The Egyptian Fellowship Board in Urology

UROLOGY CURRICULUM

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Version Two
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List of Abbreviations:

AB: Attitudes and Behavior
ATN: Acute Tubular Necrosis
BCG: Bacillus Calmette and Guérin
BPH: Benign Prostatic Hyperplasia
CbD: Case based Discussion
DJ: Double J
EFBU: Egyptian Fellowship Board of Urology
ER: Emergency Room
ESWL: Extracorporeal Shockwave Lithotripsy
GFR: Glomerular Filtration Rate
GU: Genito-Urinary
HARP: Half Annual Review Process
IC: Interstitial Cystitis
ICS: Intellectual and Clinical Skills
ILOs: Intended Learning Outcomes
K: Knowledge
IVU: Intravenous Urography
LUTS: Lower Urinary Tract Symptoms
MD: Doctorate in Medicine
M.Sc.: Master in Science
OB/GYN: Obstetrics and Gynecology
OPD: Outpatient Department
PBA: Procedure Based Assessment
**PSA:** Prostate Specific Antigen

**RPLND:** Retroperitoneal Lymph Node Dissection

**STD:** Sexually Transmitted Disease

**TCC:** Transitional Cell Carcinoma

**TNM:** Tumor, Nodes and Metastases

**TRUS:** Transrectal Ultrasound

**TURBT:** Transurethral Resection of Bladder Tumor

**TURP:** Transurethral Resection of the Prostate

**TS:** Technical Skills
PREFACE

- The Urology curriculum of the Egyptian Fellowship Board provides the framework for systemic training and assessment of candidates towards the level of the Urology specialist.
- The Egyptian Fellowship Board of Urology (EFBU) scientific council worked collaboratively with the accreditation team to make this curriculum available for trainees’ guidance and support.
- Worldwide, postgraduate medical education is now governed by sets of academic standards that describe the qualities and abilities of graduates. In addition, there are standards for the training processes, trainers’ selection and methods of assessment to ensure transparency and clarify expectations.
- The Egyptian Fellowship Board has already defined and published its standards for the general and professional competencies expected from our graduates in different specialties upon successful completion of training. These expectations are reflected in the Urology curriculum.
- The curriculum describes what trainees should know and be able to do upon completion of the training. The curriculum also describes in detail expectations from trainees during their rotations, methods of assessment and examination regulations.
- All topics covered during clinical, operative and theoretical studies are outlined. This will help trainees guide their readings and their choice of learning activities. In addition, all required procedures are listed together with the expected performance level. Trainers and educational supervisors will also be guided by the intended learning outcomes in their teaching and training activities.
- We hope that all our trainees, trainers and educational supervisors will follow the guidelines provided in the curriculum and cooperate with the Egyptian Fellowship Board of Urology and EFBU Scientific Council to implement the curriculum in the best way.
- This curriculum will be reviewed and updated every 3 years.

Secretary General
Higher Committee of Medical Specialties
CONTRIBUTORS

This curriculum has been created through collaboration between the EFBU accreditation team, the Egyptian Fellowship Curriculum Committee, and the EFBU Scientific Council. The following members of the Egyptian Fellowship Board of Urology accreditation team have made substantial contribution to the curriculum development:

- **Professor Ahmed Morsy**, Professor of Urology, Cairo University, and head of the EFBU scientific council.
- **Professor Abdalla Eltaahawy**, Urology Consultant, Armed forces, and member of the EFBU scientific council.
- **Assistant Professor Ashraf Mosharafa**, Assistant Professor of Urology, Cairo University, and member of the EFBU scientific council.

The Egyptian Fellowship Curriculum Committee has made significant contribution to the curriculum through collaboration with the accreditation team in the design and formulation of the educational structure. The member who participated in this work is **Dr Omneya Ezzat ElSherif**, MD in Family Medicine, Medical education expert and technical coordinator of the Egyptian Fellowship for international accreditation.

The curriculum has been revised and approved by the EFBU scientific council. The following members of the scientific council are to thanked for their valuable input:

- Professor Omar AbdelRazzak
- Professor Fahem AbdelRehim
- Professor Mohamed AbdulMoneim
- Professor Ashraf AbulEla
- Professor Hassan AbulEnein
- Professor AbuZeid Awad
- Professor Mohamed Rafiq ElHalaby
- Professor Mohammed ElGammal
- Professor Abdalla ElTahawy
- Professor Alaa Meshref
- Professor Ahmed Morsy
- Asst. Prof. Ashraf Mosharafa
- Professor Amr Noweir
- Professor Ahmed Shokair
REFERENCES

The Committee consulted international curricula and reference textbooks in Urology. The external references for the development of this curriculum were:

- The Intercollegiate Surgical Curriculum (ISCP Urology Curriculum), August 2010
- The American Urologic Association’s Urology Core Curriculum
- The European Association of Urology (EAU) guidelines, 2012
Purpose of the Urology Training Program

The goal of the EFBU is to graduate a safe competent trained specialist in urology who will be able to work satisfactorily and will have the knowledge, skills and attitudes required to practice nationally at a level comparable to international standards.

The educational process in the fellowship of urology aims to equip trainees with the necessary competencies to be able to practice as a urology specialist, including the following:

- Patient care that is appropriate, effective and compassionate while dealing with health promotion and health problems.
- Medical knowledge in basic sciences, clinical practice, and medical ethics, with application of such knowledge in the diagnosis and management of patients with urological disorders.
- Acting as safe independent specialists whilst recognizing the limitation of their own practice and the obligation to seek assistance from colleagues when appropriate.
- Interpersonal and communication skills that ensure effective information exchange with patients and their families and efficient teamwork with other health professionals.
- Appraisal and utilization of new scientific knowledge to update and continuously improve clinical practice.
- The ability to function as a trainer and teacher in relation to colleagues and medical students.
- Maintenance of standards appropriate in their professional field and ability to respond constructively to assessments and appraisals of professional competence and performance.
- Respect of ethical and medico-legal rules.
I. The Urology Training Program
A. Egyptian Fellowship Rules and Regulations

1- Entry requirements for the Egyptian fellowship of Urology

- The trainee carries MB BCh or equivalent from a recognized university
- Finished a rotating house officer position for twelve months
- The trainee must hold a valid license to practice medicine by the licensing authority
- Holders of postgraduate degrees in general surgery and urology are eligible to join the training program

2- Eligibility and Duration of Training

The structure of the training program of the Egyptian Fellowship Board of Urology requires five years of supervised training that must be conducted in an accredited hospital before sitting for the final examinations. The first and second years of training follow the General surgery first and second year training program. The candidate is eligible to enter the third year of training after passing the first part examination (see assessment system for details). The third, fourth and fifth years of training constitute the urology specialty training and are mainly conducted in the Urology Departments of accredited centers.

The 36 month specialized urology training duration includes six-months rotation (during the third year) spent in a University hospital (as a visiting resident), 27 months in Urology departments and 3 months yearly vacation. The six month University hospital rotation covers the clinical training in various urologic subspecialties with a focus on Pediatric Urology and renal function and nephrology. During the entire training program the candidate is dedicated as a full time resident. Holidays and on call duties are arranged according to Ministry of Health and Population regulations.

The five-year training program is based on candidates entering the program after obtaining their medical school degree (MB Bch or equivalent). Variations in the duration and rotations of training may be allowed (by a decision from the scientific council) for holders of postgraduate qualifications. For holders of a Master of Science degree, training modifications may be allowed as outlined in the table below:

<table>
<thead>
<tr>
<th>Qualifications</th>
<th>General Surgery</th>
<th>Urology</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB BCh or equivalent</td>
<td>2 years</td>
<td>3 years</td>
</tr>
</tbody>
</table>

Master of Science (M.Sc.) in General Surgery*  |  | 3 years
---|---|---
Master of Science (M.Sc.) in Urology**  | 2 years  | 2 years

* For holders of M.Sc. or an equivalent qualification in General Surgery, the first two years of general surgery training and the first part examination requirements may be waived following approval by the scientific Council.

** For holders of M.Sc. in Urology, the specialty urology training may be shortened to two years.

For holders of a Medical Doctorate (MD) in Urology, the candidate may apply for a waiver of training requirements that will be evaluated by the EBU scientific council on a case-by-case basis.

**Mandatory courses**
Candidates of first & second years of training must successfully complete the following courses:
1. Basic Surgical Skills (including intestinal & vascular anastomoses)
2. Basics of Laparoscopy
3. Basic Life Support
4. Patient Safety
5. Medical Ethics

**3- Interruption of training**

Interruption period in major unavoidable circumstances should be compensated for at the end of the training period according to the Egyptian fellowship regulations. The maximum period for interruption is one year.

**4- Dismissal policy**

Dismissal from the training program occurs in the following cases:
1. Failure to pass the first part, second part, or third part examinations within the allowed time frame and according to the number of allowed attempts
2. Getting a Grade D (Unsatisfactory) recommendation by the Half Annual Review Processes
3. Failure to abide by the general rules and regulations of the Egyptian fellowship Board
4. Breaking of institutional regulations e.g. by unprofessional misconduct
B. Trainee’s Duties & Responsibilities

1. The Job description of the Urology Trainee

1.1 Job description of the trainee of the 1st and 2nd years

Duties and responsibilities of trainees during the general surgery training (1st and 2nd years) follow the requirements described in the Egyptian Fellowship Board stated in the General Surgery curriculum

1.2 Job description of the trainee 3rd and 4th years

In Emergency room
1- Conducts primary assessment and suggests management of patients in the ER
2- Admits patients when indicated
3- Assists in various emergency procedures performed in the ER
4- Provides ER cover and on-call duties shifts according to the hospital policy

In wards:
1- Clerks all admissions (history, general and local clinical examination) and suggests basic investigations and plan of management
2- Performs daily rounds on patients
3- Writes detailed daily progress notes
4- Performs preoperative assessment and preparations.
5- Prepares operative lists.
6- Provides postoperative care
7- Arranges discharge, home medication, counseling and follow up appointments of inpatients
8- Assists in and/or performs various bedside procedures and emergency procedures
9- Follows and obtains various results of investigations and reports abnormal results to seniors
10- Follows up referral of patients to other specialties
11- Observes seniors explaining to patients the methods of management and their illness and discusses this process with seniors
12- Observes the approaches taken by the seniors when talking to patients about the prognosis of their illness
13- Checks completeness of medical reports of patients
14- Participates in the interdepartmental consultations.
15- Maintains good relationship with patients, their relatives, the medical and administrative staff
16- Maintains the confidentiality and ethics of the profession.
In OPD
1- Attends the urology clinic
2- Participates in patients management under appropriate supervision
3- Completes various hospital forms

In Operating Theater
1- Arranges patient's admission to theater
2- Revises patient's notes
3- Reviews type and side of operation, reserves blood, obtains informed consent before operation
4- Arranges endoscopes and equipment for operation
5- Follows the surgical skills and procedures competence level described in the syllabus
6- Registers the operations done in the log book, and signs it by the operating surgeons
7- Writes operative notes and postoperative treatment

Educational activities
1- Attends and presents cases in daily and grand rounds
2- Participates in journal clubs, morbidity and mortality, and other hospital educational meetings
3- Attempts to attend local educational courses and national / international conferences

1.3 Job description for trainee at 5th year

In Emergency room
1- Conducts assessment and management of patients in ER
2- Prescribes treatment.
3- Admits patients
4- Performs various emergency procedures performed in ER under the supervision as appropriate
5- Provides ER cover and on-call Rota according to hospital policy

In wards
1- Revises and supervises clerking of all admissions, requests advanced investigations with consultation of seniors and draws plan of management
2- Performs daily rounds
3- Comments on daily progress notes
4- Arranges discharge, home medications, counseling and follow up appointments of inpatients
5- Assists and teaches to perform various bedside procedures and emergency procedures
6- Follows and obtains various results of investigations and reports abnormal results to seniors
7- Plans treatment.
8- Revises preoperative assessment and preparations.
9- Reviews operative lists.
10- Revises operative records.
11- Follows up referral of patients to other specialties
12- Observes seniors explaining to patients the methods of management and their illness and discusses this process with seniors
13- Observes the approaches taken by the seniors when talking to patients about prognosis of their illness
14- Checks completeness of medical reports of patients
15- Participates in the interdepartmental consultation.

In OPD
1- Attends the urology clinic
2- Manages patients with the availability of appropriate supervision.
3- Completes various hospital forms

In Operating Theater
1- Revises type of operation, anesthesia, and surgeon allocated to the operation.
2- Observes and assists in different operations.
3- Follows the surgical procedure schedule described for the ST5.
4- Writes postoperative notes and treatment as advised by the senior staff.
5- Registers the operative procedure in the log book.

