of voiding dysfunction and incontinence in patients with neurological disease

Manage the patient with prostate cancer

- Be competent to diagnose and manage patients presenting with an elevated PSA including the provision of trans-rectal ultrasound / biopsy and MRI

- Be competent in the evaluation and management of patients with organ confined, locally advanced and metastatic prostate cancer
- Be familiar with the indications for referral to specialist units and other colleagues for patients with prostate cancer
- Be competent in performing diagnostic cystoscopy, urodynamics and TURP in patients with prostate cancer

Manage the patient with bladder cancer

- Competently diagnose, investigate and manage patients presenting with bladder cancer including the provision of cystoscopy, TURBT, intra-vesical chemotherapy etc.
- Be familiar with the indications for referral to specialist units and other colleagues for patients with locally advanced bladder cancer

Manage the patient with renal cancer

- Competently diagnose and initially manage patients presenting with renal cancer
- Manage appropriate investigation (CT, MRI etc.) in such situations, involving other specialists as appropriate
- Be familiar with the indications for referral to specialist units and other colleagues for patients

Manage the patient presenting with infertility, ejaculatory disorders etc.

- Competently diagnose, assess and manage couples with infertility appropriately and refer on to other specialist colleagues as appropriate

Manage the patient presenting with erectile dysfunction

- Competently diagnose, assess and manage men with erectile dysfunction appropriately and refer on to other specialist colleagues as appropriate

Manage the patient presenting with penile deformity, priapism, penile fracture

- Competently diagnose, assess and manage benign penile problems (including priapism and fracture) appropriately and refer on to other specialist colleagues as required

Manage the common urological conditions of childhood

- Competently diagnose, assess and manage appropriately children presenting with urinary tract infections and involving other specialist colleagues as the situation requires.
- Competently diagnose, assess and manage appropriately patients presenting with the common inguinoscrotal conditions of childhood (torsion of the testis, hernia, undescended testis), phimosis, referring and involving other specialist colleagues as the situation requires.
- Be aware of the important surgical conditions of childhood, their presentation as elective and emergency cases and the indications for urgent assessment and diagnosis by specialist colleagues (e.g. acute appendicitis, intussusception, volvulus)

Manage the patient presenting with renal failure

- Competently diagnose, assess and initially manage appropriately patients presenting with renal failure / anuria, involving other specialist colleagues as the situation requires
- Understand the indications for treatment with haemodialysis or peritoneal dialysis
- Competently assess bladder function in those patients under consideration for renal transplantation

Manage the patient with multiple injuries.

- Assess and resuscitate the patient with multiple injuries in accordance with the ATLS standards current at the time.

- Work appropriately as part of the trauma team, participating at a level appropriate to the situation either as member or leader
- Conduct the initial management of gun-shot and other penetrating wounds involving the urinary tract, calling in other expertise as necessary.
- Participate as an effective member of the major incident team as required

Manage trauma of the renal tract according to accepted protocols.

- Diagnose and manage the patient with possible injury to the urogenital tract from blunt and penetrating renal trauma
- Diagnose, resuscitate and transfer to specialist units patients suffering from renal and other trauma calling in other expertise as necessary
- Manage ureteric injury when called upon but general surgical and gynecological colleagues

Knowledge

The syllabus for urology includes a comprehensive knowledge of all aspects of urological practice. It is expected that all trainees have a comprehensive knowledge of all subspecialty areas, irrespective of which subspecialty they choose to specialise in or which specialist modules they choose to follow in “phase 3”. It is anticipated that trainees following specific specialist modules will have opportunity to develop a more in-depth appreciation of the application of this knowledge, but the knowledge curriculum, as assessed by FRCS(Urol.) UK, will apply equally to all trainees irrespective of their training path.

It is anticipated that it will not be possible to provide adequate evidence of knowledge without successful completion of the FRCS(Urol.) examination and other examinations will not be accepted as evidence for UK registration. Although knowledge will be assessed primarily by the FRCS(Urol.) examination, clinical supervisors and assigned education supervisors may also highlight areas of concern via the multiple consultant report.

The following is provided as a guide to the areas of knowledge that might be assessed but should not be treated as an exhaustive list. As new data and evidence emerge, these will be included in the examination as appropriate.

| Basic Science | Level |
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| <u>Anatomy</u> | |
| - Detailed knowledge of abdomino-pelvic anatomy especially bony pelvis, all pelvic viscera including vascular systems, pelvic floor, pelvic side wall and the endopelvic fasciae | 4 |
| - Embryology of the genitourinary tract including development of the cloaca, intestinal tract and omentum. | 4 |
| - Neuroanatomy of the central and peripheral nervous system as it relates to normal and abnormal bladder, urethral, bowel, pelvic floor and erectile function | 4 |
| <u>Physiology</u> | |
| - Physiology and neurophysiology of the bladder including the basis of micturition and continence | 4 |
| - Physiology of gastrointestinal function | 3 |
| <u>Pharmacology</u> | |
| - Pharmacology of the urogenital organs | 4 |
| - Pharmacology of drugs used in the management of lower urinary tract dysfunction including adverse reactions and interactions | 4 |
| <u>Pathology</u> | |
| - Pathophysiology of urinary incontinence in women and men | 4 |
| - Pathophysiology of micturition | 4 |
| - Aetiology and pathophysiology of central and peripheral nerve conditions (congenital and acquired) and their consequence on urinary, genital, sexual I and gastrointestinal tract function | 4 |
| - Aetiology and pathophysiology of conditions which may require urinary tract reconstruction including but not limited to congenital abnormalities, genitourinary tumours, inflammatory conditions, iatrogenic injury and trauma | 4 |
| - Holistic management of neuropathic patients | 4 |
| - Pathophysiology of renal dysfunction secondary to neurogenic bladder dysfunction | 4 |
| - Pathophysiology of urinary infection in women and men including CAUTI | 4 |
| - Pathophysiology of autonomic dysreflexia | 4 |

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| Urinary frequency/urgency syndrome and urinary urge incontinence | |
| - Clinical assessment techniques compliant with International Continence society (ICS) standards. | 4 |
| - A detailed understanding of diagnosis and management of Overactive Bladder Syndrome (OAB) | 4 |
| - The role of investigative techniques including but not limited to urodynamics, imaging and endoscopy | 4 |
| - Knowledge of conservative management | 4 |
| - Knowledge of pharmacological management | 4 |
| - Knowledge of invasive treatment techniques including indications, results and complications | 4 |
| - Knowledge of bladder management in relation to neurogenic bladder dysfunction | 4 |
| Bladder and pelvic pain syndromes | |
| - Classification, aetiology, pathophysiology, current terminology and differential diagnosis of bladder pain syndrome | 4 |
| - Clinical assessment techniques compliant with ICS standards. | 4 |
| - The role of investigative techniques including but not limited to urodynamics, radiological imaging and endoscopy. | 4 |
| - Knowledge of conservative management | 4 |
| - Medical and pharmacological intervention for bladder pain syndrome | 4 |
| - Knowledge of surgical management including indications, results and complications | 4 |
| Stress urinary incontinence in men and women | |
| - Clinical assessment techniques compliant with ICS standards. | 4 |
| - The role of investigative techniques including but not limited to urodynamics, radiological imaging and endoscopy | 4 |
| - Instigate and advise regarding conservative management techniques | 4 |
| - Surgical management including indications, results and complications | 4 |
| - Recognition and maintenance of bladder safety with regard to treatment of stress urinary incontinence in patients with neurogenic dysfunction | 4 |
| Female Urinary retention | |
| - Aetiology and pathophysiology of urinary retention in women | 4 |
| - Management of voiding dysfunction in women | 4 |
| - Role of Sacral Neuromodulation | 4 |
| Genito-urinary prolapse (primary and recurrent) | |
| - Understanding of aetiology, pathophysiology and classification of pelvic organ prolapse | 4 |
| - Understand the relationship between pelvic organ prolapse and lower urinary tract dysfunction | 4 |
| - Understanding of the relevance of neurological dysfunction in relation to pelvic floor dysfunction | 4 |
| - Understanding of indications, methods, results and complications of non-surgical management of pelvic organ prolapse | 4 |
| - Understanding of indications, results and complications of surgery for pelvic organ prolapse | 4 |
| - Surgical interventions for pelvic organ prolapse | 3 |

