

ASD Urological Pathology - Version 1.0 - January 2019 Copyright© Institute of Biomedical Science 2019 This document and its contents including the IBMS logo are the property and trademarks of the Institute of Biomedical Science. The copyright on this material is owned by the IBMS (unless otherwise explicitly stated). This document or no part of it may be copied, reproduced, republished, downloaded or transmitted in any way, other than for your own personal, non-commercial use. Prior written permission must be obtained from the IBMS, using the contact details below, for any other use of this material. All rights are reserved.

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Please note the following:

- 1. On a case-by-case basis, the quality assurance of the dissection of tissue specimens performed by biomedical scientists, who hold the Advanced Specialist Diploma in Urological Pathology Specimen Dissection, remains the responsibility of the reporting consultant pathologist
- 2. This candidate guidance must be read in conjunction with the other supporting documents pertinent to this diploma:
 - Principles of Good Practice for Biomedical Scientist involvement in Histopathological Dissection
 - Guidance to Candidates and Trainers for the IBMS Advanced Specialist Diploma in Urological Pathology Specimen Dissection
- 3. For the purposes of this guidance, the training logbook and diploma, the urological system is defined as:
 - the kidneys and ureters
 - the testes
 - the bladder and urethra
 - the prostate gland

In recognition that it may not be possible to obtain experience in dissection of all types of urological resection specimens in all pathology departments, the qualification will be awarded in either of both of the following two categories:

- A. Kidney (including ureter) and Testis
- B. Bladder (including urethra) and Prostate

Candidates are expected to have knowledge of all organs in the urological system for the written examination, but the content of the portfolio and the viva voce examination will reflect their own specialised practical dissection experience in categories A, B or both.

INTRODUCTION

The Institute's Advanced Specialist Diploma in Specimen Dissection - Urological Pathology provides evidence of the attainment of both the necessary scientific and clinical knowledge underpinning the practice of urological pathology specimen dissection, with the practical competence required to accurately dissect all urological pathology specimens whether benign or malignant. Possession of this diploma will enable you to apply for an appropriate post.

AIMS

- 1. To develop the professional knowledge and skills of a candidate beyond that of the Diploma of Expert Practice to a high level of professional practice
- 2. To enable successful candidates to undertake a role that involves the description, dissection and block sampling of urological pathology specimens
- 3. To enable successful candidates to offer expert professional advice on unological pathology dissection
- 4. To enable successful candidates to participate in the training of biomedical scientists and specialist medical trainee staff in urological pathology specimen dissection

LEARNING OUTCOMES

Individuals awarded the Advanced Specialist Diplomatic Specimen Dissection - Urological Pathology will be able to:

- 1. Demonstrate expert professional skills and advanced knowledge beyond those required of biomedical scientists in histopathology working at the level of the Diploma in Expert Practice in Histological Dissection
- 2. Demonstrate full understanding of the physiological and pathological processes associated with the kidneys, the testes, the bladder and the prostate gland
- 3. Accurately describe the macroscopic appearances of urological pathology specimens using appropriate terminology
- 4. Know and understand the role of imaging methods in relation to the assessment of urological disease
- 5. Able to relate clinical/radiological/pathological findings to complex urological pathology specimen dissection

- 6. Use highly specialised practical skills to dissect urological specimens to enable accurate histological reporting
- 7. Produce high quality macroscopic and microscopic images of urological pathology specimens to enable correlation between the gross specimen, radiological findings and the final diagnosis
- 8. Demonstrate the ability to operate autonomously within limits of their own competence, seeking advice from a consultant pathologist when needed
- 9. Engage in critical dialogue and work collaboratively with other healthcare professionals to provide a high quality service
- 10. Continue to develop their own area of practice by keeping their professional knowledge and skills up to date

CONSULTANT PATHOLOGIST SUPERVISOR

A biomedical scientist considering undertaking training for the Advanced Specialist Diploma in Histological Dissection - Urological Pathology requires a named consultant pathologist supervisor. This is essential in ensuring that the biomedical scientist in training has the necessary support and exposure to material and training to enable the acquisition of these advanced skills and knowledge, and ultimately, to apply them in advanced professional practice. The named consultant pathologist supervisor must be registered on the specialist register with the GMC, currently reporting urological pathology, meet the minimum RCPath CPD requirements must participate in a general EQA scheme and/or the national Uropathology EQA scheme. The consultant pathologist supervisor must:

- 1. Guide and direct the training process
- 2. Regularly review progress during the training period, which must include direct observation of practical skills, evidence of case reviews
- 3. Set agreed learning plans with candidate
- 4. Be able to arrange for the biomedical scientist to obtain training in all the required areas
- 5. Inspect the portfolio prior to submission to the Institute to ensure it meets the requirements specified in the guidance to candidates
- 6. Sign the declaration in the logbook to confirm that the candidate has undergone training, and in his/her opinion is competent and ready to sit the examination