Educational activities
1- Attends and presents cases in daily and grand rounds
2- Participates in journal clubs, morbidity and mortality, and other hospital educational meetings
3- Attempts to attend local educational courses and national / international conferences

2. Learning Activities (suggestion: move this to training program)

It is expected that the trainees are attached to their training hospitals for 6 days/week & are freed from any hospital duties 2 days per month to participate in the Central Scientific Days. The weekly timetable of clinical & scientific activities held in the training hospitals should be drafted at the beginning of each rotation & documented in the Learning Agreement Form. This form is sent to the Egyptian Fellowship Board and copies are kept by the trainee/s. This form is made available to the educational supervisor/s, and forms the basis of their visits to the
hospitals. It is the duty of the trainers to ensure that trainees are freed from hospital duties at least for an additional half day per week which is dedicated for self-directed learning.

Activities held in the training hospital cover the following items:
- Daily ward round
- Weekly grand round
- Regular case presentation / morbidity and mortality meetings
- Journal club
- Clinical Audit

**Central Scientific Day**

All Trainees are expected to have protected learning time at a specific day twice per month. The teaching program of these days is drafted centrally at the Egyptian Fellowship Board. The Specialty Coordinator notifies training centers by the agenda of these two days. The central scientific day follows a general format that includes three sections:
  i. Clinical Section: consisting of clinical rounds, case presentations and case based discussions
  ii. Lecture / didactic presentation section: the lectures cover the core topics of the urology syllabus and follow the outline below:

<table>
<thead>
<tr>
<th>3rd and 4th year Lectures</th>
<th>5th year Lectures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percutaneous Renal Surgery</td>
<td>Congenital anomalies of the UT</td>
</tr>
<tr>
<td>Ureteroscopy</td>
<td>Hypadpospadias and epispadias</td>
</tr>
<tr>
<td>BPH and LUTS</td>
<td>Prenatal and postnatal hydronephrosis</td>
</tr>
<tr>
<td>Minimally invasive surgery for BPH</td>
<td>Infravesical obstruction in pediatrics</td>
</tr>
<tr>
<td>Trauma I: Kidney and ureter</td>
<td>Embryology of the UT and Intersex</td>
</tr>
<tr>
<td>Trauma II: bladder and posterior urethra</td>
<td>Urinary fistula</td>
</tr>
<tr>
<td>Trauma III: anterior urethra and external genitalia</td>
<td>Kidney transplantation: overview</td>
</tr>
<tr>
<td>Priapism, penile fracture and penile deformity</td>
<td>Surgical complications of renal transplantation</td>
</tr>
<tr>
<td>Renal parenchymal neoplasms</td>
<td>Management of Male incontinence</td>
</tr>
<tr>
<td>Urethral neoplasms: Kidney and Ureter</td>
<td>Infertility I: approach to azoospermia</td>
</tr>
<tr>
<td>Non muscle-invasive Bladder Cancer</td>
<td>Infertility II: Sperm retrieval and ICSI</td>
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</tr>
<tr>
<td>Muscle-invasive bladder cancer</td>
<td>Basic Genetics for Urologists</td>
</tr>
<tr>
<td>Neurogenic bladder overview</td>
<td>Renovascular hypertension</td>
</tr>
<tr>
<td>Failure to void</td>
<td>Management of Male incontinence</td>
</tr>
<tr>
<td>Urinary incontinence overview</td>
<td>Erectile Dysfunction</td>
</tr>
<tr>
<td>Urodynamic studies</td>
<td>ARF, CRF and ESRD</td>
</tr>
<tr>
<td>Management of female urinary</td>
<td>Specific Laparoscopic Urologic Procedures</td>
</tr>
<tr>
<td>incontinence</td>
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<tr>
<td>PSA and TRUS</td>
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<tr>
<td>Prostate cancer: diagnosis and</td>
<td></td>
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<tr>
<td>treatment</td>
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<tr>
<td>Prostate cancer: management</td>
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<tr>
<td>Basic Laparoscopic Surgery</td>
<td></td>
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<tr>
<td>Genito-Urinary TB</td>
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<tr>
<td>Non-specific Infections of</td>
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<tr>
<td>genitourinary system</td>
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<tr>
<td>Urinary obstruction and stasis</td>
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<tr>
<td>Urinary diversion and bladder</td>
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<tr>
<td>substitution</td>
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</table>

iii. Trainee-led section: various learning activities are exercised including presentation of reviewed topics by trainees, journal club, and research project presentations.

C. Supervisory and Training Staff

1. The Trainer

Qualifications of the trainer:
   1- High urological qualification such as: Egyptian Fellowship, MD, American Board, FRCS or any other equivalent.
2- An experience of at least 3 years after the high qualification.
3- Employed on a full time basis, if possible.

Job description of the trainer:
1- Provides training & teaching for the trainees according to the provided curriculum & intended learning outcomes
2- Reviews and agrees upon the learning agreement forms and activities with the trainee.
3- Supervises various activities of the trainees.
4- Arranges the rotation plan to subspecialties and other trainers, if applicable.
5- Ensures the documentation of the different activities in the log book by the trainee and counter signs these activities.
6- Conducts periodic educational evaluation of the trainee, including monthly reports and workplace based assessment (WPBA), with feedback to the trainee and forwarding assessment documents to the Egyptian Fellowship of Urology Scientific Council.
7- Attends a meeting with the educational supervisor every three months to discuss the learning progress of the trainee and solve any arising problems.

2. The Educational (Scientific) Supervisor

Qualifications:
1- High urological qualification such as: MD, American Board, FRCS or equivalent.
2- A consultant urologist status, 10 years after the high qualification.
3- A member of the urology scientific council.

Job description of the educational supervisor:
1- Checks and evaluates the progress of the training program.
2- Evaluates trainers’ monthly reports and proposes remedial actions for any deficiencies.
3- Ensures that all training activities are running according to the stated curriculum.
4- Meets with the trainer every three months to discuss the learning progress of the trainee and solves any arising problems.
5- Checks the availability of requirements and facilities for training and advises the scientific council when appropriate.
6- Checks that each trainee is involved in an audit process.
7- Assesses the logbook activities of each trainee & provide needed remarks for both trainer & trainees on individual basis.
8- Ensures the adherence to the rotation plan for each trainee.
9- Reports to the EFBU accreditation committee and scientific board and discusses with them the performance of trainees and their eligibility to sit for the exam.
10- Ensures the applicability and regularity of WPBA.
11- Discusses with hospital authorities the administrative affairs of the trainees and proposes solutions.
12- Participates in the annual review process and in exit exams as nominated or required by the urology scientific board.

3. **Urology Specialty Coordinator**

Job description of specialty coordinator

1- Manages training across hospitals and hospital networks
2- Keeps records of trainees' progression in trainees' files
3- Collects and follows up all forms related to the training process. These forms should be organized and summarized in a suitable spreadsheet reflecting each activity corresponding to trainees, trainers, supervisors and training post.
4- Organizes the training sequence to meet the needs of the trainee
5- Recruits trainers under scientific council supervision
6- Recruits trainees in collaboration with the Egyptian Board administration and according to the approved scientific board requirements.
7- Follows up and facilitates trainers and supervisors activities
8- Links with training hospitals’ management teams to successfully manage the training program in each training center
9- Coordinates Half Annual Review Process (HARP) meetings
10- Prepares for and participates in visits for accreditation of training hospitals
11- Follows up on regular audit of training centers performance which is based on:
    a. Reports from trainers
    b. Reports from educational supervisors
    c. Trainee post assessment forms
12- The specialty coordinator should identify any issues arising from previously mentioned monitoring approaches or as a direct complaint from trainees and coordinate appropriately with relevant personnel to resolve it.

4. The **Urology Administrative Coordinator**

D. Accreditation of Urology Department / Centre for Training

Details of requirements for training centre / Department accreditation are based on the Egyptian Fellowship accreditation requirements and are described in Appendix B.
II. Urology Syllabus
A. Overview

The Urology syllabus states the knowledge, skills and professional attitudes that the Egyptian Fellowship of Urology trainee is expected to acquire during the training program. The syllabus also provides the basis for the assessment of candidates. Candidates who fulfill the specified learning outcomes and pass the summative assessment are expected to meet the requirements for certification and to be able to provide skilled independent urological care upon graduation.

The syllabus consists of 11 topics under which the various intended learning outcomes (ILOs) are listed. The first topic describes the general competencies common to the Egyptian Fellowship trainees in various specialties, while the remaining topics (2-11) describe the knowledge and skills specific to the Urology training program.

Standards for Technical and Procedural skills
During the Urology training program, the trainee is expected to demonstrate the applied knowledge in performing certain technical and procedural skills. The following methodology is used to define the competency level (from 1-5) the candidate is expected to reach by the end of the training:

1. Has observed
Exit descriptor; at this level the trainee:
- Has adequate knowledge of the steps through direct observation.
- Demonstrates proper handling of the instruments relevant to the procedure appropriately and safely.

2. Has assisted
Exit descriptor; at this level the trainee:
- Has adequate knowledge of the steps through observation and assistance.
- Performs the tasks of the assistant appropriately.
- Can perform parts of the procedure with reasonable fluency.

3. 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 the start till the end.
- Knows and demonstrates when to call for assistance/advice from the supervisor (recognizes personal limitations).

4. 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.
- Recognizes 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 to seek help.
- Seeks advice rather than help that requires the trainer to scrub.
5. Competent to do without assistance, including managing complications

Exit descriptor, at this level the trainee:
- Can deal with straightforward and difficult cases to a satisfactory level and without the need for external input.
- The level at which one would expect a Urology Specialist (as defined by the Ministry of Health and Population) to practice.
- Is capable of supervising trainees.

List of Topics:
1. General Competencies
2. Urolithiasis
3. Urinary Tract Obstruction
4. Uro-Genital Infections & Inflammations
5. Voiding Dysfunction & Urinary Tract Reconstruction
6. Urologic Oncology
7. Andrology
8. Pediatric Urology
9. Renal Function and Nephrology
10. Uro-Radiology
11. Genito-Urinary Trauma

B. Intended Learning Outcomes (ILOs) of the curriculum

The Urology Program Intended Learning Outcomes (ILOs) for each specific topic with regards to the Knowledge (K), Intellectual and Clinical Skills (ICS), Attitude and Behavior (AB), and Technical Skills (TS) is demonstrated in the below table:

<table>
<thead>
<tr>
<th>Topic</th>
<th>1. General Competencies</th>
<th>level</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.1 History Taking</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Objective</strong></td>
<td>All trainees should be able to obtain a relevant history from patients, accurately record and analyze the history with clinical examination to formulate a clear diagnostic plan</td>
<td></td>
</tr>
<tr>
<td>Knowledge (K1.1)</td>
<td>Trainees should be able to recognize:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>K.1.1.1 The importance of different elements of history</td>
<td></td>
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<tr>
<td></td>
<td>K.1.1.2 Causes and risk factors for conditions relevant to the clinical presentation</td>
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<td></td>
<td>K.1.1.3 The way that the history should be informative to the examination, investigations and management</td>
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<tr>
<td></td>
<td>K.1.1.4 The different possibilities (differential diagnosis) of the different clinical symptoms</td>
<td></td>
</tr>
<tr>
<td>Intellectual &amp;</td>
<td>Trainees should be able to</td>
<td></td>
</tr>
</tbody>
</table>
| Clinical Skills (ICS1.1) | ICS.1.1.1 Find clues in the urologic history to allow for provisional diagnosis, differential diagnosis and plan the management  
ICS.1.1.2 Manage alternative and conflicting views from the family, caregivers and friends |
|---|---|
| Attitudes and Behavior (AB1.1) | Trainees should  
A.B. 1.1.1 Demonstrate respect, compassion and empathy for the patients and their caregivers  
A.B. 1.1.2 Recognize and overcome barriers to effective communication  
A.B. 1.1.3 Recognize and interpret the use of non-verbal communication from patients and caregivers |
| 1.2 Clinical Examination & Assessment | **Objective**  
All trainees should be able to perform focused and accurate clinical examination and be able to relate physical findings to history in order to establish a diagnosis and formulate a management plan. |
| Knowledge (K1.2) | Trainees should be able to recognize:  
K.1.2.1 The basis and relevance of physical signs  
K.1.2.2 The limitations of the physical examination & the need for adjunctive forms of assessment |
| Intellectual & Clinical Skills (ICS1.2) | Trainees should be able to  
ICS.1.2.1 Carry out general examination relevant to urologic disorders.  
ICS.1.2.2 Carry out a thorough abdomino-pelvic examination and elicit physical signs that are relevant to the presentation and that is valid, targeted and time efficient  
ICS.1.2.3 Elicit important clinical findings  
ICS.1.2.4 Perform relevant adjunctive examinations |
| Attitudes and Behavior (AB1.2) | Trainees should  
A.B.1.2.1 Respect patients’ dignity and confidentiality  
A.B.1.2.2 Acknowledge cultural issues  
A.B.1.2.3 Appropriately involve relatives  
A.B.1.2.4 Appreciate situations where there is the need for a chaperone. |
| 1.3 Investigations | **Objective**  
All trainees must be able to describe the principles, application and side effects of commonly used investigations. They must be able to choose the proper investigations and interpret the findings. |
| Knowledge (K1.3) | Trainees should be able to:  
K.1.3.1 Explain the range of investigations available, and the circumstances in which they are used.  
K.1.3.2 Recognize the limitations of the investigation and the
<table>
<thead>
<tr>
<th>Intellectual &amp; Clinical Skills (ICS1.3)</th>
<th>Trainees should be able to</th>
</tr>
</thead>
<tbody>
<tr>
<td>K.1.3.1 Prioritize, select and use appropriate investigations</td>
<td>ICS.1.3.2 Interpret the findings</td>
</tr>
<tr>
<td>K.1.3.3 Recognize when further action is required</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attitudes and Behavior (AB1.3)</th>
<th>Trainees should</th>
</tr>
</thead>
<tbody>
<tr>
<td>AB.1.3.1 Recognize the cost and localize the resources involved.</td>
<td>AB.1.3.2 Provide explanations to patients as regarding the rationale for investigations, limitations and possible unwanted effects</td>
</tr>
</tbody>
</table>

**1.4 Decision Making and Clinical Reasoning**

**Objective**

By the end of the training trainees should be able to formulate a diagnostic and therapeutic plan for a patient according to the clinical information available, prioritize the elements of the plan and communicate it appropriately.