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| Urinary fistulae | |
| - Aetiology, pathophysiology, presentation and complications of urinary fistulae | 4 |
| - Knowledge of diagnostic technique | 4 |
| - Knowledge of appropriate management including indications, results and complications | 4 |
| - Surgical treatment of urinary fistula | 4 |
| Urethral diverticulum | |
| - Aetiology, pathophysiology, presentation and complications of urethral diverticula | 4 |
| - Knowledge of appropriate imaging and diagnostic techniques | 4 |
| - Knowledge of appropriate management options including indications, results and complications | 4 |
| Defaecatory disorders and other lower gastrointestinal disorders | |
| - Understand the techniques of assessment and treatment of anorectal disorders including: | 2 |
| - Anorectal physiology tests (manometry, proctography and endoanal US) | 2 |
| - Pelvic floor electromyography | 2 |
| - Nerve conduction studies | 2 |
| Reconstruction of the bladder and ureter | |
| - Anatomy of gastrointestinal tract including vascular supply | 4 |
| - Aetiology and pathophysiology of conditions requiring bladder and ureteric reconstruction | 4 |
| - Techniques of assessment for bladder and ureteric reconstruction including but not limited to urodynamics, radiology and nuclear medicine techniques | 4 |
| - Metabolic effects of urinary tract reconstruction and interposition of intestine within the urinary tract | 4 |
| - Complications of urinary tract reconstruction including interposition of intestine within the urinary tract | 4 |
| - Knowledge of endourological techniques relevant to urinary tract reconstruction | 4 |
| - Knowledge of open surgical techniques applied to reconstruction of the bladder and ureter | 4 |
| Urethral reconstruction | |
| - Pathophysiology of congenital abnormalities including but not limited to hypospadias and epispadias | 4 |
| - Embryology of urethra as applied to hypospadias and epispadias | 4 |
| - Aetiology, pathophysiology and complications of urethral strictures | 4 |
| - Pathophysiology of traumatic urethral injury | 4 |
| - Techniques of assessment for bladder and urinary tract reconstruction including urodynamics, radiology and nuclear medicine techniques | 4 |
| - Techniques and complications of urethral reconstruction | 4 |
| - Knowledge of endourological techniques relevant to urethral | 4 |
| - Knowledge of open surgery for urethral reconstruction | 4 |

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| Management of patients with neurogenic bladder | |
| - Understand the effects of neurological diseases on bladder and sexual function | 4 |
| - An understanding of the investigation, diagnosis and management of patients with neurogenic bladder or sexual dysfunction | 4 |
| - Complications of neurogenic bladder dysfunction including but not limited to renal dysfunction, urosepsis and calculus formation | 4 |
| - Clinical assessment techniques according to ICS standards | 4 |
| - The role of investigations in the assessment of neurogenic bladder including but not limited to urodynamic studies, radiological imaging and endoscopy | 4 |
| - Knowledge of conservative management techniques | 4 |
| - Knowledge of surgical management techniques including indications, results and complications | 4 |
| Diagnosis and Assessment of Upper Urinary Tract Stone Disease | |
| - Anatomy of the renal tract, including surface anatomy | 4 |
| - Mechanisms of calcium stone formation | 4 |
| - Urinary tract infections and stones | 4 |
| - Metabolic stone disease (hypercalcaemia, uric acid, cystinuria) | 4 |
| - Pathophysiology of upper tract obstruction | 4 |
| - Symptoms and signs of acute ureteric colic | 4 |
| - Symptoms and signs of renal urolithiasis | 4 |
| - Principles of imaging modalities for urolithiasis (ultrasound/plain radiograph/computed tomography) | 4 |
| - Causes , clinical features, pathophysiology and management of upper urinary tract obstruction | 4 |
| - Investigation and management of upper urinary tract obstruction, including retroperitoneal fibrosis, malignancy and strictures | 4 |
| Acute management of ureteric colic | |
| - Pathophysiology of upper tract obstruction | 4 |
| - Physiology of the ureter | 4 |
| - Pharmacotherapy for ureteric colic (NSAIDs, opiates, evidence for medical expulsive therapy) | 4 |
| - Pathophysiology of sepsis | 4 |
| - Symptoms and signs of acute ureteric colic | 4 |
| - Indications for emergent renal drainage | 4 |
| Management of Renal Stones | |
| - Biochemical mechanisms of renal stone formation | 4 |
| - Types of renal calculi | 4 |
| - Systemic conditions predisposing to stone formation | 4 |
| - Anatomical abnormalities predisposing to stone formation | 4 |
| - Natural history of renal stones | 4 |
| - Pharmacotherapy for renal stones (uric acid and cystinuria) | 4 |
| - Principles of shockwave lithotripsy (types of generators, contra-indications, complications, basic shockwave physics) | 4 |
| - Principles of laser operation and safety | 4 |
| - Mechanisms of stone destruction by shockwave/laser | 4 |
| - Principles of percutaneous renal access | 4 |

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| Assessment and Management of Bladder Stones | |
| - Pathophysiology of bladder stone formation (bladder outflow obstruction, neuropathic bladders, other anatomical abnormalities) | 4 |
| - Bladder stones and UTIs | 4 |
| - Complications of bladder stones | 4 |
| - Urodynamic assessment of neuropathic bladder | 4 |
| - Assessment of bladder outflow obstruction | 4 |
| - Management of bladder outflow obstruction | 4 |
| Assessment and Management of lower urinary tract obstruction | |
| - Pathophysiology of lower urinary tract obstruction | 4 |
| - Pathophysiology of Benign Prostatic Hyperplasia (BPH) | 4 |
| - Assessment and management of BPH | 4 |
| - Complications of BPH and lower urinary tract obstruction | 4 |
| - Surgical treatment options for BPH | 4 |
| - Classification, assessment and management of chronic prostatitis and chronic pelvic pain syndrome | 4 |
| Andrology and Infertility | |
| - Detailed anatomy and embryology of the internal and external male genitalia | 4 |
| - Endocrine physiology, pharmacology of hormones and drugs that regulate testicular function, | 4 |
| - Physiology of penile erection and ejaculation and ejaculatory disorders and their management | 4 |
| - The physiology of conception | 4 |
| - The ability to interpret semen analysis | 4 |
| - Gross and microscopic pathology related to the genital system | 4 |
| - Pharmacology and toxicity of commonly used drugs in andrology | 4 |
| - The diagnosis of endocrine disorders effecting the male reproductive system (e.g. hypogonadotropic hypogonadism), azoospermia and oligozoospermia | 4 |
| - An understanding of the common causes and treatment of male infertility | 4 |
| - An understanding of the molecular and neurobiological mechanism of erectile function and dysfunction | 4 |
| - Varicocele – anatomy, physiology and management | 4 |
| - Male contraception - Methods, results and complications of different methods of contraception | 4 |