The pathologist supervisor and the biomedical scientist in training should comply with relevant RCPath and IBMS guidelines and standards

DELIVERY OF TRAINING

Training must be delivered in accordance with this IBMS/RCPath training logbook for the Advanced Specialist Diploma in Urological Pathology Specimen Dissection. Completion of training is evidenced by submission of the signed logbook and compilation of a portfolio that contains evidence of regular assessments of competence in dissecting appropriate urological pathology specimens by a named consultant pathologist supervisor. If the repertoire of the training laboratory is not comprehensive enough to allow exposure to the widest spectrum of urological pathology, it is considered good practice for biomedical scientists to visit other laboratories to share expertise and to learn different techniques.

The sub-speciality training component of this training programme is best served by participation in current specialist urological pathology and related activities, in close association with a consultant specialising in this area. The overall aim of the training programme is to develop advanced knowledge, attitudes and dissection skills in urological pathology. Training of biomedical scientists in advanced urological pathology dissection must not detract from the training of specialist trainee medical staff in these areas.

ONGOING ASSESSMENT OF COMPETENCE

In-house assessments of competence must be an interactive continuous process between the supervising pathologist and the biomedical scientist. Work-based assessments (WBAs) must include a minimum of six direct observation of practical skills (DOPs), three case-based discussions (CBDs) and three evaluation of clinical events (ECEs) and one multi-source feedback (MSF) which must be undertaken during the training period. Regular reviews of progress are essential for the setting of agreed learning plans and as part of an ongoing personal development plan.

COMPLETION OF TRAINING

Once the named consultant pathologist supervisor and the laboratory manager are satisfied that the training is complete, the candidate may contact the Institute for an examination application form.

Progression to the examination for the Advanced Specialist Diploma in Specimen Dissection – Urological Pathology is dependent upon the satisfactory assessment of the portfolio. Success in the written and viva voce examinations will be recognised by the awarding of the Advanced Specialist Diploma in Specimen Dissection – Urological Pathology

TRAINING PROGRAMME

The training programme for biomedical scientists wishing to obtain the Advanced Specialist Diploma in Specimen Dissection - Urological Pathology is guided by recommendations made by the following reports, documents and guidelines:

- the final report from the Royal College of Pathologists and Institute of Biomedical Science Working Group on the implementation of the extended role of the biomedical scientists in specimen description, dissection and sampling (2004)
- Modernising Pathology Services. DH (2004)
- Institute of Biomedical Science and Royal College of Pathologists training logbooks for the Advanced Specialist Diploma in Specimen Dissection Breast Pathology (version 1.2 2013) and Lower Gastrointestinal Pathology (version 1.2 2013)
- RCPath Tissue Pathways: https://www.rcpath.org/resourceLibrary/urological-tissue-pathways.html
- RCPath Cancer Datasets: <u>https://www.rcpath.org/profession/publications/cancer-datasets.html</u>
 - Prostatic carcinoma (2016),
 - Adult renal parenchymal neoplasms (2017)
 - Testicular neoplasms (2014)
 - Tumours of the urinary collecting system (2013

A CORE GENERIC KNOWLEDGE AND SKILLS

Generic knowledge and dissection skills must be evidenced before attempting the Advanced Specialist Diploma in Urological Pathology Specimen Dissection.

Subject	Knowledge	Performance criteria
Introduction	Has a sound and thorough knowledge of the nature of the specimens received within the department	Demonstrates the ability to solve problems regarding queries over specimens from a clinician, at the cut-up bench.
	Possesses an appropriate knowledge of urological pathology, sufficient to dissect such specimens.	Understands that the clinicopathological correlation is absolutely crucial in pathology in general and the impact that this has on patient management.
Clinical governance	Has a thorough knowledge and understanding of the definition and organisational framework of clinical governance.	Participates in all elements of clinical governance, maintains patient confidentiality, learns from complaints and errors and shares best
Training	Understands the training methods used to impart cut-up skills and	practice Applies the various training methods to the practical situation and
Iranning	appreciates the sequence of observation, direct supervision and indirect supervision	demonstrates competence in sample selection.
Continuing Professional Development	Understands the need for Continuing Professional Development	Actively participates in learning opportunities including sessions spent in clinics, theatre, departmental multidisciplinary and urology pathology teaching sessions and meetings.
		Maintains a personal development plan to set learning goals.
		Has an insight into own knowledge and skills limitations.
		Is able to learn from colleagues and accepts that appraisal and feedback are positive steps to setting learning targets for further improvement/personal development.
Standard	Understands that all aspects of laboratory work must be covered by	Can use departmental SOPs competently and has the ability to
Operating Procedures.	individual, signed, indexed and dated SOPs.	write, modify or add to them.
	Knows that before commencing training it is mandatory that SOPs are in place to describe the departmental protocol for the dissection of tissues.	