**Knowledge (K1.4)**

Trainees should demonstrate knowledge of:

- K.1.4.1 Generation of hypothesis and differential diagnosis within the clinical context
- K.1.4.2 The need to test, refine and verify hypotheses
- K.1.4.3 Problem lists and action plans

**Intellectual & Clinical Skills (ICS1.4)**

Trainees should be able to

- ICS.1.4.1 Recognize critical illness and respond with appropriate urgency
- ICS.1.4.2 Recognize the most urgent / important tasks and ensure that they managed rapidly
- ICS.1.4.3 Interpret clinical features, their reliability and correlation to clinical scenarios including recognition of the variability of presentation.
- ICS.1.4.4 Formulate an evaluation plan for appropriate medical, laboratory, and radiological examinations
- ICS.1.4.5 Prioritize the investigations needed to reach final diagnosis
- ICS.1.4.6 Construct an appropriate management plan and communicate this effectively to the patient, parents and care givers where relevant
- ICS.1.4.7 Weigh risks and benefits of therapeutic intervention to an individual patient

**Attitudes and Behavior (AB1.4)**

Trainees should demonstrate the readiness to:

- AB.1.4.1 Discuss with a patient the benefit/risk balance of therapeutic intervention and facilitate patient choice
- AB.1.4.2 Search for evidence to support clinical decision making
| AB.1.4.3 Seek senior advice on formulating plan | Objective 1.5 Communication
| AB.1.4.4 Use expert advice, clinical guidelines and algorithms | All trainees must be able to communicate effectively and sensitively with patients, care givers and colleagues and be able to establish a doctor/patient/relatives relationship characterized by good communication, understanding, trust, respect, empathy and confidentiality.
| AB.1.4.5 Communicates the impact of lifestyle and risk factors on the likelihood of future events | Knowledge (K1.5) Trainees should demonstrate the knowledge of:
| K.1.5.1 How to structure an interview appropriately | K.1.5.2 The importance of the patient's background (including ethnicity and wealth), culture (including spirituality and religion), education and preconceptions (ideas, concerns, expectations) to the process
| Intellectual & Clinical Skills (ICS1.5) | Intellectual & Clinical Skills (ICS1.5) Trainees should be able to
| ICS.1.5.1 Establish a rapport with the patient and any relevant others (e.g. care givers) | ICS.1.5.2 Deliver information compassionately, being alert to and managing their and your emotional response (anxiety, antipathy etc.)
| ICS.1.5.3 Check the patient's/care-giver's understanding, ensuring that all their concerns/questions have been covered | ICS.1.5.4 Communicate accurately, clearly, promptly and comprehensively with relevant colleagues by means appropriate to the urgency of a situation (telephone, email, letter etc.), especially where responsibility for a patient's care is transferred
| ICS.1.5.5 Ensure appropriate referrals are optimally managed | ICS.1.5.6 Communicate effectively with administrative bodies
| Attitudes and Behavior (AB1.5) | Attitudes and Behavior (AB1.5) Trainees should
| AB.1.5.1 Approach the situation with courtesy, empathy, compassion and professionalism | AB.1.5.2 Ensure that the approach is inclusive and patient centered and respect the diversity of values in patients and colleagues
| 1.6 Team Work, Teaching and Training Others | Objective
| All trainees should recognize the importance of co-operation and team-work with other healthcare professionals involved in patient care. Trainees should demonstrate willingness, enthusiasm and ability to contribute to the teaching and training of junior trainees and other healthcare colleagues |
### Knowledge (K1.6)

Trainees should be able to recognize:

- **K.1.6.1** The roles and responsibilities of members of the healthcare team
- **K.1.6.2** The value of the multi-disciplinary team meeting
- **K.1.6.3** The role of the physician as an educator

### Intellectual & Clinical Skills (ICS1.6)

Trainees should be able to:

- **ICS.1.6.1** Work cooperatively as part of a clinical team and accept, where appropriate, the role of the leader of the team.
- **ICS.1.6.2** Share information with colleagues
- **ICS.1.6.3** Prepare patient lists with clarification of problems and ongoing care plan
- **ICS.1.6.4** Keep records up-to-date and legible and relevant to the safe progress of the patient
- **ICS.1.6.5** Demonstrate important urological signs to others
- **ICS.1.6.6** Develop basic PowerPoint presentation to support educational activity
- **ICS.1.6.7** Share in departmental teaching programs including journal clubs
- **ICS.1.6.8** Provide effective feedback after teaching

### Attitudes and Behavior (AB1.6)

Trainees should:

- **AB.1.6.1** Respect the views of others in achieving the common purpose of the team
- **AB.1.6.2** Arrange cover (Manage the deteriorating performance of colleagues e.g. due to stress, fatigue)
- **AB.1.6.3** Act to maintain the dignity and safety of patients in discharging educational duties at all times

### 1.7 Patient Safety in Clinical Practice

**Objective**

All trainees must ensure patient safety in the organization and during delivery of care.

### Knowledge (K1.7)

Trainees should be able to define:

- **K.1.7.1** The features of a safe working environment
- **K.1.7.2** The hazards of medical equipment in common use
- **K.1.7.3** The dangers of sharps and blood contamination
- **K.1.7.4** The side effects and contraindications of medications prescribed

### Intellectual & Clinical Skills (ICS1.7)

Trainees should be able to:

- **ICS.1.7.1** Recognize when a patient is not responding to treatment, reassess the situation
- **ICS.1.7.2** Recognize when different strategies are required in those not responding to a particular therapy and respond to the manifestations of a patient’s deterioration
- **ICS.1.7.3** Ensure the correct and safe use of medical equipment
<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
</table>
| Attitudes and Behavior (AB1.7)   | Trainees should  
AB.1.7.1 Demonstrate a high level of safety awareness at all times  
AB.1.7.2 Encourage feedback from all members of the team on safety issues                                                                                                                                                                                                 |
| Objective                        | All trainees should be able to prevent and control transmission of infection to patients in different healthcare settings. Also they should protect themselves from exposure to biological hazards and adhere to the management plan on exposure.                                                                 |
| Knowledge (K1.8)                 | Trainees should be able to recognize:  
K.1.8.1 Outline the principles of infection control as defined by the national guidelines of MOH  
K.1.8.2 Describe the principles of preventing infection in high risk groups  
K.1.8.3 Describe principles of aseptic techniques  
K.1.8.4 Recognize types of immunization that should be received by healthcare workers  
K.1.8.5 Outline work restriction policy for healthcare workers  
K.1.8.6 Recognize management plan for healthcare workers exposed to biological workplace hazards |
| Intellectual & Clinical Skills (ICS1.8) | Trainees should  
ICS.1.8.1 Actively engage in local infection control monitoring and reporting processes  
ICS.1.8.2 Prescribe antibiotics according to local antibiotic guidelines  
ICS.1.8.3 Detect potentials for cross-infection in clinical settings  
ICS.1.8.4 Practice aseptic technique whenever relevant and maintains high standard of infection control during interventional procedures  
ICS.1.8.5 Strictly adhere to standard precautions and transmission based precautions  
ICS.1.8.6 Triage and refer patients with infectious disease that require isolation to the suitable facilities with available isolation rooms  
ICS.1.8.7 Efficiently use personnel protective equipment to protect themselves and their patients from biological hazards  
ICS.1.8.8 Assess the risk of transmission of blood-borne pathogens |
| Attitudes and Behavior (AB1.8)   | Trainees should  
AB.1.8.1 Recognize that standard precautions are sufficient to protect against blood-borne pathogens and avoid over exaggeration when caring for patients with such pathogens.  
AB.1.8.2 Encourage all staff, patients and relatives to observe infection control principles  
AB.1.8.3 Take appropriate steps to protect patients when their own
Health is affected by illness or disability.  
AB.1.8.4 Protect themselves, their colleagues and their patients by being immunized against vaccine preventable diseases (HBV, influenza, etc.)  
AB.1.8.5 Notify occupational health service with exposures and needle stick injuries and adhere to the post exposure management plan

**1.9 Medical Ethics**

**Objective**  
All trainees should know, understand and apply appropriately the principles, guidance and laws regarding medical ethics and confidentiality and be able to obtain valid consent from the patient and respond to the patient's level of understanding and mental state.

**Knowledge (K1.9)**  
Trainees should be able to recognize:  
K.1.9.1 The principles of medical ethics  
K.1.9.2 The factors influencing ethical decision making: religion, moral beliefs, and cultural practices.  
K.1.9.3 Components of valid consent  
K.1.9.4 Persons from whom consent should be taken  
K.1.9.5 Situations where patient consent, while desirable, may not be required for disclosure e.g. communicable diseases

**Intellectual & Clinical Skills (ICS1.9)**  
Trainees should be able to  
ICS.1.9.1 Explain to the patient and family his or her disease, natural history, prognosis, management plan, all care options and possible complications.  
ICS.1.9.2 Obtain a valid consent  
ICS.1.9.3 Practice and promote accurate documentation within clinical practice

**Attitudes and Behavior (AB1.9)**  
Trainees should  
AB.1.9.1 Respond to the patient's level of understanding and mental state and how this may impair their capacity for informed consent.  
AB.1.9.2 Demonstrate balanced attitude to deliver the information in the consent without ease or frightening to the patient and his/her family.  
AB.1.9.3 Respect patient’s requests for information not to be shared, unless this puts the patient, or others, at risk of harm  
AB.1.9.4 Demonstrate honesty and openness in any financial arrangements with patients  
AB.1.9.5 Conforms to codes of practice

**1.10 Audit**

**Objective**  
All trainees should progressively develop the ability to perform an audit of clinical practice and to apply the findings appropriately.
| Knowledge (K1.10) | Trainees should recognize:  
|                  | K.1.10.1 The uses of audit (developing patient care, risk management, etc.)  
|                  | K.1.10.2 The steps involved in completing the audit cycle  
|                  | K.1.10.3 The uses of local systems for reporting and learning from clinical incidents and near misses |
| Intellectual & Clinical Skills (ICS1.10) | Trainees should be able to  
|                  | ICS.1.10.1 Use the findings of an audit to develop and implement change |
| Attitudes and Behavior (AB1.10) | Trainees should  
|                  | AB.1.10.1 Recognize the need for audit in clinical practice for quality improvement  
|                  | AB.1.10.2 Attend departmental audit meetings  
|                  | AB.1.10.3 Support audit by junior medical trainees and within the multidisciplinary team |

### 1.11 Research Appraisal

| Objective | All trainees should be able to recognize research principles and methodology and critically evaluate scientific papers |

| Knowledge (K1.11) | Trainees should be recognize:  
|                  | K.1.11.1 The principles of formulating a clinical question that could be answered by research  
|                  | K.1.11.2 The Principles behind qualitative, quantitative and epidemiological research methods |
| Intellectual & Clinical Skills (ICS1.11) | Trainees should be able to  
|                  | ICS.1.11.1 Demonstrate critical appraisal skills & the ability to interpret important statistical data  
|                  | ICS.1.11.2 Present data in a clear, honest and critical fashion |
| Attitudes and Behavior (AB1.11) | Trainees should  
|                  | AB.1.11.1 Appreciate the importance of research in generating knowledge that could be applied in medical practice |

### 1.12 Professionalism and Probity

| Objective | All trainees should be trusted and are known to act fairly in all situations to be able to manage complex human, legal and ethical problem |

| Knowledge (K1.12) | Trainees should demonstrate understanding of:  
|                  | K.1.12.1 The overall approach of value based practice and how this relates to ethics, code of practice, law and decision making |
| Intellectual & Clinical Skills (ICS1.12) | Trainees should be able to  
ICS.1.12.1 Behave with honesty and probity and act with honesty and sensitivity in a non-confrontational manner  
ICS.1.12.2 Admit to errors early and pro-actively |
| --- | --- |
| Attitudes and Behavior (AB1.12) | Trainees should  
AB. 1.12.1 Demonstrate honesty and openness in any arrangements with patients by providing valid information.  
AB. 1.12.2 Recognize the importance of personal development as a role model to guide trainees in aspects of good professional behavior |