| Paediatric Urology | |
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| - Embryology and anatomy of common congenital abnormalities, e.g. undescended testis, duplex systems, reflux and hydronephrosis | 4 |
| - Investigations and management of perinatal hydronephrosis | 4 |
| - Investigation and management of PUJ obstruction | 4 |
| - Investigation and management of ureteric reflux | 4 |
| - Principles of functional assessment of the genitourinary tract | 4 |
| - Basic embryology, anatomy of abnormality and natural history of intersex, spina bifida and posterior urethral valves | 4 |
| - Concise knowledge of inguino-scrotal anatomy | 4 |
| - Bacteriology of UTI in childhood | 4 |
| - Investigation and management of recurrent urinary tract infections | 4 |
| - Natural history and normal patterns of continence | 4 |
| - Assessment and management of phimosis | 4 |
| - Assessment and management of scrotal swellings in childhood | 4 |
| - Assessment and management of the acute scrotum in childhood | 4 |
| - Assessment and management of incontinence | 4 |
| - Assessment and management of voiding dysfunction | 4 |

| Transplant surgery | |
|--|---|
| - Anatomy of the retroperitoneum and the great vessels | 4 |
| - Embryology of the genitourinary tract including development of the kidney and the common variations in vascular supply to the kidney | 4 |
| - Anatomy and blood supply of the kidney, ureter and bladder | 4 |
| - Neuroanatomy as it relates to normal and abnormal bladder, urethra & pelvic floor function | 4 |
| - Arterial supply and venous drainage of the upper and lower limbs | 4 |
| - Physiology of the kidney | 4 |
| - Physiology of fluid balance | 4 |
| - Physiology of the lower urinary tract | 4 |
| - Pharmacology of drugs used in immunosuppression | 4 |
| - Pharmacology of perfusion fluids and use of diuretics | 4 |
| - Pharmacology of inotropes and blood pressure control and effects of drugs on renal blood flow | 4 |
| - HLA matching | 4 |
| - Cytotoxic cross match | 4 |
| - Rejection | 4 |
| - Immunosuppression | 4 |
| - Renal failure - causes and classification | 4 |
| - Pathophysiology of renal failure | 4 |
| - Treatment options for renal failure | 4 |
| - Indications and contraindications for kidney transplantation | 4 |
| - Indications and types of dialysis | 4 |
| - Access for dialysis | 4 |
| - Complications of dialysis | 4 |
| - Organ donation | 4 |
| - Criteria for brainstem death and circulatory death | 4 |
| - Pathophysiology of brainstem death | 4 |
| - Principles of donor management and organ preservation | 4 |

| Trauma | |
|--|---|
| - Causes, pathophysiology classification and management of renal trauma | 4 |
| - Causes, pathophysiology classification and management of ureteric trauma | 4 |
| - Causes, pathophysiology classification and management of bladder trauma | 4 |
| - Causes, pathophysiology classification and management of urethral trauma | 4 |
| - Causes, pathophysiology classification and management of genital trauma, including penile fracture | 4 |
| - Causes, pathophysiology classification and management of testicular trauma | 4 |

| Emergency urology | |
|---|---|
| - Investigation and management of acute urinary retention | 4 |
| - Investigation and management of high pressure urinary retention | 4 |
| - Investigation and management of acute renal colic | 4 |
| - Investigation and management of upper urinary tract obstruction | 4 |
| - Investigation and management of acute kidney injury | 4 |
| - Investigation and management of upper urinary tract infections, including renal abscess and pyonephrosis | 4 |
| - Investigation and management of acute scrotal swellings including scrotal infections, abscess and torsion | 4 |
| - Investigation and management of lower urinary tract infections | 4 |
| - Investigation and management of acute prostatitis and prostate abscess | 4 |
| - Investigation and management of haematuria and clot retention | 4 |
| - Investigation and management of post-operative emergencies | 4 |
| - Investigation and management of surgical injuries to the urinary tract, including accidental bladder and ureteric injury. | 4 |
| - Appropriate follow-up and long-term management of urological emergencies | 4 |
| - Activation and deactivation of artificial urinary sphincter in the acute setting | 4 |
| - Identification and management of autonomic dysreflexia | 4 |

| Technology | |
|--|---|
| - Comprehensive understanding of lasers and their use in urological practice | 4 |
| - Comprehensive understanding of energy sources in urology, including those used for haemostasis | 4 |
| - Techniques of haemostasis including understanding of the physiology of haemostasis and wound healing | 4 |
| - Comprehensive understanding of radiological techniques and imaging | 4 |
| - Interpretation of radiology investigations | 4 |
| - Interpretation of laboratory investigations | 4 |
| - Surgical instruments in urology (including laparoscopy, robotic surgery, endourology) | 4 |
| - Scientific basis of optics and the application in urology | 4 |
| - Scientific basis of shock-wave technology and the application in urology | 4 |

| General principles in the management of Urological Malignancy | |
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| - Anatomy of the Urogenital tract, including surface anatomy | 4 |
| - Understand past and current systems for staging and grading cancers | 4 |
| - Understanding of tumour biology and the principles of carcinogenesis | 4 |
| - Understanding of epidemiology as applied to urological malignancy | 4 |
| - Understanding of the occupational, environmental and drug factors in tumour formation | 4 |
| - Understanding of basic immunology, tumour immunology and the principles of immunotherapy | 4 |
| - Understand the principle of cancer therapy including surgery, radiotherapy, chemotherapy, immunotherapy and hormone therapy | 4 |
| - Understand the effect of aging on the ability of patients to tolerate surgical and medical treatments | 4 |
| - Understand the effects of impaired renal function on the ability to tolerate surgical and medical treatments | 4 |
| - Understanding the post-operative complications of sepsis, thrombo-embolism, stroke and other cardiovascular events associated with prolonged complex procedures | 4 |
| - Understanding the role and importance of each member of the multi-disciplinary team | 4 |
| - Understanding of the psycho-social aspects of cancer care | 4 |
| - Understand the sexual effects of cancer and its treatment | 4 |
| - Understanding of the hospice movement and the principles and indications for end of life care | 4 |
| - Ability to competently evaluate and manage patients with ureteric obstruction | 4 |
| - Expertise in counselling patients with cancer and the management of the bereaved relative | 4 |
| - Understanding of the availability / inclusion criteria of clinical trials both those open and those recently completed | 4 |
| Management of Prostate Cancer | |
| - Understand the principle of screening and problems of screening for prostate cancer | 4 |
| - Understand the management of patients presenting with an elevated PSA including the provision of mpMRI and biopsy | 4 |
| - Understanding the biology of prostate cancer | 4 |
| - Understand the indications for Active Surveillance and radical intervention in patients with localised cancer | 4 |
| - Knowledge of the rationale and use of hormonal agents in the treatment of prostate cancer | 4 |
| - Principles of chemotherapeutic agents used in the treatment of prostate cancer; their indications, common side effects and outcomes of treatment | 4 |
| - Understand the management of patients presenting with painful bone metastasis and the protocol for the urgent treatment of suspected spinal cord compression | 4 |
| Management of Bladder Cancer | |
| - Diagnose and manage the common causes of haematuria using appropriate radiological and endoscopic techniques | 4 |
| - Understanding of the use of urinary biomarkers for the diagnosis and surveillance of bladder cancer | 4 |
| - Understanding of the criteria defining optimal TURBT | 4 |
| - understanding the role of intravesical therapy in the treatment of superficial bladder cancer | 4 |
| - Understand the indications for referral to specialist units for patients with muscle invasive bladder cancer | 4 |