Risk	Has a good knowledge of risk management as applied to the laboratory setting and the utility of the risk management cycle which incorporates incident reporting	Has a positive attitude to risk management by recognising that risk is a part of laboratory practice.
	Has specific knowledge of the following:	Learns from mistakes and applies changes in order to minimise the risk of recurrence.
	Safety responsibilities of the employee as defined in each individual's job description.	Follows the departmental/trust risk and safety procedures.
	The universal precautions for handling specimens.	
	Waste/human tissue disposal/retained organ regulations.	
	The procedures for dealing with high risk specimens.	
	Specimen handling procedures for dissection.	
	Procedure for mislabelled specimens.	
	SOP risk assessment compliance	
	The protocol for referring any specimen or specimen type outside their competence or remit to the consultant pathologist	
Audit	Has a thorough knowledge of the audit cycle and internal and external quality assurance procedures as applied to laboratory	Can independently initiate an audit project.
	practice	Appreciates that audit ensures that best practice is being carried out
Data security and confidentiality	Has knowledge of the Caldicott report and the Data Protection Act (2018) and how these are applied to laboratory practice.	Understands the need for patient confidentiality and applies this knowledge to the laboratory situation.
and	Has knowledge of the Caldicott report and the Data Protection Act (2018) and how these are applied to laboratory practice.	

В CORE SUB-SPECIALITY UROLOGICAL PATHOLOGY KNOWLEDGE The following are areas which the biomedical scientist in training must become familiar with: **GENERAL PRINCIPLES** DATE COMPLETED COMPETENCE **REFERENCE TO PORTFOLIO** Has a knowledge and understanding of: The anatomy, function and physiology of the urological system (as defined previously) The role of endoscopic techniques (e.g. cystoscopy, ureteroscopy) biopsy and cytology in the diagnosis of urological pathology The recognition, naming, anatomical relationships and orientation of all urological surgical excision specimens How to dissect common specimen types within the urological system competently and safely The role of imaging in the diagnosis and staging of urological pathology and its correlation with pathology results in the context of urological MDT meetings **Specimens and Pathology** Has the knowledge, skills and competence in handling the following specimens and an understanding of the associated pathological findings GENERAL **Biopsy and Transurethral Resection Specimens** Handling and processing of small hiopsylcurettage spectmens from various sites within the urological system

PRINCIPLES OF UROLOGICAL PATHOLOGY SPECIMEN DISSECTION

COMPETENCE	DATE COMPLETED	REFERENCE TO PORTFOLIO
Radical Resection Specimens		
Identification of constituent anatomical parts and knowledge of their relationship with other		
organs		
Recognition of normal macroscopic appearances		
Identification of resection margins		
identification of resection margins		
Inking of resection margins		
Opening of specimens to facilitate fixation		
Appropriate use of macrophotography		
Fresh tissue sampling for research and clinical trials, as appropriate		
Thesh dissue sumpling for research and ennical thats, as appropriate		
Accurately describe tumours/lesions, using medical terminology, to record the location,		
focality, appearance, size, extent and the relationship to surgical margins		
Recognise incidental lesions		
Correlate appearances with clinical, imaging and previous biopsy/resection findings		
Correlate appearances with the effects of any neoadjuyant therapy		
Colortion of an averagista black of the second of the second		
Selection of appropriate blocks to enable assessment of tumour type, grade, stage and relevant prognostic factors and relationship to surgical margins		
Lymph node sampling		

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INDIVDUAL SPECIMEN TYPES

COMPETENCE	DATE COMPLETED	REFERENCE TO PORTFOLIO
Specimens and Pathology		
Has the knowledge skills and competence with the following specimens and associated		
pathology:		
KIDNEY AND URETER		
Ureter		
Biopsies for lesions detected on imaging or ureteroscopy, including tumours, carcinoma in-		
situ and benign conditions (including nephrogenic adenoma/metaplasia, ureteritis cystica,		
amyloidosis, endometriosis, florid von Brunn's nests and schistosomiasis)		
Pelvi-ureteric junction (PUJ) excisions for obstruction due to congenital or acquired		
conditions		
Ureterectomy for excision of stricture, congenital anomalies, ureteritis cystica,		
endometriosis, sclerosing retroperitoneal fibrosis (IgG4 related disease)		
Simple nephrectomy		
For benign conditions including:		
• renal cystic disease: adult polycystic kidney disease (APCKD), acquired cystic renal		
disease		
non-functioning kidneys		
inflammatory conditions e.g. chronic pyelonephritis, xanthogranulomatous		
pyelonephritis		
renal calculous disease		
• roflux uronothy		
reflux uropathy		