<table>
<thead>
<tr>
<th>Topic</th>
<th>Objective</th>
<th>Knowledge (K2)</th>
</tr>
</thead>
</table>
| 2. Urolithiasis (Urinary Stone Disease) | To diagnose, assess and manage patients presenting with urinary stone/s including onward referral when appropriate | K2.1 Basic Concepts of Urolithiasis  
Trainees must be able to  
K2.1.1 Detail the anatomy of the urinary tract and its relations  
K2.1.2 Describe the physiology of urine formation and transport  
K2.1.3 Define the mechanisms of renal pain and ureteric colic  
K2.1.4 Outline the pharmacology of pain prevention and relief  
K2.1.5 Outline the pharmacology of commonly used drugs in the management of ureteric colic  
K2.1.6 Discuss the use of local and regional anesthetic techniques  
K2.1.7 Outline the microbiology of uro-sepsis  
K2.1.8 Outline the pharmacology of commonly used drugs for uro-sepsis  
K2.1.9 Describe the pathophysiology and mechanisms of stone formation  
K2.1.10 Discuss the pathophysiology of ureteric obstruction  
K2.1.11 Identify the natural history of stone disease  
K2.1.12 Describe the variable presentations of stones according to site  
K2.1.13 Recognize the complications of stone disease  
K2.1.14 Outline the principles of management of stones in the urinary tract  
K2.1.15 Discuss the metabolic management of urinary stone disease  
K2.2 Renal Calculi  
Trainees must be able to  
K2.2.1 Compare the indications for different treatment modalities  
K2.2.2 Discuss the mechanisms of extracorporeal lithotripsy |
<table>
<thead>
<tr>
<th>K2.2.3</th>
<th>Compare the mechanisms of intracorporeal lithotripsy</th>
</tr>
</thead>
<tbody>
<tr>
<td>K2.2.4</td>
<td>Identify complications of treatment including lithotripsy</td>
</tr>
<tr>
<td>K2.2.5</td>
<td>Explain outcomes of treatment</td>
</tr>
<tr>
<td>K2.2.6</td>
<td>Recognize normal post-operative progress</td>
</tr>
<tr>
<td>K2.2.7</td>
<td>Outline post treatment care</td>
</tr>
<tr>
<td>K2.2.8</td>
<td>Compare imaging and techniques for percutaneous access</td>
</tr>
<tr>
<td>K2.2.9</td>
<td>Describe operative management of renal calculi</td>
</tr>
</tbody>
</table>

**K2.3 Ureteric Calculi**

Trainees must be able to

<table>
<thead>
<tr>
<th>K2.3.1</th>
<th>Detail the assessment and the investigations needed for patients with ureteric calculi</th>
</tr>
</thead>
<tbody>
<tr>
<td>K2.3.2</td>
<td>Compare indications for different treatment modalities</td>
</tr>
<tr>
<td>K2.3.3</td>
<td>Discuss mechanisms of extracorporeal lithotripsy</td>
</tr>
<tr>
<td>K2.3.4</td>
<td>Compare mechanisms of intracorporal lithotripsy</td>
</tr>
<tr>
<td>K2.3.5</td>
<td>Identify complications of treatment including lithotripsy</td>
</tr>
<tr>
<td>K2.3.6</td>
<td>Explain outcomes of treatment</td>
</tr>
<tr>
<td>K2.3.7</td>
<td>Recognize normal post-operative progress</td>
</tr>
<tr>
<td>K2.3.8</td>
<td>Outline post treatment care</td>
</tr>
<tr>
<td>K2.3.9</td>
<td>Discuss the role of stents in the treatment of ureteric calculi</td>
</tr>
<tr>
<td>K2.3.10</td>
<td>Describe operative management of ureteric calculi</td>
</tr>
</tbody>
</table>

**K2.4 Bladder calculi**

Trainees must be able to

<table>
<thead>
<tr>
<th>K2.4.1</th>
<th>Detail the assessment and the investigations needed for patients presenting with bladder calculi</th>
</tr>
</thead>
<tbody>
<tr>
<td>K2.4.2</td>
<td>Compare the indications for different treatment modalities</td>
</tr>
<tr>
<td>K2.4.3</td>
<td>Compare the mechanisms of intracorporal lithotripsy</td>
</tr>
<tr>
<td>K2.4.4</td>
<td>Identify the complications of treatment of bladder calculi</td>
</tr>
<tr>
<td>K2.4.5</td>
<td>Explain outcomes of treatment</td>
</tr>
<tr>
<td>K2.4.6</td>
<td>Recognize normal post-operative progress</td>
</tr>
</tbody>
</table>

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**Intellectual & Clinical Skills (ICS2)**

**ICS2.1 General skills in urinary stone management**

Trainees must be able to

<table>
<thead>
<tr>
<th>ICS2.1.1</th>
<th>Diagnose and assess the anuric and/or uremic patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICS2.1.2</td>
<td>Identify indications for emergency therapy</td>
</tr>
<tr>
<td>ICS2.1.3</td>
<td>Select appropriate investigations</td>
</tr>
<tr>
<td>ICS2.1.4</td>
<td>Demonstrate steps for the prevention, diagnosis and management of uro-sepsis</td>
</tr>
<tr>
<td>ICS2.1.5</td>
<td>Coordinate multidisciplinary assessment and management</td>
</tr>
<tr>
<td>ICS2.1.6</td>
<td>Select investigations needed for patients presenting with recurrent stone disease</td>
</tr>
</tbody>
</table>

**ICS2.2 Renal Calculi**

Trainees must be able to

<table>
<thead>
<tr>
<th>ICS2.2.1</th>
<th>Diagnose and assess patients presenting with renal calculi</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICS2.2.2</td>
<td>Formulate a correct management plan including addressing complications</td>
</tr>
</tbody>
</table>
ICS2.2.3 Take an informed consent before relevant investigations and procedures  
ICS2.2.4 Conduct post-operative assessment of patients in the postoperative period  
ICS2.2.5 Coordinate appropriate referral pathways when indicated  

**ICS2.3 Ureteric calculi**  
Trainees must be able to  
ICS2.3.1 Diagnose and assess patients presenting with ureteric calculi  
ICS2.3.2 Formulate an appropriate management plan for ureteric calculi including addressing complications  
ICS2.3.3 Take an informed consent before relevant investigations and procedures  
ICS2.3.4 Conduct post-operative assessment of patients in the postoperative period  
ICS2.3.5 Coordinate appropriate referral pathways when indicated  

**ICS2.4 Bladder and urethral calculi**  
Trainees must be able to  
ICS2.4.1 Diagnose and assess patients presenting with bladder and urethral calculi  
ICS2.4.2 Formulate an appropriate management plan including addressing issues related to complications  

<table>
<thead>
<tr>
<th>Technical Skills and Procedures (TS2)</th>
<th>Trainees must demonstrate the appropriate competence level for the following skills/procedures</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TS2.1 Cystoscopy and insertion of DJ stent</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>TS2.2 ESWL for renal and ureteric stone</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>TS2.3 Imaging and techniques used for obtaining percutaneous renal access / placement of a percutaneous nephrostomy</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>TS2.4 Percutaneous nephrolithotomy including intracorporeal lithotripsy</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>TS2.5 Rigid ureteroscopy including intracorporeal lithotripsy</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>TS2.6 Flexible ureteroscopy including intracorporeal lithotripsy</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>TS2.7 Endoscopic fragmentation of bladder calculi</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>TS2.8 Open removal bladder calculi</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>TS2.9 Open access to the kidney and the retroperitoneum</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>TS2.10 Open ureterolithotomy</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>TS2.11 Open pyelolithotomy</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>TS2.12 Open complex stone procedures (recurrent pyelolithotomy, extended pyelonephrolithotomy, and anatrophic nephrolithotomy)</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Topic</td>
<td>Objective</td>
<td>Knowledge (K3)</td>
</tr>
<tr>
<td>----------------------------</td>
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<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
|                            | To assess and manage a patient presenting with upper and/or lower urinary tract obstruction  
To assess and manage a patient presenting with lower urinary tract symptoms and/or dysfunction | K3.1 *Upper urinary tract obstruction*  
Trainees must be able to  
K3.1.1 Describe the causes and pathophysiology of upper urinary tract obstruction (unilateral and/or bilateral)  
K3.1.2 Outline the evaluation and management of upper urinary tract obstruction  

K3.2 *Lower urinary tract obstruction (LUTS)*  
Trainees must be able to  
K3.2.1 Describe the physiology, epidemiology and pathophysiology of lower urinary tract dysfunction  
K3.2.2 Compare investigative tools used for diagnosing urinary tract obstruction  
K3.2.3 Discuss treatment options for male and female LUTS  
K3.2.4 Describe the causes and pathophysiology of urinary retention  
K3.2.5 Describe the mechanisms of acute and chronic retention  
K3.2.6 Describe the etiology, pathophysiology and management of urethral stricture  
K3.2.7 Describe the etiology, pathophysiology and management of bladder neck stenosis  
K3.2.8 Discuss the mechanisms of chronic urinary retention and its relationship to obstructive uropathy  

K3.3 *Male Lower Urinary Tract Symptoms (LUTS) and BPH*  
Trainees must be able to  
K3.3.1 Describe the anatomy of the prostate gland  
K3.3.2 Describe the physiology of the prostate gland  
K3.3.3 Describe the epidemiology of BPH  
K3.3.4 Outline the natural history and complications of BPH  
K3.3.5 Discuss the underlying mechanism for lower urinary tract symptoms  
K3.3.6 List non-urological causes of LUTS  
K3.3.7 Outline the utility of PSA in the evaluation of prostate diseases  
K3.3.8 Detail the non-surgical management therapy of BPH  
K3.3.9 Detail the surgical management therapy of BPH  

Intellectual & Clinical Skills (ICS3)  
ICS3.1 *Upper Urinary tract obstruction*  
Trainees must be able to  
ICS3.1.1 Assess patients presenting with unilateral and/or bilateral upper urinary tract obstruction |
| ICS3.1.2 Assess fluid balance and renal function |
| ICS3.1.3 Interpret IVU and diuresis renography |
| ICS3.1.4 Appropriately manage upper urinary tract obstruction |
| ICS3.1.5 Manage post obstructive diuresis |
| ICS3.1.6 Recognize and appropriately manage upper urinary tract sepsis |

**ICS3.2 Lower Urinary tract obstruction**

Trainees must be able to

- ICS3.2.1 Assess and appropriately investigate patients with LUTS
- ICS3.2.2 Diagnose and formulate a differential diagnosis for patients presenting with LUTS
- ICS3.2.3 Formulate a therapeutic plan for patients presenting with LUTS
- ICS3.2.4 Manage urethral stricture including onward referral as appropriate
- ICS3.2.5 Manage bladder neck stenosis including onward referral as appropriate

**ICS3.3 Male LUTS and BPH**

Trainees must be able to

- ICS3.3.1 Assess and appropriately investigate patients presenting with LUTS
- ICS3.3.1.1 Interpret fluid charts
- ICS3.3.1.2 Interpret biochemistry results (e.g. PSA)
- ICS3.3.1.3 Interpret urodynamic investigations (e.g. flow rate, residual urine)
- ICS3.3.2 Formulate an appropriate differential diagnosis
- ICS3.3.3 Formulate an appropriate plan of management for patients presenting with LUTS/BPH
- ICS3.3.4 Select appropriate medical therapy of patients with BPH/LUTS

**Technical Skills and Procedures (TS3)**

Trainees must demonstrate the appropriate competence level for the following skills/procedures:

- **TS2.1 Cystoscopy and insertion of DJ stent** 5
- **TS3.1 Cystoscopy and retrograde uretero-pyelogram** 5
- **TS3.2 TURP** 3
- **TS3.3 Bladder neck incision** 5
- **TS3.4 Percutaneous insertion of suprapubic catheter** 5
- **TS3.5 Urethrography** 5
- **TS3.6 Visual Internal Urethrotomy** 4
<table>
<thead>
<tr>
<th>Topic</th>
<th>4. Uro-Genital Infections &amp; Inflammations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective</td>
<td>To understand the pathogenesis, natural history and complications of urinary tract infection. To be able to assess and manage patients presenting with urinary tract infections. To be able to assess and manage patients presenting with genital infections.</td>
</tr>
<tr>
<td>Knowledge (K4)</td>
<td></td>
</tr>
<tr>
<td>K4.1 Basic Concepts</td>
<td>Trainees must be able to</td>
</tr>
<tr>
<td></td>
<td>K4.1.1 Outline the microbiology relevant to the Genitourinary tract, including causative organisms, virulence, and host defense</td>
</tr>
<tr>
<td></td>
<td>K4.1.2 Compare antibiotics used in the treatment of GU including the mechanisms of action, and resistance</td>
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<td></td>
<td>K4.1.3 Select appropriate diagnostic investigations</td>
</tr>
<tr>
<td></td>
<td>K4.1.4 Describe the pathology of acute and chronic inflammatory response relevant to the GU tract</td>
</tr>
<tr>
<td>K4.2 Pyelonephritis &amp; Pyonephrosis</td>
<td>Trainees must be able to</td>
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<tr>
<td></td>
<td>K4.2.1 List predisposing causes of pyelonephritis</td>
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<tr>
<td></td>
<td>K4.2.2 Describe clinical presentation and management of pyelonephritis &amp; pyonephrosis</td>
</tr>
<tr>
<td>K4.3 Renal and peri-renal abscess</td>
<td>Trainees must be able to</td>
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<tr>
<td></td>
<td>K4.3.1 Discuss pathogenesis and predisposing causes or renal and perirenal abscess</td>
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<tr>
<td></td>
<td>K4.3.2 Describe clinical presentation and management of renal and perirenal abscess</td>
</tr>
<tr>
<td>K4.4 Genito-urinary tuberculosis</td>
<td>Trainees must be able to</td>
</tr>
<tr>
<td></td>
<td>K4.4.1 Discuss pathogenesis, natural history and complications of GU tuberculosis</td>
</tr>
<tr>
<td></td>
<td>K4.4.2 Describe clinical presentation and management of GU tuberculosis</td>
</tr>
<tr>
<td>K4.5 Prostatitis</td>
<td>Trainees must be able to</td>
</tr>
<tr>
<td></td>
<td>K4.5.1 Outline classification, pathogenesis, natural history and complications of prostatitis</td>
</tr>
<tr>
<td></td>
<td>K4.5.2 Discuss diagnosis and management of prostatitis</td>
</tr>
<tr>
<td>K4.6 Epididymitis</td>
<td>Trainees must be able to</td>
</tr>
<tr>
<td></td>
<td>K4.6.1 Discuss pathogenesis and complications of epididymitis</td>
</tr>
</tbody>
</table>
K4.6.2 Describe clinical presentation, diagnosis and differential diagnosis of epididymitis
K4.6.3 Detail treatment of epididymitis

K4.7 Scrotal abscess
Trainees must be able to
K4.7.1 Classify types of scrotal abscess
K4.7.2 Describe pathogenesis and complications of scrotal abscess
K4.7.3 Describe diagnosis and management of scrotal abscess

K4.8 Fournier’s gangrene
Trainees must be able to
K4.8.1 Discuss the pathophysiology and clinical features of Fournier’s gangrene
K4.8.2 Outline the diagnosis and management of Fournier’s gangrene

K4.9 Sexually transmitted diseases including Chlamydia trachomatis, Gonococcal and non-Gonococcal urethritis
Trainees must be able to
K4.9.1 Discuss pathogenesis and complications of STDs
K4.9.2 Describe the clinical presentation, diagnosis, differential diagnosis and management of SDTs

K4.10 Interstitial cystitis
Trainees must be able to
K4.10.1 Outline pathogenesis, natural history and complications of IC
K4.10.2 Describe the clinical presentation of IC
K4.10.3 Outline the management options for IC

K4.11 Urinary Schistosomiasis
Trainees must be able to
K4.11.1 Describe the pathogenesis, natural history and complications of urinary Schistosomiasis
K4.11.2 Describe the clinical presentation and management of urinary Schistosomiasis

K4.12 Fungal infection
Trainees must be able to
K4.11.1 Describe the pathogenesis and complications of fungal infections
K4.11.2 Describe the clinical presentation and management of fungal infections

Intellectual & Clinical Skills (ICS4)
ICS4.1 General
Trainees should be able to
ICS4.1.1 Appropriately investigate cases of urinary tract infection
<table>
<thead>
<tr>
<th>ICS4.1.2</th>
<th>Differentiate between significant infection and asymptomatic bacteriuria</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICS4.1.3</td>
<td>Select appropriate antimicrobials</td>
</tr>
<tr>
<td>ICS4.1.4</td>
<td>Plan the management of patients presenting with urinary infection</td>
</tr>
<tr>
<td>ICS4.1.5</td>
<td>Adapt the management plan according to special situations (pregnancy, immune-compromised patients, elderly)</td>
</tr>
<tr>
<td>ICS4.1.6</td>
<td>Apply principles of infection control</td>
</tr>
<tr>
<td>ICS4.1.7</td>
<td>Outline the management of multi-resistant organisms</td>
</tr>
</tbody>
</table>

**ICS4.2 Pyelonephritis & pyonephrosis**
Trainees should be able to
ICS4.2.1 Assess the patient appropriately
ICS4.2.2 Select appropriate diagnostic and microbiological tests
ICS4.2.3 Interpret relevant diagnostic tests
ICS4.2.4 Identify the indications for nephrostomy / drainage

**ICS4.3 Renal and peri-renal abscess**
Trainees should be able to
ICS4.3.1 Assess the patient appropriately
ICS4.3.2 Select appropriate diagnostic and microbiological tests
ICS4.3.3 Interpret relevant diagnostic tests
ICS4.3.4 Plan appropriate management

**ICS4.4 Genitourinary tuberculosis**
Trainees should be able to
ICS4.4.1 Assess the patient appropriately
ICS4.4.2 Select appropriate diagnostic and microbiological tests
ICS4.4.3 Interpret relevant diagnostic tests
ICS4.4.4 Plan appropriate management

**ICS4.5 Prostatitis**
Trainees should be able to
ICS4.5.1 Assess the patient appropriately
ICS4.5.2 Select appropriate diagnostic and microbiological tests
ICS4.5.3 Interpret relevant diagnostic tests
ICS4.5.4 Plan appropriate management

**ICS4.6 Epididymitis**
Trainees should be able to
ICS4.6.1 Assess the patient appropriately
ICS4.6.2 Select appropriate diagnostic and microbiological tests
ICS4.6.3 Interpret relevant diagnostic tests
ICS4.6.4 Plan appropriate management

**ICS4.7 Scrotal abscess**
Trainees should be able to
ICS4.7.1 Assess the patient appropriately
<table>
<thead>
<tr>
<th>Technical Skills and Procedures (TS4)</th>
<th>Trainees must demonstrate the appropriate competence level for the following skills/procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>TS4.1 Surgical management of scrotal abscess</td>
<td>5</td>
</tr>
<tr>
<td>TS4.2 Cystoscopy and biopsy</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Topic</th>
<th>5. Voiding Dysfunction &amp; Urinary tract Reconstruction level</th>
</tr>
</thead>
</table>
| Objective | To assess and manage a patient presenting with symptoms of urinary incontinence.  
To assess and manage patients with neuropathic bladder dysfunction including onward referral when appropriate  
To assess and manage patients presenting with lower and upper tract dysfunction requiring urinary tract reconstruction |
| Knowledge | K5.1 Basics of voiding function and dysfunction |
| (K5) | Trainees should be able to  
K5.1.1 Define the neuro-physiological control of filling/voiding cycles (including bladder sensation and continence mechanisms)  
K5.1.2 Discuss pharmacology of cholinergic and adrenergic pathways  
K5.1.3 Define indications and basics of urodynamic studies  

**K5.2 Urinary Incontinence**  
Trainees should be able to  
K5.2.1 Outline etiology, epidemiology, pathophysiology and classification incontinence in men and women  
K5.2.2 Describe clinical presentation and differential diagnosis of urinary incontinence  
K5.2.3 Detail management of urinary incontinence  

**K5.3 Neuropathic bladder**  
Trainees should be able to  
K5.3.1 Describe basic anatomy physiology, pathophysiology, pharmacology of neuropathic bladder  
K5.3.2 Outline etiology, epidemiology, pathophysiology and classification of neuropathic bladder  
K5.3.3 Describe the clinical presentation and differential diagnosis of voiding dysfunction  
K5.3.4 Detail the management of neuropathic bladder  

**K5.4 Bladder and upper tract reconstruction**  
Trainees should be able to  
K5.4.1 Describe the causes and pathophysiology of conditions that might require reconstruction of the bladder and ureter including:  
- Congenital and acquired conditions of the central nervous system  
- Congenital abnormalities of the urinary tract  
- Genitourinary tumours  
- Inflammatory conditions of the urinary tract  
- Iatrogenic damage  
K5.4.2 Outline the techniques of assessment for bladder and urinary tract reconstruction including urodynamics, radiology and nuclear medicine techniques  
K5.4.3 Describe the metabolic effects of urinary tract reconstruction and interposition of intestine within the urinary tract  
K5.4.4 Outline the complications of urinary tract reconstruction and interposition of intestine within the urinary tract  
K5.4.5 Describe the endourological and surgical techniques relevant to urinary tract reconstruction  

| Intellectual & Clinical Skills (ICS5) | ICS5.1 Basics of voiding function and dysfunction  
Trainees should be able to  
ICS5.1.1 Select appropriate studies for evaluation of voiding dysfunction |
### ICS5.2 Urinary Incontinence
Trainees should be able to
ICS5.2.1 Formulate treatment plan for urinary incontinence, including conservative, medical and surgical options

### ICS5.3 Neuropathic Bladder
Trainees should be able to
ICS5.3.1 Take appropriate history, examination and investigation
ICS5.3.2 Interpret frequency volume chart and other tests
ICS5.3.3 Coordinate with multidisciplinary team (eg neurology, nephrology, and OB/GYN services)
ICS5.3.4 Formulate a practical treatment plan
ICS5.3.5 Refer for sub-specialist management and surgery as appropriate

### ICS5.4 Bladder and upper tract reconstruction
Trainees should be able to
ICS5.4.1 Appropriately assess patients requiring urinary tract reconstruction
ICS5.4.2 Manage post-operative consequences of urinary tract reconstruction and interposition of intestine within the urinary tract
ICS5.4.3 Arrange appropriate follow up of patients with urinary tract reconstruction

### Technical Skills and Procedures (TS5)
Trainees must demonstrate the appropriate competence level for the following skills/procedures

<table>
<thead>
<tr>
<th>TS5.1</th>
<th>Urodynamic assessment</th>
<th>2</th>
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</thead>
<tbody>
<tr>
<td>TS5.2</td>
<td>Cystoscopy and injection of Botulinum Toxin</td>
<td>1</td>
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<tr>
<td>TS5.3</td>
<td>Cystoscopy and injection of urethral bulking agent</td>
<td>1</td>
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<tr>
<td>TS5.4</td>
<td>Surgical insertion of mid-urethral tape</td>
<td>2</td>
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<tr>
<td>TS5.5</td>
<td>Colposuspension and pubourethral sling procedures</td>
<td>1</td>
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<tr>
<td>TS5.6</td>
<td>Repair of vesicovaginal /urethrovaginal fistula</td>
<td>1</td>
</tr>
<tr>
<td>TS5.7</td>
<td>Intestinal anastomosis</td>
<td>3</td>
</tr>
<tr>
<td>TS5.8</td>
<td>Various reconstructive procedures</td>
<td>2</td>
</tr>
<tr>
<td>TS5.8.1</td>
<td>Uretero-ureteral anastomosis</td>
<td></td>
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<tr>
<td>TS5.8.2</td>
<td>Ureteric reimplantation</td>
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<tr>
<td>TS5.8.3</td>
<td>Psoas hitch</td>
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<td>TS5.8.4</td>
<td>Boari flap</td>
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<tr>
<td>TS5.8.5</td>
<td>Transuretero-ureterostomy</td>
<td></td>
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<tr>
<td>TS5.8.6</td>
<td>Simple cystectomy</td>
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<td>TS5.8.7</td>
<td>Augmentation cystoplasty</td>
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<td>TS5.8.8</td>
<td>Substitution cystoplasty</td>
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<tr>
<td>TS5.8.9</td>
<td>Ileal conduit diversion</td>
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<tr>
<td>TS5.8.10</td>
<td>Continent urinary diversion</td>
<td></td>
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<tr>
<td>TS5.8.11</td>
<td>Orthotopic bladder reconstruction</td>
<td></td>
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<tr>
<td>TS5.8.12</td>
<td>Artificial urinary sphincter insertion</td>
<td></td>
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<tr>
<td>TS5.8.13</td>
<td>Vaginal reconstruction</td>
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<tr>
<td>Topic</td>
<td>6. Urologic Oncology level</td>
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<tr>
<td><strong>Objective</strong></td>
<td>To assess and manage patients with suspected urological cancer. To manage patients with a proven urological cancer including onward referral where necessary.</td>
<td></td>
</tr>
</tbody>
</table>
| **Knowledge (K6)**    | **K6.1 General Uro-Oncology**  
|                       | **K6.1.1 Etiology, epidemiology and pathophysiology**  
|                       | Trainees should be able to  
|                       | K6.1.1.1 Discuss the epidemiology of urological cancer  
|                       | K6.1.1.2 Identify the basics of molecular biology of urological cancer  
|                       | K6.1.1.3 Describe the role of genetic & environmental factors in urological cancer  
|                       | K6.1.1.4 Identify the role of oncogenes, growth factors and angiogenesis in urological cancer  
|                       | **K6.1.2 Clinical features**  
|                       | Trainees should be able to  
|                       | K6.1.2.1 Describe the symptom complexes arising from urological malignancies  
|                       | K6.1.2.2 Outline the current standards for the evaluation and investigation of common urological cancers  
|                       | K6.1.2.3 Detail the causes, pathophysiology, differential diagnosis and assessment of patients presenting with hematuria  
|                       | K6.1.2.4 List the TNM classifications of common urological tumors  
|                       | **K6.1.3 Treatment**  
|                       | Trainees should be able to  
|                       | K6.1.3.1 Outline the current guidelines for treatment of common urological cancers  
|                       | K6.1.3.2 Compare the principles of neo-adjuvant versus adjuvant therapy  
|                       | K6.1.3.3 Describe the principles and application of radiotherapy in urological malignancies  
|                       | K6.1.3.4 Outline the essentials of terminal care for urological cancers  
|                       | **K6.1.4 Screening**  
|                       | Trainees should be able to  
|                       | K6.1.4.1 Outline the principles of screening for urological malignancies  
|                       | K6.1.4.2 Discuss the role of PSA and other tumor markers as screening tools in urological malignancies  
|                       | K6.1.4.3 Define the application of urine cytology to screening  
|                       | K6.1.4.4 Explain the controversies in screening for urological cancers  