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| Management of Renal Cancer | |
| - Understanding the role of renal biopsy in the diagnosis of kidney cancer | 4 |
| - Understanding the role of Active Surveillance, Ablation, partial and radical nephrectomy for localised disease | 4 |
| - Knowledge of hereditary kidney cancer syndromes including the role of genetic testing | 4 |
| - Understand the significance of ischaemic injury to the kidney | 4 |
| - Understand the significance of complex cystic disease of the kidney | 4 |
| - Understand paraneoplastic syndromes related to renal cancer | 4 |
| - Understand the role of Lymph node dissection, caval thrombectomy, cytoreductive nephrectomy and metastectomy for advanced disease | 3 |
| - Understand the role of systemic therapy for metastatic disease | 3 |
| - Understand the role of endoscopic ablation, distal ureterectomy and nephroureterectomy for upper tract urothelial carcinoma (UTUC) | 4 |
| - Understand the role of adjuvant chemotherapy in upper tract TCC | 4 |
| Management of Testicular Cancer | |
| - Understand the embryology and anatomy of male genitalia including lymphatic drainage | 4 |
| - Understand the pathology of the differing types of testis cancer and pre-malignant conditions | 4 |
| - Understand the role of environmental factors in testis cancer | 4 |
| - Understand the rationale for, indications, results and complications of surgery, chemotherapy and radiotherapy in the treatment of metastatic testicular cancer | 4 |
| Management of Penile Cancer | |
| - Understand the embryology and anatomy of the male genitalia including lymphatic drainage | 4 |
| - Understand the anatomy of the femoral triangle and upper thigh | 4 |
| - Understand the physiology of erection | 4 |
| - Recognise the common malignant and potentially malignant conditions of the penis, including phimosis, paraphimosis, viral lesions, squamous carcinoma and be familiar with current management protocols and their implications for early management | 4 |
| - Understand the use of chemotherapy for men with penile cancer | 4 |
| - Understand management of penile cancer (local, regional and metastatic) | 4 |

Special interest modules - clinical and technical skills

During phase 3, trainees will develop expertise in the chosen Special Interest modules but will also continue to develop and refine general urology skills. Therefore, there is an expectation that competency levels will increase during Phase 3 even in specialty areas not chosen as the trainee's Special Interest.

At the end of Phase 3, trainees will be expected to reach the competencies listed under "SI" for their chosen Special Interest Module(s). They will also be expected to reach the competencies listed under "P3" for all the other modules to CCT. In the case of technical skills, it is anticipated that attaining operative skills in all procedure may not be possible. It is expected that at least 80% of the procedural competencies would be achieved by CCT in their special interest module(s). Trainees who are unable to provide evidence to the ARCP of completion of all competencies at the required level will be given targeted training with extra training time if needed but will not progress to CCT.

Modular Curriculum in General Urology

| Topic | Assessment of lower urinary tract symptoms | P2 | P3 | SI |
|---------------------------------|---|----|----|----|
| Objective | - Assessment and treatment of men and women with lower urinary tract symptoms | | | |
| Clinical Skills | - Clinical assessment of women and men with lower urinary tract dysfunction, including characterisation of symptoms, clinical examination and simple outpatient tests | 4 | 4 | 4 |
| | - Ability to develop logical management plan encompassing appropriate use of conservative, pharmacological and surgical options. | 4 | 4 | 4 |
| Technical Skills and Procedures | - Standard urodynamic studies to investigate lower urinary tract dysfunction | 2 | 4 | 4 |
| | - Video urodynamic studies to investigate urinary tract dysfunction. | 1 | 2 | 3 |

| Topic | Management of urological infections | P2 | P3 | SI |
|-----------------|--|----|----|----|
| Objective | - Assessment and treatment of men and women with urological infections | | | |
| Clinical Skills | - Management of complex urinary tract infections (eg in the context of abnormal urinary tract, bladder outflow obstruction, chronic retention) and infections in men | 3 | 3 | 4 |
| | - Management of recurrent UTI in women (investigation and treatment) | 3 | 3 | 4 |

| | | | | |
|-----------------|---|----|----|----|
| Topic | Upper Urinary Tract Obstruction and stones | P2 | P3 | SI |
| Objective | - Assessment and treatment of men and women with upper urinary tract obstruction and stones | | | |
| Clinical Skills | - Assessment and diagnosis of renal obstruction | 4 | 4 | 4 |
| | - Determine the optimum management of upper urinary tract stones | 3 | 3 | 4 |
| | - Medical management of urinary tract stones (including metabolic evaluation) | 2 | 3 | 4 |

| | | | | |
|---------------------------------|---|----|----|-----|
| Topic | Management of Benign Prostatic Hyperplasia | P2 | P3 | SI |
| Objective | - Assessment and treatment of men and women with lower urinary tract symptoms | | | |
| Clinical Skills | - Assessment of male lower urinary tract symptoms | 4 | 4 | 4 |
| | - Advise on the suitability of alternative interventional procedures for the management of BPH | 3 | 3 | 4 |
| Technical Skills and Procedures | - TURP | 3 | 4 | 4 |
| | - Complex catheterisation techniques | 3 | 4 | 4 |
| | - At least one other surgical treatment for BPH (eg laser enucleation, vapourisation treatments, prostate implant systems, prostate injections, other energy systems) | 1 | 2 | 4 * |

* SI trainees will develop at least one treatment for BPH (in addition to TURP) to level 4

| | | | | |
|---------------------------------|---|----|----|----|
| Topic | Erectile dysfunction and hypogonadism | P2 | P3 | SI |
| Objective | - Assessment and treatment of men with erectile dysfunction and hypogonadism | | | |
| Clinical Skills | - Evaluation and simple medical management of erectile dysfunction | 4 | 4 | 4 |
| | - Advise on the management of refractory erectile dysfunction (including VTD, injection therapy and penile implant) | 3 | 3 | 4 |
| Technical Skills and Procedures | - Perform and teach injection treatments for ED | 1 | 3 | 4 |
| | - Counsel and instruct patients on the use of Vacuum Therapy Devices | 2 | 2 | 4 |

| | | | | |
|---------------------------------|--|----|----|----|
| Topic | Female, Functional and Reconstructive Urology | P2 | P3 | SI |
| Objective | - Assessment and treatment of men and women with lower urinary tract symptoms, including neuropathic bladder | | | |
| Clinical Skills | - Advise on the management of women with incontinence | 4 | 4 | 4 |
| | - Optimum management of the neuropathic bladder | 3 | 3 | 4 |
| Technical Skills and Procedures | - Standard multichannel urodynamics | 2 | 4 | 4 |
| | - video urodynamics | 1 | 2 | 2 |
| | - Cystoscopic injections of botulinum toxin | 2 | 3 | 4 |
| | - Operations for stress incontinence | 1 | 2 | 3* |

* SI trainees will develop at least one treatment for stress incontinence to level 3

| Topic | Emergency Urology | P2 | P3 | SI |
|---------------------------------|--|----|----|----|
| Objective | - Assessment and treatment of urological emergencies in men and women | | | |
| Clinical Skills | - Manage the acute urology on-call including assessment of patients and initial management | 4 | 4 | 4 |
| | - Definitive management of urological emergencies | 3 | 4 | 4 |
| Technical Skills and Procedures | - Cystoscopic bladder washout | 4 | 4 | 4 |
| | - Orchidopexy and/or orchiectomy for testicular torsion | 4 | 4 | 4 |
| | - Reduction of paraphimosis, including dorsal slit | 4 | 4 | 4 |
| | - Debridement of Fournier's gangrene | 3 | 4 | 4 |
| | - Repair of bladder injury * | 2 | 3 | 3 |
| | - Repair of ureteric injury * | 2 | 3 | 3 |
| | - Reimplantation of ureter * | 2 | 3 | 3 |
| | - Complex catheterisation | 3 | 4 | 4 |
| | - Insertion of suprapubic catheter | 3 | 4 | 4 |

*Competency in emergency reconstructive procedures may be demonstrated by experience of the specified procedures, or by simulation courses, or by other procedures with transferable skills (eg ileal conduit competency at level 3 is regarded as a surrogate for ureteric repair / reimplantation)

| Topic | Paediatric urology | P2 | P3 | SI |
|---------------------------------|--|----|----|----|
| Objective | - Assessment and treatment of urological conditions in childhood | | | |
| Clinical Skills | - Diagnosis and management of scrotal swellings | 3 | 3 | 3 |
| | - Diagnosis and management of phimosis | 3 | 3 | 3 |
| | - Diagnosis and management of enuresis | 3 | 3 | 3 |
| | - Diagnosis and management of UTI | 3 | 3 | 3 |
| | - Diagnosis and management Spina bifida and intersex | 3 | 3 | 3 |
| | - Appropriate assessment and management of children with hypospadias | 3 | 3 | 3 |
| | -Management of urinary tract obstruction in childhood including Pelvi- ureteric junction obstruction (PUJ) vesicoureteric junction (VUJ) obstruction and posterior urethral valves | 3 | 3 | 3 |
| | -Management of incontinence in childhood including neuropathic incontinence | 3 | 3 | 3 |
| | - Appropriate use of commonly used drugs recognising common side effects, interactions and contra-indications | 3 | 3 | 3 |
| Technical Skills and Procedures | - Paediatric circumcision | 2 | 2 | 3 |
| | - Orchidopexy | 2 | 2 | 2 |
| | - Surgical management of scrotal swellings | 2 | 2 | 2 |
| | - Patent Processus Vaginalis | 2 | 2 | 2 |
| | - Surgery for hypospadias | 2 | 2 | 2 |

* For those that express an interest in developing paediatric urology as an interest within general adult urology practice, support can be provided to attain higher levels of competency. This table shows the minimum level for all trainees

Modular curriculum in Female, Functional and Reconstructive Urology

| Topic | Assessment of lower urinary tract symptoms | P2 | P3 | SI |
|---------------------------------|---|----|----|--------|
| Objective | - To develop advanced skills in the assessment and treatment of men and women with urinary and genital tract dysfunction including that arising as a consequence of neurological disease. - To develop advanced skills in lower urinary tract reconstruction | | | |
| Clinical Skills | - Clinical assessment of women and men with lower urinary tract dysfunction, including characterisation of symptoms, clinical examination and simple outpatient tests | 4 | 4 | 4 |
| | - Understanding the place of invasive investigations such as cystoscopy and invasive urodynamics in the assessment of such patients. | 3 | 4 | 4 |
| | - Ability to develop logical management plan encompassing appropriate use of conservative, pharmacological and surgical options. | 3 | 4 | 4 |
| | - Ability to counsel patients regarding treatment options | 4 | 4 | 4 |
| | - Appropriate use of pharmacological agents, knowledge of common side effects, interactions and contra-indications | 4 | 4 | 4 |
| | - Determine appropriate management of patient with unsafe high pressure bladder | 4 | 4 | 4 |
| | - Liaison with the multidisciplinary team - Can run the specialist female urology MDT | | 4 | 4 4 |
| Technical Skills and Procedures | - Standard urodynamic studies to investigate lower urinary tract dysfunction | 2 | 4 | 4 |
| | - Video urodynamic studies to investigate urinary tract dysfunction. | 1 | 2 | 4 |

| Topic | Management of overactive bladder and urge incontinence | P2 | P3 | SI |
|-----------------|---|----|----|----|
| Objective | - To develop advanced skills in the assessment and treatment of men and women with urinary and genital tract dysfunction including that arising as a consequence of neurological disease. - To develop advanced skills in lower urinary tract reconstruction | | | |
| Clinical Skills | - Determine appropriate management of patients with resistant overactive bladder | 4 | 4 | 4 |

| | | | | |
|---------------------------------------|---|---|---|---|
| Technical Skills and Procedures | - Cystoscopy and injection Botulinum toxin | 2 | 3 | 4 |
| | - Augmentation and substitution cystoplasty | | 1 | 2 |
| | - Sacral neuromodulation | | | 2 |
| | - Ileal conduit formation * | 1 | 2 | 3 |
| | - Simple cystectomy | 1 | 1 | 2 |

* ileal conduit may not always be deliverable in programs. If not available, then adequate competency in reconstructive techniques such as ureteric repair and/or reimplantation must be demonstrated through either work-based assessments in these procedures, or by an appropriate simulation course.

| Topic | Bladder and pelvic pain syndromes | P2 | P3 | SI |
|---------------------------------------|---|----|----|----|
| Objective | - To develop advanced skills in the assessment and treatment of men and women with urinary and genital tract dysfunction including that arising as a consequence of neurological disease. - To develop advanced skills in lower urinary tract reconstruction | | | |
| Clinical Skills | - Determine appropriate management of patients with bladder and pelvic pain | 4 | 4 | 4 |
| Technical Skills and Procedures | - Cystoscopic assessment painful bladder | 3 | 4 | 4 |
| | - Augmentation and substitution cystoplasty | | 1 | 2 |
| | - Simple cystectomy | 1 | 2 | 2 |
| | - Ileal conduit diversion* | 1 | 3 | 3 |

* ileal conduit may not always be deliverable in programs. If not available, then adequate competency in reconstructive techniques such as ureteric repair and/or reimplantation must be demonstrated through either work-based assessments in these procedures, or by an appropriate simulation course.

| Topic | Neuropathic bladder | P2 | P3 | SI |
|---------------------------------------|---|----|----|----|
| Objective | - To develop advanced skills in the assessment and treatment of men and women with urinary and genital tract dysfunction including that arising as a consequence of neurological disease. - To develop advanced skills in lower urinary tract reconstruction | | | |
| Clinical Skills | - Determine appropriate safe management of patients with neuropathic bladder | 4 | 4 | 4 |
| | - Determine optimum long-term management of patients with neuropathic bladder, including management of incontinence, emptying, infections, renal function and bowel management | 2 | 3 | 4 |
| Technical Skills and Procedures | - Cystoscopy and injection Botulinum toxin | 2 | 3 | 4 |
| | - Augmentation and substitution cystoplasty | 1 | 1 | 2 |
| | - Sacral neuromodulation | | | 2 |
| | - Ileal conduit formation* | 1 | 2 | 3 |
| | - Simple cystectomy | 1 | 1 | 2 |
| | - suprapubic catheterisation | 4 | 4 | 4 |
| | - artificial urinary sphincter | 1 | 1 | 1 |

* ileal conduit may not always be deliverable in programs. If not available, then adequate competency in reconstructive techniques such as ureteric repair and/or reimplantation must be demonstrated through either work-based assessments in these procedures, or by an appropriate simulation course.

| Topic | Stress urinary incontinence in men and women | P2 | P3 | SI |
|---------------------------------|---|----|----|----|
| Objective | - To develop advanced skills in the assessment and treatment of men and women with urinary and genital tract dysfunction including that arising as a consequence of neurological disease. - To develop advanced skills in lower urinary tract reconstruction | | | |
| Clinical Skills | - Determine appropriate management of patients with stress urinary incontinence | 4 | 4 | 4 |
| Technical Skills and Procedures | - Midurethral sling insertion | 2 | 2 | 4 |
| | - Injection of bulking agents | 2 | 2 | 4 |
| | - Colposuspension or Autologous fascial sling | 1 | 1 | 3 |
| | - Artificial urinary sphincter | 1 | 1 | 2 |

| Topic | Female Urinary retention | P2 | P3 | SI |
|---------------------------------|---|----|----|----|
| Objective | - To develop advanced skills in the assessment and treatment of men and women with urinary and genital tract dysfunction including that arising as a consequence of neurological disease. - To develop advanced skills in lower urinary tract reconstruction | | | |
| Clinical Skills | - Determine appropriate management of women with voiding dysfunction and urinary retention | 4 | 4 | 4 |
| Technical Skills and Procedures | - suprapubic catheterisation | 4 | 4 | 4 |
| | - sacral neuromodulation | 1 | 1 | 2 |
| | - Mitrofanoff formation | | | 1 |