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K6.2 Prostate cancer
K6.2.1 Basic science relative to prostate cancer
Trainees should be able to
K6.2.1.1 Describe the anatomy and embryology of prostate, bladder and sphincters
K6.2.1.2 Discuss the physiology of the prostate
K6.2.1.3 Outline the physiology of erection
K6.2.1.4 Detail the pharmacology of endocrine drugs used in the treatment of prostate cancer
K6.2.2 Localized and locally advanced prostate cancer
Trainees should be able to
K6.2.2.1 Describe the rationale for, indications, complications of different therapies for localized and locally advanced prostate cancer (Radical surgery, Radiotherapy, Brachytherapy, Adjuvant hormones, and active surveillance)
K6.2.2.2 Outline the rationale, role and limitations of new technology (e.g. cryotherapy and high intensity focused ultrasound) in the treatment of localized and locally advanced prostate cancer
K6.2.3 Outline the rationale for, indications, complications of different therapies for metastatic and hormone refractory disease

K6.3 Bladder cancer
K6.3.1 Basic science relative to bladder cancer
Trainees should be able to
K6.3.1.1 Describe the embryology and anatomy of the urinary tract, including lymphatic drainage of the pelvic organs
K6.3.1.2 Discuss the physiology of micturition and continence
K6.3.1.3 Detail the pharmacology of agents used for intravesical therapy
K6.3.1.4 Describe the pathology of the differing types of bladder cancer
K6.3.1.5 Identify risk factors for bladder cancer
K6.3.2 Superficial bladder cancer
Trainees should be able to
K6.3.2.1 Describe the rationale for, indications, results, and complications of different therapies for superficial bladder cancer including endoscopic therapy, intravesical chemotherapy, intravesical BCG, and radical surgery
K6.3.2.2 Describe the role and limitations of new technology in the diagnosis and therapy of superficial bladder cancer
K6.3.3 Muscle-invasive bladder cancer
Trainees should be able to
K6.3.3.1 Describe the rationale for, indications, results, and complications of different therapies for muscle-invasive bladder cancer including endoscopic and radical surgery, radiotherapy and chemotherapy
| K6.3.3.2 Describe the role and limitations of new technology in the diagnosis and therapy of muscle-invasive bladder cancer |
| K6.3.3.3 Discuss the rationale for, indications, results, and complications of reconstructive surgery following cystectomy |
| K6.3.4 Outline therapies for metastatic bladder cancer |

**K6.4 Renal Cancer**

**K6.4.1 Basic science relative to renal cancer**

Trainees should be able to

K6.4.1.1 Describe the embryology and anatomy of the kidneys

K6.4.1.2 Describe the role of genetics and environmental factors in renal cancer and upper tract TCC

K6.4.1.3 Outline the pharmacology of agents used for immunotherapy and biological targeted therapy in renal cancer

K6.4.1.4 Describe the pathology of different types of renal cancer

K6.4.2 Discuss the rationale for, indications, results, and complications of different therapies for localized renal cancer

K6.4.3 Describe the role and limitations of new technology in the diagnosis and therapy of renal cancer

K6.4.4 Describe the rationale for indications, complications of different therapies for metastatic renal cancer including surgery, chemotherapy, biological therapy, immunotherapy, novel therapy

**K6.5 Upper tract TCC**

Trainees should be able to

K6.5.1 Describe the rationale for, indications, results, and complications of different therapies for upper tract TCC

**K6.6 Testicular cancer**

**K6.6.1 Basic science relative to testicular cancer**

Trainees should be able to

K6.6.1.1 Describe embryology and anatomy of the male genitalia

K6.6.1.2 Discuss basics of reproductive physiology

K6.6.1.3 Describe the role of genetics and environmental factors in testicular cancer

K6.6.1.4 Outline the pharmacology of cytotoxic agents used for testicular cancer

K6.6.1.5 Describe pathology of different types of testicular cancer

K6.6.2 Describe the rationale for, indications, results, and complications of surgery and other therapies for localized testicular cancer

K6.6.3 Describe the rationale for, indications, and complications of different therapies for metastatic testicular cancer including surgery (RPLND), chemotherapy and radiotherapy

K6.6.4 Explain the impact of testicular cancer and its therapy on fertility

Intellectual & ICS6.1 General Uro-oncology skills
<table>
<thead>
<tr>
<th>Clinical Skills (ICS6)</th>
<th>Trainees should be able to</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICS6.1.1 Demonstrate high level empathetic communication</td>
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<tr>
<td>ICS6.1.2 Appropriately assess patients with possible malignancy</td>
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<tr>
<td>ICS6.1.3 Utilize PSA, urine cytology and other markers appropriately</td>
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<tr>
<td>ICS6.1.4 Interpret tests correctly</td>
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<tr>
<td>ICS6.1.5 Coordinate with multidisciplinary team</td>
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<tr>
<td>ICS6.1.6 Appropriately manage urological malignancies, including appropriate referral for sub-specialist management and surgery</td>
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<tr>
<td>ICS6.1.7 Share in caring for the dying patient</td>
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</tbody>
</table>

**ICS6.2 Prostate cancer**
Trainees should be able to
ICS6.2.1 Select relevant radiological and pathological investigations
ICS6.2.2 Formulate a best fit management policy
ICS6.2.3 Obtain informed consent for the relevant procedure, including offering patient the options of other therapies
ICS6.2.4 Coordinate with other specialties (radiation oncology, medical oncology etc.)
ICS6.2.5 Formulate a relevant follow up plan

**ICS6.3 Bladder cancer**
Trainees should be able to
ICS6.3.1 Select relevant radiological and pathological investigations
ICS6.3.2 Formulate a best fit management policy
ICS6.3.3 Obtain informed consent for the relevant procedure, including offering patient the options of other therapies
ICS6.3.4 Obtain informed consent for the relevant urinary diversion following cystectomy
ICS6.3.5 Coordinate with other specialties (radiation oncology, medical oncology)
ICS6.3.6 Formulate a relevant follow up plan

**ICS6.4 Renal cancer**
Trainees should be able to
ICS6.4.1 Select relevant radiological and pathological investigations
ICS6.4.2 Formulate a best fit management policy
ICS6.4.3 Obtain informed consent for the relevant procedure, including offering patient the options of other therapies
ICS6.4.4 Coordinate with other specialties (radiation oncology, medical oncology)
ICS6.4.5 Formulate a relevant follow up plan

**ICS6.5 Upper tract TCC**
Trainees should be able to
ICS6.5.1 Select relevant radiological and pathological investigations
ICS6.5.2 Formulate a best fit management policy
ICS6.5.3 Obtain informed consent for the relevant procedure, including offering patient the options of other therapies
ICS6.5.4 Coordinate with other specialties (radiation oncology, medical oncology)
ICS6.5.5 Formulate a relevant follow up plan

**ICS6.6 Testicular cancer**
Trainees should be able to
ICS6.6.1 Select relevant radiological and pathological investigations
ICS6.6.2 Formulate a best fit management policy
ICS6.6.3 Obtain informed consent for the relevant procedure, including offering patient the options of other therapies
ICS6.6.4 Coordinate with other specialties (radiation oncology, medical oncology)
ICS6.6.5 Formulate a relevant follow up plan
ICS6.6.6 Show appropriate regard to future fertility prospects

### Technical Skills and Procedures (TS6)
Trainees must demonstrate the appropriate competence level for the following skills/procedures

<table>
<thead>
<tr>
<th>TS2.1 Cystoscopy and DJ stent insertion</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>TS2.5 Rigid Ureteroscopy</td>
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</tr>
<tr>
<td>TS3.1 Cystoscopy and retrograde pyelogram</td>
<td>5</td>
</tr>
<tr>
<td>TS4.3 Cystoscopy and biopsy</td>
<td>5</td>
</tr>
<tr>
<td>TS6.1 Cystoscopy and diathermy of bladder lesion</td>
<td>5</td>
</tr>
<tr>
<td>TS6.2 TURBT</td>
<td>4</td>
</tr>
<tr>
<td>TS6.3 Radical Orchidectomy</td>
<td>5</td>
</tr>
<tr>
<td>TS6.4 Radical Prostatectomy (retro-pubic or perineal)</td>
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</tr>
<tr>
<td>TS6.5 Radical cystectomy, cystoprostatectomy, cystourethrectomy</td>
<td>2</td>
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<tr>
<td>TS6.6 Urethrectomy</td>
<td>2</td>
</tr>
<tr>
<td>TS6.7 Ileal conduit diversion</td>
<td>3</td>
</tr>
<tr>
<td>TS6.8 Orthotopic bladder reconstruction</td>
<td>2</td>
</tr>
<tr>
<td>TS6.9 Radical nephrectomy</td>
<td>3</td>
</tr>
<tr>
<td>TS6.10 Partial nephrectomy</td>
<td>2</td>
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<tr>
<td>TS6.11 Laparoscopic nephrectomy</td>
<td>1</td>
</tr>
<tr>
<td>TS6.12 Radical nephroureterectomy</td>
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<td>TS6.13 Segmental ureterectomy and reconstruction</td>
<td>2</td>
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<tr>
<td>TS6.14 Laparoscopic nephroureterectomy</td>
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</tr>
<tr>
<td>TS6.15 Rigid Ureteroscopy and endoscopic therapy to TCC</td>
<td>2</td>
</tr>
</tbody>
</table>

### Topic 7. Andrology

#### Objective
To assess and manage a man with male factor infertility including onward referral as necessary
To assess and manage a man with erectile dysfunction including onward referral as necessary
To assess and manage a man with varicocele, ejaculatory disorders,
| Knowledge (K7) | **K7.1 Male Infertility**  
Trainees should be able to  
K7.1.1 Describe the anatomy, embryology and physiology of male reproductive system  
K7.1.2 Outline causes, assessment and management of male factor infertility  
K7.1.3 Describe modern methods of assisted fertilization  
  
**K7.2 Erectile dysfunction**  
Trainees should be able to  
K7.2.1 Describe the anatomy, physiology and pharmacology of erectile mechanism  
K7.2.2 Identify effects of concurrent pathology and medications on erectile mechanism  
K7.2.3 Outline standards of assessment and investigation of erectile dysfunction  
K7.2.4 Discuss therapeutic options including the pharmacological basis of modern therapy  
  
**K7.3 Other Male Sexual Disorders**  
Trainees should be able to  
K7.3.1 Describe the anatomy, physiology and management of penile deformity  
K7.3.2 Outline causes, pathophysiology and management of prolonged erection  
K7.3.3 Describe assessment and management of penile fracture  
K7.3.4 Outline anatomy, physiology and management of erectile disorders  
K7.3.5 Detail the anatomy, physiology and management of varicoceles |
| Intellectual & Clinical Skills (ICS7) | **ICS7.1 Male infertility**  
Trainees should be able to  
ICS7.1.1 Appropriately investigate male factor infertility  
ICS7.1.2 Interpret semen analysis and hormonal profile  
ICS7.1.3 Suggest a treatment plan  
ICS7.1.4 Coordinate with multidisciplinary team and referral for subspecialist management  
  
**ICS7.2 Erectile dysfunction**  
Trainees should be able to  
ICS7.2.1 Demonstrate high level empathetic communication skills  
ICS7.2.2 Select appropriate investigations  
ICS7.2.3 Suggest a treatment plan  
ICS7.2.4 Conduct medical management of erectile dysfunction |
ICS7.2.5 Coordinate with multidisciplinary team and referral for subspecialist management