| Topic | Genito-urinary prolapse (primary and recurrent) | P2 | P3 | SI |
|---------------------------------|---|----|----|----|
| Objective | - To develop advanced skills in the assessment and treatment of men and women with urinary and genital tract dysfunction including that arising as a consequence of neurological disease. - To develop advanced skills in lower urinary tract reconstruction | | | |
| Clinical Skills | - Detailed assessment of pelvic organ prolapse including staging | 3 | 3 | 4 |
| | - Ability to select and advise suitable conservative treatments | 3 | 3 | 4 |
| | - Ability to select and advise regarding surgical treatment options | 2 | 2 | 3 |
| Technical Skills and Procedures | - Insertion and removal of pessaries | 1 | 1 | 3 |
| | - Anterior and posterior repair | 1 | 1 | 2 |
| | - Vaginal hysterectomy | | | 1 |

| Topic | Urinary fistulae | P2 | P3 | SI |
|---------------------------------|---|-------------|-------------|-------------|
| Objective | - To develop advanced skills in the assessment and treatment of men and women with urinary and genital tract dysfunction including that arising as a consequence of neurological disease. - To develop advanced skills in lower urinary tract reconstruction | | | |
| Clinical Skills | - Appropriate assessment of urinary fistulae - Ability to advise regarding the suitability of surgery - Ability to determine appropriate management of patient with urinary fistula | 2 2 2 | 3 2 3 | 4 4 4 |
| Technical Skills and Procedures | - Repair vesicovaginal fistula - Martius flap | 1 1 | 1 1 | 2 2 |

| Topic | Urethral diverticulum | P2 | P3 | SI |
|---------------------------------|---|--------|--------|--------|
| Objective | - To develop advanced skills in the assessment and treatment of men and women with urinary and genital tract dysfunction including that arising as a consequence of neurological disease. - To develop advanced skills in lower urinary tract reconstruction | | | |
| Clinical Skills | - Appropriate clinical assessment and investigation of urethral diverticulum | 2 | 3 | 4 |
| Technical Skills and Procedures | - Surgical excision urethral diverticulum - Martius flap | 1 1 | 1 1 | 2 2 |

| Topic | Reconstruction of the bladder and ureter | P2 | P3 | SI |
|---------------------------------|---|------------------|------------------|------------------|
| Objective | - To develop advanced skills in the assessment and treatment of men and women with urinary and genital tract dysfunction including that arising as a consequence of neurological disease. - To develop advanced skills in lower urinary tract reconstruction | | | |
| Clinical Skills | - Appropriate assessment of patients requiring urinary tract reconstruction - Be able to advise on the surgical and non-surgical options and the appropriateness of surgery - Management of post-operative consequences of urinary tract reconstruction and interposition of intestine within the urinary tract | 3 3 3 | 3 3 3 | 4 4 4 |
| Technical Skills and Procedures | - Ureteric anastomosis - Ureteric reimplantation - Psoas hitch - Boari flap | 1 1 1 1 | 3 3 3 3 | 3 3 3 3 |

| Topic | Urethral reconstruction | P2 | P3 | SI |
|---------------------------------|---|----|----|----|
| Objective | - To develop advanced skills in the assessment and treatment of men and women with urinary and genital tract dysfunction including that arising as a consequence of neurological disease. - To develop advanced skills in lower urinary tract reconstruction | | | |
| Clinical Skills | - Appropriate clinical assessment of men with urethral strictures including investigative selection and interpretation | 3 | 4 | 4 |
| | - Be able to advise on the surgical options and the appropriateness of surgery | 3 | 4 | 4 |
| Technical Skills and Procedures | - Optical urethrotomy | 3 | 4 | 4 |
| | - Harvesting buccal mucosa graft | 1 | 1 | 2 |
| | - Bulbar anastomotic urethroplasty | 1 | 1 | 2 |
| | - Single stage substitution urethroplasty using flaps and grafts | | | 1 |
| | - Two stage buccal graft urethroplasty | | | 1 |
| | - Pelvic fracture urethral reconstruction | | | 1 |

Modular Curriculum in Endourology

| Topic | Diagnosis and Assessment of Upper Urinary Tract Stone Disease and obstruction (Renal and Ureteric stones) | P2 | P3 | SI |
|---------------------------------|--|----|----|----|
| Objective | - To develop advanced skills in the management of patients with urinary tract stone disease - To develop advanced skills in the management of upper urinary tract obstruction and other conditions of the upper urinary tract | | | |
| Clinical Skills | - Clinical assessment of patients with suspected urolithiasis, including history, clinical examination and simple outpatient tests | 4 | 4 | 4 |
| | - Interpretation of urinary biochemistry | 3 | 3 | 4 |
| | - Knowledge of usage & interpretation of imaging including plain films (KUB), ultrasonography, CT scans, Mag3/DMSA renography | 3 | 4 | 4 |
| | - Administration of appropriate analgesia to a patient presenting with renal colic | 4 | 4 | 4 |
| | - Selection of initial imaging modality | 4 | 4 | 4 |
| | - Assessment of the recurrent stone former | 3 | 3 | 4 |
| | - Assessment of upper urinary tract obstruction not caused by stones, including PUJ obstruction, retroperitoneal fibrosis, malignancy, stricture disease | 4 | 4 | 4 |
| Technical Skills and Procedures | - retrograde pyelogram | 4 | 4 | 4 |

| Topic | Acute management of ureteric colic and upper urinary tract obstruction | P2 | P3 | SI |
|---------------------------------|--|----|----|----|
| Objective | - To develop advanced skills in the management of patients with urinary tract stone disease - To develop advanced skills in the management of upper urinary tract obstruction and other conditions of the upper urinary tract | | | |
| Clinical Skills | - Analgesia and fluid resuscitation of the patient with acute ureteric colic | 4 | 4 | 4 |
| | - Recognition of the patient requiring immediate treatment including obstructed infected kidney, solitary kidney or bilateral stones, declining renal function, intractable pain | 4 | 4 | 4 |
| | - Conservative management and follow-up of a patient with a small ureteric stone | 4 | 4 | 4 |
| | - Treatment of a patient with a ureteric stone >10mm, including decisions regarding timing of treatment. | 3 | 4 | 4 |
| | - Formulate treatment plan for upper urinary tract obstruction not caused by stones, including PUJ obstruction, retroperitoneal fibrosis, malignancy, stricture disease | 4 | 4 | 4 |
| Technical Skills and Procedures | - Cystoscopy, retrograde pyelography and insertion of ureteric stent | 4 | 4 | 4 |
| | - Insertion of percutaneous nephrostomy | 1 | 1 | 1 |
| | - Semi-rigid ureteroscopy (lower 1/3) and lasertripsy | 3 | 4 | 4 |
| | - Semi-rigid ureteroscopy (upper 2/3) and lasertripsy | 3 | 3 | 4 |
| | - Flexible ureterorenoscopy | 2 | 3 | 4 |
| | - Shockwave lithotripsy | 2 | 2 | 4 |
| | - Endopyelotomy | | 1 | 3 |
| - Ureteric dilatation | 2 | 3 | 4 | |

| Topic | Management of Renal Stones | P2 | P3 | SI |
|---------------------------------|---|----|----|----|
| Objective | To develop advanced skills in the management of patients with urinary tract stone disease | | | |
| Clinical Skills | - Conservative management and follow-up of patients with renal stones (case selection, mechanisms of follow-up) | 4 | 4 | 4 |
| | - Medical management of patients with cystinuria | 3 | 3 | 4 |
| | - Medical therapy for uric acid stones | 3 | 3 | 4 |
| | - Counselling of patients requiring surgical treatment of renal stones (SWL vs ureteroscopy vs PCNL) | 3 | 4 | 4 |
| | - Treatment planning in stone MDT | 3 | 3 | 4 |
| Technical Skills and Procedures | - Cystoscopy, retrograde pyelography and insertion of ureteric stent | 4 | 4 | 4 |
| | - Flexible ureterorenoscopy | 2 | 3 | 4 |

| | | | | |
|--|---|---|---|---|
| | - Shockwave lithotripsy | 2 | 2 | 3 |
| | - Percutaneous nephrolithotomy (with or without access) | 2 | 2 | 4 |

| Topic | Assessment and Management of Bladder Stones | P2 | P3 | SI |
|---------------------------------|---|----|----|----|
| Objective | To develop advanced skills in the management of patients with urinary tract stone disease | | | |
| Clinical Skills | - Assessment of patients with bladder outflow obstruction including flow rate, post void residual assessment, urodynamics | 4 | 4 | 4 |
| | - Use of urodynamic assessment of patients with neuropathic bladder | 4 | 4 | 4 |
| | - Counselling of patients requiring surgical treatment of bladder stones | 4 | 4 | 4 |
| | - Management of concurrent bladder outflow obstruction | 4 | 4 | 4 |
| | - Treatment planning, particularly those with anatomical abnormalities/ neuropathic bladder | 4 | 4 | 4 |
| Technical Skills and Procedures | Endoscopic fragmentation of bladder calculus | 3 | 4 | 4 |
| | Percutaneous cystolithotomy (PCCL) | 2 | 2 | 3 |
| | Open cystolithotomy | 2 | 3 | 3 |
| | Bladder outflow procedures (BNI, TURP etc) | 3 | 4 | 4 |

Modular Curriculum in Andrology and Infertility

| Topic | Male Infertility | P2 | P3 | SI |
|---------------------------------|--|----|----|----|
| Objective | - To develop advanced skills in the assessment and treatment of patients with male factor infertility | | | |
| Clinical Skills | - The diagnosis of endocrine disorders (e.g. hypogonadotropic hypogonadism), azoospermia and oligozoospermia | 4 | 4 | 4 |
| | - Ability to diagnose and discuss treatment options available for varicocele | 4 | 4 | 4 |
| | - Ability to advise on fertility control and family planning | 4 | 4 | 4 |
| | - The ability to interpret endocrine laboratory diagnostic procedures | 3 | 3 | 4 |
| | - The management of endocrine disorders | 3 | 3 | 4 |
| | - The management of azoospermia and oligozoospermia | 3 | 3 | 4 |
| Technical Skills and Procedures | - Vasectomy | 4 | 4 | 4 |
| | - Exposure and experience in varicocele ligation | 1 | 3 | 3 |
| | - Surgical sperm retrieval (PESA, TESA, TESE, Micro-TESE) | 1 | 2 | 3 |

| Topic | Erectile Dysfunction (ED) | P2 | P3 | SI |
|---------------------------------|---|----|----|----|
| Objective | - To develop advanced skills in the assessment and treatment of patients with benign disease of male sexual dysfunction | | | |
| Clinical Skills | - Medical management of ED | 4 | 4 | 4 |
| | - Expertise in the recognition and diagnosis of psychological disorders in ED | 4 | 4 | 4 |
| | - Assessment and management of cardiovascular risk in erectile dysfunction | 4 | 4 | 4 |
| | - The diagnosis of pituitary, central nervous system disease relating to erectile dysfunction | 4 | 4 | 4 |
| | - The diagnosis and management of testicular disease relating to erectile dysfunction | 4 | 4 | 4 |
| | - The management of endocrine disorders relating to erectile dysfunction, including testosterone therapy and late onset hypogonadism | 3 | 4 | 4 |
| | - Management and treatment of erectile dysfunction using intracavernosal therapy, intraurethral therapy, topical and vacuum devices | 4 | 4 | 4 |
| Technical Skills and Procedures | - Penile fracture – assessment and emergency management | 4 | 4 | 4 |
| | - Techniques and ability to interpret Nocturnal penile tumescence and penile doppler studies, MRI, cavernosography/cavernosometry and arteriography of the penis. | 2 | 2 | 4 |
| | - Surgical treatment of penile fracture | 2 | 3 | 4 |
| | - Perform and teach injection therapy for ED | 1 | 3 | 4 |
| | - Counsel and instruct patients on the use of VED | 2 | 2 | 4 |

| Topic | Ejaculatory Dysfunction | P2 | P3 | SI |
|-----------------|---|----|----|----|
| Objective | - To develop advanced skills in the assessment and treatment of patients with benign disease of male sexual dysfunction | | | |
| Clinical Skills | - Understanding of the common causes of ejaculatory disorders | 4 | 4 | 4 |
| | - Competence in the diagnosis and management of disorders of ejaculation and orgasm | 4 | 4 | 4 |

| Topic | Peyronie's Disease (PD) | P2 | P3 | SI |
|-----------|---|----|----|----|
| Objective | - To develop advanced skills in the assessment and treatment of patients with benign disease of male sexual dysfunction | | | |

| | | | | |
|---------------------------------|--|---|---|---|
| Clinical Skills | - Understanding of the presenting features, clinical findings and natural history of Peyronie's disease | 4 | 4 | 4 |
| | - Make a reliable assessment of penile curvature and other features of PD | 4 | 4 | 4 |
| | - An understanding of the available medical, mechanical, injectable and surgical treatment options for PD | 4 | 4 | 4 |
| | - Competency in the counselling and use of mechanical devices for PD | 4 | 4 | 4 |
| | - An ability to appropriately dose and perform intra-cavernosal injections as part of the assessment of PD | 1 | 3 | 4 |
| | - The ability to select and counsel patients for the various treatment options for PD listed above including penile prosthesis | 3 | 3 | 4 |
| Technical Skills and Procedures | - To perform a simple Nesbit procedure (or similar) for dorso-lateral penile curvatures | 2 | 2 | 4 |

| Topic | Penile Enlargement, reconstruction and Phalloplasty | P2 | P3 | SI |
|-----------------|---|----|----|----|
| Objective | - To develop advanced skills in the assessment and treatment of patients with benign disease of male sexual dysfunction | | | |
| Clinical Skills | - To assess the patient complaining of a small/micropenis penis, make a full assessment, refer to normal reference ranges, and perform appropriate counselling | 4 | 4 | 4 |
| | - To counsel patients with micro-penis, penile loss or gender identity disorder as to the available management strategies and surgical procedures for reconstruction. | 3 | 3 | 4 |
| | - An awareness of penile reconstruction utilizing reconstructive techniques including phalloplasty, the techniques involved, and the typical outcomes and complication rates. | 3 | 3 | 4 |

| Topic | Priapism | P2 | P3 | SI |
|---------------------------------|--|----|----|----|
| Objective | - To develop advanced skills in the assessment and treatment of patients with benign disease of male sexual dysfunction | | | |
| Clinical Skills | - To be able to undertake an appropriate and focused history and examination and arrange appropriate investigations and treatment. | 4 | 4 | 4 |
| | - To be able to discuss treatment options with patients suffering refractory ischaemic priapism and have an understanding of the optimum timing of treatment including medical treatments, shunts and the role of penile prosthesis insertion. | 3 | 3 | 2 |
| Technical Skills and Procedures | - To perform a distal (Winter) shunt | 2 | 2 | 4 |