ICS7.3 Other Male Sexual Disorders
ICS7.3.1 Penile Deformity
Trainees should be able to
ICS7.3.1.1 Select appropriate investigation
ICS7.3.1.2 Suggest treatment plan including onward referral where appropriate

ICS7.3.2 Prolonged Erection
Trainees should be able to
ICS7.3.2.1 Select appropriate investigation
ICS7.3.2.2 Conduct initial management
ICS7.3.2.3 Suggest treatment plan including onward referral where appropriate

ICS7.3.3 Penile Fracture
Trainees should be able to
ICS7.3.3.1 Select appropriate investigation
ICS7.3.3.2 Conduct initial management
ICS7.3.3.3 Suggest treatment plan including onward referral where appropriate

ICS7.3.4 Ejaculatory disorders
Trainees should be able to
ICS7.3.4.1 Select appropriate investigation
ICS7.3.4.2 Suggest treatment plan including onward referral where appropriate

ICS7.3.5 Varicocele
Trainees should be able to
ICS7.3.5.1 Select appropriate investigation
ICS7.3.5.2 Conduct initial management
ICS7.3.5.3 Suggest treatment plan including onward referral where appropriate

Technical Skills and Procedures (TS7)
Trainees must demonstrate the appropriate competence level for the following skills/procedures
TS7.1 Initial management (evacuation, irrigation) for priapism
TS7.2 Operative management of priapism
TS7.3 Operative management of varicocele
TS7.4 Nesbit’s procedure
TS7.5 Surgical repair of penile fracture

<table>
<thead>
<tr>
<th>Topic</th>
<th>8. Pediatric Urology level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective</td>
<td>To assess and manage a child with a congenital disorder of the urogenital tract including onward referral as necessary</td>
</tr>
<tr>
<td></td>
<td>To assess and manage a child with enuresis, congenital</td>
</tr>
</tbody>
</table>
neuropathic bladder or with intersex, including onward referral as necessary
To assess and manage a child with an inguinoscrotal abnormality including onward referral as necessary
To assess and manage a child with urinary infection, including onward referral as necessary

<table>
<thead>
<tr>
<th>Knowledge (K8)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>K8.1 Common congenital urological disorders</strong> e.g undescended testis, hypospadias, duplex systems, reflux and hydronephrosis</td>
</tr>
<tr>
<td>Trainees should be able to</td>
</tr>
<tr>
<td><strong>K8.1.1 Describe the embryology and anatomy of common congenital abnormalities, e.g undescended testis, hypospadias, duplex systems, reflux and hydronephrosis</strong></td>
</tr>
<tr>
<td><strong>K8.2 Spina bifida, intersex and posterior urethral valves</strong></td>
</tr>
<tr>
<td><strong>K8.2.1 Outline the basic embryology, anatomy, and natural history of intersex, spina bifida and posterior urethral valves</strong></td>
</tr>
<tr>
<td><strong>K8.3 Inguinoscrotal abnormalities</strong></td>
</tr>
<tr>
<td>Trainees should be able to</td>
</tr>
<tr>
<td><strong>K8.3.1 Describe concisely the anatomy of the inguino-scrotal area</strong></td>
</tr>
<tr>
<td><strong>K8.3.2 Detail the pathogenesis, natural history, clinical presentation and management of acute scrotum</strong></td>
</tr>
<tr>
<td><strong>K8.4 Urinary tract infection</strong></td>
</tr>
<tr>
<td>Trainees should be able to</td>
</tr>
<tr>
<td><strong>K8.4.1 Discuss bacteriology of UTI in childhood</strong></td>
</tr>
<tr>
<td><strong>K8.4.2 Describe clinical presentation, appropriate investigations and management including appropriate referral for UTI in childhood</strong></td>
</tr>
<tr>
<td><strong>K8.5 Enuresis</strong></td>
</tr>
<tr>
<td>Trainees should be able to</td>
</tr>
<tr>
<td><strong>K8.5.1 Describe natural history and normal patterns of continence</strong></td>
</tr>
<tr>
<td><strong>K8.5.2 Outline the principles of functional assessment of the genitourinary tract in the pediatric group</strong></td>
</tr>
<tr>
<td><strong>K8.5.3 Describe clinical presentation, differential diagnosis, and management of urinary incontinence in the pediatric group</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intellectual &amp; Clinical Skills (ICS8)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ICS8.1 Common congenital urological disorders</strong> e.g undescended testis, hypospadias, duplex systems, reflux and hydronephrosis</td>
</tr>
<tr>
<td>Trainees should be able to</td>
</tr>
<tr>
<td><strong>ICS8.1.1 Suggest differential diagnosis and investigation plans</strong></td>
</tr>
<tr>
<td><strong>ICS8.1.2 Formulate management plan including referral for subspecialist management and / or surgery</strong></td>
</tr>
<tr>
<td><strong>ICS8.1.3 Demonstrate family orientated communication skills</strong></td>
</tr>
<tr>
<td><strong>ICS8.2 Spina bifida, intersex and posterior urethral valves</strong></td>
</tr>
<tr>
<td>Trainees should be able to</td>
</tr>
</tbody>
</table>
### ICS8.2.1 Appreciate prognostic possibilities
ICS8.2.2 Formulate management plan including referral for sub-specialist management and/or surgery

### ICS8.3 Inguinoscrotal abnormalities (eg phimosis and paraphimosis, undescended testes, hydrocele, testicular torsion)
Trainees should be able to
ICS8.3.1 Select appropriate tests to elicit differential diagnosis
ICS8.3.2 Formulate appropriate treatment plan
ICS8.3.3 Manage the condition, including knowledge of indications, results and complications of surgery

### ICS8.4 Urinary tract infection
Trainees should be able to
ICS8.4.1 Select appropriate investigation plans
ICS8.4.2 Formulate management plan including appropriate referral for sub-specialist management and/or surgery

### ICS8.5 Enuresis
Trainees should be able to
ICS8.5.1 Select appropriate investigation plans
ICS8.5.2 Formulate management plan including appropriate referral for sub-specialist management and/or surgery

### Technical Skills and Procedures (TS8)
Trainees must demonstrate the appropriate competence level for the following skills/procedures
- TS8.1 Circumcision 5
- TS8.2 Hydrocelectomy 5
- TS8.3 Orchidopexy 5
- TS8.4 Surgical exploration for testicular torsion with fixation 5
- TS8.5 Reduction of phimosis; dorsal slit 5

### Topic 9. Renal function and Nephrology

| Objective | To have a good working knowledge of the assessment of renal function and the urological conditions that predispose to the development of renal failure. To understand the pathogenesis, natural history and complications of urological conditions that can lead to renal dysfunction and how urological intervention may prevent or delay the onset of renal failure. To understand the different methods of renal replacement including renal transplantation |
| Knowledge (K9) | **K9.1 Basic concepts** Trainees should be able to  
K9.1.1 Describe physiology of renal function  
K9.1.2 Outline GFR estimation techniques  
K9.1.3 Outline basics of tubular function and dysfunction  
K9.1.4 Describe basic pathology of acute and chronic renal failure  
K9.1.5 Describe principles of dialysis, renal preservation  
K9.1.6 Outline basics of blood pressure control  
K9.2 Discuss etiology, diagnosis and early management of Acute Tubular Necrosis  
K9.3 Discuss etiology, diagnosis and early management of pre-renal failure  

**K3.1 Upper tract obstruction** Trainees should be able to  
K3.1.1 Describe the anatomy, causes and pathophysiology of upper urinary tract obstruction (unilateral and bilateral)  
K3.1.2 Outline the evaluation and management of upper urinary tract obstruction  
K3.2.8 Discuss mechanisms of chronic retention and its relationship to obstructive uropathy  

**K9.4 ESRD & hemodialysis** Trainees should be able to  
K9.4.1 Outline principles of haemodialysis and peritoneal dialysis  
K9.4.2 Describe indwelling cannulae for haemodialysis  
K9.4.3 Outline principles of Continuous ambulatory peritoneal dialysis (CAPD)  

**K9.5 Renal Transplantation** Trainees should be able to  
K9.5.1 Discuss recipient selection and indications for transplantation  
K9.5.2 Describe tissue typing and cross matching for transplantation  
K9.5.3 Define relative indications for haemodialysis or transplantation  
K9.5.4 Discuss immunosuppression for transplantation  
K9.5.5 Describe complications of renal transplantation  

| Intellectual & Clinical Skills (ICS9) | Trainees should be able to  
ICS9.1 Assess GFR using appropriate methods  
ICS9.2 Assess patients with tubular disorders (e.g. ATN)  
ICS9.3 Assess patients with renal failure  
ICS9.4 Appropriate manage upper urinary tract obstruction  
ICS9.1.2 Assess fluid balance and renal function  
ICS3.1.3 Interpret IVU and diuresis renography  
ICS3.1.4 Manage post obstructive diuresis  
ICS3.1.5
### Technical Skills and Procedures (TS9)

Trainees must demonstrate the appropriate competence level for the following skills/procedures:

<table>
<thead>
<tr>
<th>TS9.1 Open or laparoscopic donor nephrectomy for transplantation</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>TS9.2 Renal transplantation</td>
<td>1</td>
</tr>
</tbody>
</table>

### Topic 10. Urologic Radiology

#### Objective

- To understand the different radiological techniques used in the investigation of urological disease, including practical techniques, indications and safety issues
- To gain hands on experience in diagnostic and interventional radiology
- To develop technical skills in standard radiological techniques relevant to urology

#### Knowledge (K10)

**K10.1 Basic concepts**

Trainees should be able to:

- K10.1.1 Outline principles of ionizing radiation
- K10.1.2 Outline patient and physician protection methods
- K10.1.3 Name investigation-related radiation dose
- K10.1.4 Appreciate impact of aberrant anatomy
- K10.1.5 Select appropriate radiological investigations
- K10.1.6 Outline principles of isotope and isotope imaging
- K10.1.7 Outline techniques of interventional radiology
- K10.1.8 Discuss indications, limitations and complications of interventional radiology

- K10.2 Describe IVP indications, interpretation and limitations, safety issues and contraindications
- K10.3 Describe Ultrasound (including Doppler) basic theory principles, practical techniques, indications, interpretation and limitations, safety issues and contraindications
- K10.4 Describe CT scanning basic theory principles, practical techniques (including contrast agents), indications, interpretation and limitations, safety issues and contraindications
K10.5 Describe MR scanning basic theory, practical techniques (including contrast agents), indications, interpretation and limitations, safety issues and contraindications

K10.6 Describe Renography basic theory, practical techniques (including contrast agents), indications, interpretation and limitations, safety issues and contraindications

Trainees should be able to
ICS10.1 Select appropriate radiologic investigations
ICS10.2 Interpret relevant radiologic investigations

Trainees must demonstrate the appropriate competence level for the following skills/procedures

<table>
<thead>
<tr>
<th>Skill/Procedure</th>
<th>Level</th>
</tr>
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<tbody>
<tr>
<td>TS10.1 IVU</td>
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</tr>
<tr>
<td>TS10.2 Cystogram</td>
<td>5</td>
</tr>
<tr>
<td>TS10.3 Urethrogram</td>
<td>5</td>
</tr>
<tr>
<td>TS10.4 Retrograde Pyelogram</td>
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</tr>
<tr>
<td>TS10.5 Renal ultrasound</td>
<td>3</td>
</tr>
<tr>
<td>TS10.6 Scrotal ultrasound</td>
<td>3</td>
</tr>
<tr>
<td>TS10.7 Transrectal ultrasound (TRUS) including biopsy</td>
<td>1</td>
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<tr>
<td>TS10.8 Ultrasound guided percutaneous puncture of kidney</td>
<td>1</td>
</tr>
<tr>
<td>TS10.9 Ultrasound guided percutaneous puncture of bladder</td>
<td>3</td>
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</tbody>
</table>

11. Genito-Urinary Trauma

Objective
To assess and manage patients who present acutely with urological trauma, including onward referral when appropriate

Knowledge (K11)
Trainees must be able to
K11.1 Describe causes, pathophysiology, classification and management of renal trauma
K11.2 Describe causes, pathophysiology, classification and management of ureteric trauma
K11.3 Describe causes, pathophysiology, classification and management of bladder trauma
K11.4 Describe causes, pathophysiology, classification and management of urethral trauma
K11.5 Describe causes, pathophysiology, classification and management of genital trauma
K11.6 Explain special considerations in the management of trauma in the pediatric group

Intellectual & Clinical Skills
Trainees must be able to
ICS11.1 Assess and manage renal trauma
(ICS11)  
ICS11.2 Assess and manage ureteric trauma  
ICS11.3 Assess and manage bladder trauma  
ICS11.4 Assess and manage urethral trauma  
ICS11.5 Assess and manage genital trauma  
ICS11.6 Coordinate with relevant specialties in multiple trauma patients  

Technical Skills and Procedures (TS11)  
Trainees must demonstrate the appropriate competence level for the following skills/procedures  
TS11.1 Exploration and repair of renal trauma  
TS11.2 Exploration and repair of ureteric trauma  
TS11.3 Exploration and repair of bladder injury  
TS11.4 Placement of suprapubic cystostomy  
TS11.5 Scrotal exploration and testicular repair  

C. Urology Assessment Blueprint  
The following tables summarize the assessment plan for the Intended Learning Outcomes (ILOs) within the various topics of the syllabus (see the assessment section for details).  