| Topic | Penile Cancer | P2 | P3 | SI |
|---------------------------------|---|----|----|----|
| Objective | - To develop advanced skills in the assessment and treatment of patients with penile cancer | | | |
| Clinical Skills | -The recognition and classification of pre-malignant and malignant lesions of the penis including PeIN | 3 | 3 | 4 |
| | -The ability to manage common non-cancer penile lesions including PeIN | 3 | 3 | 4 |
| | - An understanding of the risk factors,aetiopathogenesis, signs and symptoms, natural history and treatment options for penile cancer | 3 | 3 | 4 |
| | - Understand the common preliminary investigations required for penile cancers | 4 | 4 | 4 |
| | - Be able to stage penile cancers using a combination of clinical and radiological assessment | 3 | 3 | 4 |
| | - Understand in detail the various treatment options available for each stage of penile cancer including penile conservation surgery, penectomy and lymphadenectomy | 3 | 3 | 4 |
| | - An understanding of the surgical procedures used for both penile and lymph node surgery including sentinel node biopsy. | 3 | 3 | 4 |
| | -An understanding of the role of adjuvant and neoadjuvant therapies in men with penile cancer | 3 | 3 | 4 |
| Technical Skills and Procedures | - Penile biopsy | 4 | 4 | 4 |
| | - Circumcision | 4 | 4 | 4 |

Modular Curriculum in Urological Oncology

| Topic | Urological Cancers | P2 | P3 | SI |
|-----------------|---|----|----|----|
| Objective | - Assessment and treatment of urological cancers in men and women | | | |
| Clinical Skills | - Application of cancer guidelines for the diagnosis and surveillance of bladder cancer | 3 | 4 | 4 |
| | - Use of adjuvant treatments for superficial bladder cancer | 2 | 3 | 4 |
| | - Decision making in high-risk bladder cancer | 3 | 3 | 4 |
| | - Application of cancer guidelines for prostate cancer | 3 | 3 | 4 |
| | - Management of raised PSA, including in elderly patients | 3 | 3 | 4 |
| | - Management of metastatic prostate cancer | 3 | 3 | 4 |
| | - Management of active surveillance for prostate cancer | 3 | 3 | 4 |
| | - Application of cancer guidelines for renal cancer | 3 | 3 | 4 |
| | - Application of cancer guidelines for testicular cancer | 3 | 3 | 4 |
| | - Application of cancer guidelines penile cancer | 3 | 3 | 4 |
| | - Clinical demonstration of familiarity with one-stop clinics and pathways * | 3 | 3 | 4 |

* can be evidenced by a relevant course, reflective writing, CBDs or AES reports

| Topic | Management of Prostate Cancer | P2 | P3 | SI |
|---------------------------------|--|----|----|----|
| Objectives | - To develop advanced skills in the assessment and treatment of men with prostate cancer | | | |
| Clinical Skills | - Clinical assessment of patients with suspected prostate cancer, including history, clinical examination and PSA | 4 | 4 | 4 |
| | - Knowledge of usage & interpretation of imaging including mpMRI, ultrasonography, CT scans, Bone scans and PET/CT scans | 4 | 4 | 4 |
| | - Formation of a management plan after discussion at an MDT | 3 | 4 | 4 |
| | - Formation of a relevant follow-up plan including location of follow-up | 4 | 4 | 4 |
| | - Assessment of the patient with recurrent / metastatic disease | 4 | 4 | 4 |
| Technical Skills and Procedures | - Transrectal ultrasound and biopsy | 4 | 4 | 4 |
| | - Transperineal ultrasound guided biopsy | 2 | 3 | 4 |
| | - Radical prostatectomy | 1 | 2 | 3 |

| Topic | Management of Bladder Cancer | P2 | P3 | SI |
|---------------------------------|--|----|----|----|
| Objectives | - To develop advanced skills in the assessment and treatment of men with bladder cancer | | | |
| Clinical Skills | -Ability to be run a diagnostic haematuria clinic | 3 | 4 | 4 |
| | - Knowledge of usage & interpretation of imaging including mpMRI, ultrasonography, CT scans, Bone scans and PET/CT scans | 3 | 4 | 4 |
| | - Formation of a management plan after discussion at an MDT | 3 | 4 | 4 |
| | - Confidence in counselling complex patients <ul style="list-style-type: none"> with HRNMIBC about treatment options including BCG and radical cystectomy | 2 | 3 | 4 |
| | <ul style="list-style-type: none"> with MIBC about neoadjuvant chemotherapy, radical cystectomy and radical radiotherapy with metastatic disease | 2 | 3 | 4 |
| Technical Skills and Procedures | - Treatment of small bladder tumour recurrences using LA flexible cystoscopy | 4 | 4 | 4 |
| | - TURBT | 4 | 4 | 4 |
| | - ileal Conduit | 1 | 2 | 3 |
| | - Radical cystectomy | 1 | 2 | 3 |
| | - Urethrectomy | 1 | 2 | 2 |
| | - Formation of neobladder | 1 | 2 | 2 |

| Topic | Management of Renal Cancer | P2 | P3 | SI |
|---------------------------------|--|----|----|----|
| Objectives | - To develop advanced skills in the assessment and treatment of men with renal cancer | | | |
| Clinical Skills | - Assessment of patient presenting with a renal mass | 4 | 4 | 4 |
| | - Knowledge of usage & interpretation of imaging including mpMRI, ultrasonography, CT scans, Bone scans and PET/CT scans | 4 | 4 | 4 |
| | - Formation of a management plan after discussion at an MDT | 3 | 4 | 4 |
| Technical Skills and Procedures | -Diagnostic ureteroscopy and endoscopic ablation (UTUC) | 3 | 4 | 4 |
| | - Lap Nephrectomy | 1 | 2 | 3 |
| | - Open Radical Nephrectomy | 1 | 2 | 3 |
| | - Partial nephrectomy | 1 | 2 | 3 |
| | - Nephroureterectomy (UTUC) | 1 | 2 | 3 |
| | - Distal ureterectomy | 1 | 2 | 3 |

| Topic | Management of Testicular Cancer | P2 | P3 | SI |
|-----------------|--|----|----|----|
| Objectives | - To develop advanced skills in the assessment and treatment of men with testicular cancer | | | |
| Clinical Skills | - Appropriate assessment of patients with testicular swelling including radiological assessment and the use of molecular markers | 4 | 4 | 4 |
| | - Appropriate regard for future fertility prospects | 4 | 4 | 4 |

| | | | | |
|---------------------------------|---|---|---|---|
| | - Appropriate management of testicular cancer and other scrotal tumours | 4 | 4 | 4 |
| | - Formation of a management plan after discussion at an MDT | 3 | 4 | 4 |
| Technical Skills and Procedures | - Radical orchidectomy | 4 | 4 | 4 |
| | - Insertion of testicular prosthesis | 4 | 4 | 4 |
| | - RPLND | | 1 | 2 |

| Topic | Management of Penile Cancer | P2 | P3 | SI |
|---------------------------------|---|----|----|----|
| Objectives | - To develop advanced skills in the assessment and treatment of men with penile cancer | | | |
| Clinical Skills | - Appropriate assessment of patients with penile cancer including radiological assessment | 4 | 4 | 4 |
| | - Formation of a management plan following discussion at an MDT meeting | 3 | 4 | 4 |
| Technical Skills and Procedures | - Circumcision and penile biopsy | 4 | 4 | 4 |
| | - Partial penectomy | 1 | 2 | 4 |
| | - Glansctomy and skin grafting | 1 | 2 | 3 |
| | - Total penectomy | 1 | 2 | 4 |
| | - Inguinal lymph node block dissection | 1 | 2 | 2 |
| | - Sentinel lymph node biopsy | 1 | 2 | 3 |
| | - Pelvic lymph node dissection (incl. laparoscopic) | | 1 | 1 |