<table>
<thead>
<tr>
<th>Code</th>
<th>Subject</th>
<th>Weight</th>
<th>Part II AKT (200 MCQ)</th>
<th>Part II Short Essay Questions</th>
<th>Part III Clinical (one long case + two short cases)</th>
<th>Part III Viva (two sessions)</th>
<th>Part III OSCE (Ten OSCE Stations)</th>
<th>WPBA</th>
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<td>Urinary Tract Infection</td>
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<td>Voiding Dysfunction &amp; Urinary Tract Reconstruction</td>
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<tr>
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<td>9</td>
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<td>OSCE Stations</td>
<td>Clinical Encounter</td>
<td>Practical station</td>
<td>Percentage</td>
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<td>Information giving (informed</td>
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### Long Cases

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<tbody>
<tr>
<td>1</td>
<td>Bladder Cancer</td>
</tr>
<tr>
<td>2</td>
<td>Prostate Cancer</td>
</tr>
<tr>
<td>3</td>
<td>Renal Mass</td>
</tr>
<tr>
<td>4</td>
<td>Benign Prostatic Hyperplasia</td>
</tr>
<tr>
<td>5</td>
<td>Hematuria</td>
</tr>
<tr>
<td>6</td>
<td>Urinary Incontinence (SUI, fistula, ...)</td>
</tr>
<tr>
<td>7</td>
<td>Urolithiasis</td>
</tr>
</tbody>
</table>
## Short Cases

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Urethral disruption / urethral stricture / Suprapubic catheter</td>
</tr>
<tr>
<td>2</td>
<td>Scrotal swellings (hydrocele - varicocele - spermatocele - inflammatory swellings of testes - testicular tumors -....)</td>
</tr>
<tr>
<td>3</td>
<td>Hypospadias - Epispadias - Ectopia vesica</td>
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<tr>
<td>4</td>
<td>Undescended testis</td>
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<td>5</td>
<td>Percutaneous Nephrostomy</td>
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<tr>
<td>6</td>
<td>Urolithiasis</td>
</tr>
<tr>
<td>7</td>
<td>Benign Prostatic Hyperplasia</td>
</tr>
</tbody>
</table>

## D. Suggested Reading Resources

### Textbooks:

1. Walsh-Campbell’s Urology
2. Adult and Paediatric Urology (Glen water)
3. Scientific Basis of Urology (Mundy)
4. Genito-Urinary Surgery (Whitefield)
5. Lectures\ operative urology (Blandy)
6. General Urology (Smith)

### Periodicals:

1. Journal of Urology
2. British Journal of Urology International
3. Urologic Clinics of North America
4. European Urology
III. The Assessment System
A. Overview

The assessment system refers to an integrated set of evaluation methods used during the entire training program and which is blueprinted against and supports the curriculum. The purpose of the assessment system is to determine whether trainees are acquiring the knowledge and skills specified in the curriculum as they are progressing in the training program, and to ensure that trainees graduating the program are meeting the standards of competence and performance required by the Ministry of Health to practice at the Urology specialist level.

The assessment system has two components: formative assessment and summative assessment.

B. Formative Assessment:

This type of assessment of trainees occurs during the Urology Specialty training and is primarily aimed at aiding learning through constructive feedback.

The assessment is composed of the following elements:

1. Workplace based assessment (WPBA):
   - Candidates are assessed at the workplace by two main methods: Case Based Discussions (CBD) and Procedure Based Assessments (PBA). The baseline frequency of assessments is four CBDs and two PBAs for each 6-monthly assessment cycle, but the frequency may be altered based on adequacy of progression.
   - The written CBD and PBA reports are included in the trainee’s evaluation in the Half Annual Review Process (HARP).

2. Log book
   - The logbook provides a record of the scope and volume of operative exposure, as well as the educational and training activities attended by the trainee.
   - It is the responsibility of the trainee to record activities into the logbook.
   - Logbook entries include outpatient clinic sessions, surgical procedures, emergency sessions, scientific activities and training courses
   - Each candidate has to complete a signed and approved log book for each evaluation cycle. The logbook entry is signed by the person in charge of the activity (consultant surgeon or lecturer) and countersigned by the trainer. The candidate has to document attendance of at least 75% of scheduled educational and training activities.
The logbook should be presented every six months to the specialty coordinator 4 weeks prior to the scheduled Half Annual Review Process, and should be available for inspection during audits and educational reviews.

3. Forms and Reports
Trainee Assessment Forms, Trainer reports, and Educational Supervisor Reports
These standard forms (Appendix A) are filled at regular predetermined intervals to evaluate the progress of the trainee, and are submitted to the Specialty coordinator for inclusion in the HARP documents.

- The chairman of the scientific council sets the date for the HARP, selects the members of the review board and sends the invitations.
- A minimum of three review board members (who can be the chairman of scientific council, council members, educational supervisors, specialty coordinator, or representative of trainers) should attend this meeting.
- Trainees will be notified one month ahead of the meeting date.
- Learning agreements, logbooks, trainer monthly reports, quarterly educational supervisor reports, trainee assessment forms and training post assessment forms should be submitted to the specialty coordinator at least 3 weeks before the date of the meeting. The specialty coordinator will forward the above documents to the review board members at least a week before the meeting date.
- The following items will be assessed in the meeting:
  - Logbook completion
  - Weekly activities (working in the different clinical settings)
  - Surgical procedures and PBAs
  - Scientific activities and case based discussions (CBDs)
  - Trainee assessment forms
  - Educational Supervisor reports
  - Additional documents submitted by trainee (e.g. course attendance certificate)
- Based on the above evidence and following discussions with trainees one of the following outcomes will be decided:

HARP A: Trainee is achieving progress and competencies at the expected rate. Satisfactory in all aspects to proceed.

HARP B: Satisfactory to proceed, but development of specific competencies required – additional training time not required.
HARP C: Inadequate progress by the trainee. Official warning and additional training time may be required.

HARP D: Unsatisfactory and should be referred for advice about choosing an alternative career pathway.

HARP I: Incomplete evidence presented.

HARP S: Successful completion of training, eligible to sit for final exams.

C. Summative Assessment:

It is composed of the Egyptian Fellowship Board of Urology Three parts examination:

First Part Written Exam:

This is the First part of the Egyptian Fellowship Board in General Surgery exam. It is conducted by the General Surgery board. Candidates are eligible to sit for the exam after having completed 6 months of their core surgical training and they are allowed up to three attempts. Passing the First Part Exam of the Egyptian Fellowship of General Surgery is a prerequisite to be accepted into specialized urology training at a third year (ST3) position.

Second Part Written Exam:

Trainees are eligible to sit for the second part exam after successful completion of training and satisfactory performance in the Half Annual Review Process (HARP).

The trainee has three chances to re-sit the exam within a maximum of three years from the first attempt.

The exam pass mark will be set using the modified Angoff standard setting for the four written exam papers. The pass mark is determined based on the four written papers collectively.

This second part exam consists of four written papers on two separate days:

- First Day (2 sessions, each session is for two hours and each paper is for 100 marks)

Paper one: eight short essay questions in two hours including problem solving questions.
Paper two: 100 applied knowledge test questions in the form of multiple choice questions with one single best answer out of five and in the form of clinical scenarios or interpretive questions. Incorrect answers do not lead to deductions from the total marking.

- Second Day (2 sessions, each session is for two hours and each paper is for 100 marks)

Paper three: eight short essay questions in two hours including problem solving questions.

Paper four: 100 applied knowledge test questions in the form of multiple choice questions with one single best answer out of five and in the form of clinical scenarios or interpretive questions. Incorrect answers do not lead to deductions from the total marking.

Third Part Clinical Exam:

Trainees have to pass the second part written exam to be eligible to sit for the third part clinical exam. The pass mark of the clinical exam will be determined by the borderline regression method for each component. The marks for the components are combined in order to determine the final score for the third part clinical final exam.

The trainee has three chances to re-sit the exam within maximum three years of the first attempt.

The third part clinical exam consists of four components:

1. **Long Case (100 marks):**

A long clinical case for 60 minutes including observed history taking, physical examination, and presentation of history and clinical findings for forty minutes, followed by structured and calibrated discussion for twenty minutes, conducted by two examiners.

2. **Short Case (100 marks):**

Two short clinical cases, each for 20 minutes. The candidate is asked to take a focused history and a detailed local examination (with possible relevant general physical sigs), to provide a likely and differential diagnosis and to discuss the management.

3. **Structured and calibrated Viva Exam (100 marks) (Two sessions, each for twenty minutes and 50 marks):**
   a. Emergency and operative urology session
Two examiners assess the candidate in this session focused on Urological emergencies and their management, and on surgical procedures including indications, anesthesia, operative steps, and postoperative complications.

b- Endourology and Technology session

Two examiners assess the candidate in this session focused on Endourological procedures and recent technological advances in the management of urological diseases

4. **OSCE stations (Ten stations, each for six minutes, 100 marks)**

This is an objective structured clinical exam consisting of 10 stations which may require focused history taking, focused general exam, local exam, interpreting a radiology image or other investigations, testing communication skills or testing certain surgical skills.

The third part clinical exam is marked according the following system of grade descriptors:

**Clear Pass (CP):**

The trainee demonstrates a high level of competence and meets the expected standard of performance in all important aspects.

**Marginal Pass (MP):**

The trainee demonstrates an adequate level of competence, with minor errors or minor deviation from expected standard.

**Marginal Fail (MF):**

The trainee fails to demonstrate adequate competence, with a clinical approach that is at times unsystematic or inconsistent with accepted practice.

**Clear Fail (CF):**

The trainee clearly fails to demonstrate competence or could not perform the task or perform a critical error or two or more major errors/defects.

**Serious Concern:**

The trainee shows dangerous practice or grossly unacceptable behaviour that place patients at risk of significant harm from decisions and actions that the doctor takes or fails to take.
D. Requirements for Certification:

- Completion of the Urology training program
- Achieving a satisfactory formative assessment
- Passing through all the components of the summative assessment

E. Timing and Venue

Currently, the written and clinical examinations are held once per year. The exam venue is determined and announced by the Egyptian Fellowship Board.
Appendix A: Assessment Forms
Appendix B: Accreditation of Urology Department / Training Center

1. The hospital must be already accredited for:

   1.1. Departments related to urology, i.e. departments of Anesthesia, General Surgery, Radiology, Histopathology, Laboratory, General medicine, Accidents and Emergencies. Blood bank.

   1.2. Continuous education requirements such as: medical library, seminar rooms and audio-visual multimedia.

   1.3. Good filing system and medical record department.

   1.4. Other general requirements for accreditation.

2. Department of Urology:

   2.1. Composed of at least 20 beds.

   2.2. The admissions per bed should not be less than 20 cases per bed per year.

   2.3. The department should perform at least 500 operative procedures per year.

   2.4. Runs at least three out-patient clinics weekly.

   2.5. The head of the department should hold a recognized high urological qualification.

   2.6. The consultant members of staff should be at least two and hold recognized qualifications in urology.

3. Operating Rooms and specialty Units:

   3.1. The hospital must have at least 2 urological operating and Endoscope rooms with facilities to perform emergency operations 24 hours per day.

   3.2. The hospital must have an intensive care unit (ICU) equipped with ventilators, defibrillators and resuscitation and monitoring facilities.

   3.3. The hospital must have facilities to provide physiotherapy.
3.4. The hospital must have specialized services such as ESWL, Urodynamics, day surgery, burn unit, renal dialysis unit, cardiac catheterization and organ transplantation units etc.

4. **The department staff should practice regular scientific activities.**

4.1. Continuous Education Requirements.

4.2. Medical library: Reasonable library containing basic medical sciences, clinical and operative text books, periodicals, journals and facilities for reading.

4.3. Seminar rooms: at least one major lecture hall accommodating 100 attendants, beside 2 seminar rooms 10-20 seating capacity.

4.4. The hospital should have facilities for photocopy, slide and overhead projection, internet, computer, medical photography and audio visual aids.

5. **Medical Record Department:**

5.1 The patient's files are kept and called according to serial filing numbers.

5.2 Computer Facilities are desirable. The patient's files should contain:

   5.2.1 History and physical examination.
   5.2.2 Physician progress notes - nursing progress notes.
   5.2.3 Laboratory results notes.
   5.2.4 Radiology and ultrasound reports form.
   5.2.5 Histopathology reports.
   5.2.6 Consultation forms.
   5.2.7 Physician order sheets.
   5.2.8 Operative consent.
   5.2.9 Discharge summary.
   5.2.10 Outpatient follows up records.