COMPETENCE	DATE COMPLETED	REFERENCE TO PORTFOLIO
failed renal transplant		
hydronephrosis due to obstruction		
other: traumatic injury, radiation nephropathy, ischaemia		
Partial nephrectomy (nephron-sparing surgery)		
For small renal masses, benign or malignant		
Nephroureterectomy		
 For tumours and/or carcinoma in-situ of the renal pelvis and/or ureter usually includes a bladder cuff 		
may include resection of lymph nodes		
ncludes adjacent organs if locally advanced tumour		
Radical nephrectomy		
or malignant/suspected malignant renal masses diagnosed on biopsy, imaging or following		
prior diagnosis of metastatic disease These resections may include:		
 the adrenal gland 		
hilar lymph nodes		
 separate sampling of other regional lymph nodes 		
 inferior vena cava thrombi, separate or attached 		
ncludes adjacent organs if locally advanced tumour		

COMPETENCE	DATE COMPLETED	REFERENCE TO PORTFOLIO
TESTIS		
Biopsies		
For investigation of fertility		•
To exclude germ cell neoplasia in-situ (GCNIS) in undescended testis or biopsy		
(uncommonly) of the contralateral testis at the time of surgery for malignancy		
Hydrocoele		
To exclude malignancy		
Epididymis		
Excision for cysts, chronic pain, pain post vasectomy, suspected tumour		
Orchidectomy for benign conditions		
Undescended testis, torsion, trauma, infarction, inflammatory conditions, infection, atro	phy,	
testicular regression syndrome		
During hernia repair		
Bilateral, for hormonal control of prostate cancer (uncommon)		
Orchidectomy for testicular masses		
Benign or malignant		
Includes the epididymis and spermatic cord		

COMPETENCE	DATE COMPLETED	REFERENCE TO PORTFOLIO
Retroperitoneal lymph node dissection (RPLND)		
For removal of intra-abdominal lymph node metastases, usually post-chemotherapy, for testicular germ cell tumours		
(it is accepted that dissection experience of RPLND specimens may not be possible at all centres)		
COMPETENCE	DATE COMPLETED	REFERENCE TO PORTFOLIO
PROSTATE		
Prostate biopsies		
For suspected prostate cancer following a raised PSA level and/or abnormal rectal examination		
Transrectal or transperineal approach		
Transurethral resection (TURP)		
For relief of bladder outflow obstruction in patients with no history of careinoma or patients with known prostate cancer		
Uncommonly, for detection of suspected carcinoma in patients with previous negative prostate biopsies (to detect a transition zone tumour)		
Retropubic prostatectomy/ enucleation specimens		
For relief of bladder outflow obstruction, as for TURP		
Radical prostatectomy		
For prostatic carcinoma, previously diagnosed on biopsy or TURP		
Includes the seminal vesicles with or without pelvic lymph node sampling		

COMPETENCE	DATE COMPLETED	REFERENCE TO PORTFOLIO
BLADDER AND URETHRA		
Bladder biopsies/transurethral resections		
Investigation of:		
haematuria		•
 abnormal urine cytology 		
For diagnosis of lesions detected at cystoscopy		
Diagnosis of benign conditions, including cystitis (infectious, non-infectious, interstitial,		
ketamine related, post radiation), cystitis cystica, squamous metaplasia (keratinising and		
non-keratinising), amyloidosis, malakoplakia, nephrogenic adenoma/metaplasia		
Follow-up of tumours and carcinoma in-situ (CIS), post resection and post treatment - post		
intravesical therapy e.g. Bacillus Calmette-Guerin (BCG) or mitomycin Cetc, chemotherapy		
or radiotherapy		
Partial cystectomy		
Diverticulum		
Benign localised lesions – endometriosis, haemangioma, leiomyoma, paraganglioma,		
amyloidosis		
Severe lower urinary tract symptoms – interstitial cystitis		
Fistula – colovesical or vesicovaginal		
Tumours arising the dome of the bladder, e.g. urachat carcinomas, with excision of the entire		
urachal tract remnant and the umbilitus		

COMPETENCE	DATE COMPLETED	REFERENCE TO PORTFOLIC
Total cystectomy		
For benign conditions:		
radiation cystitis		
• palliative, for relief of severe pain, haematuria, urinary frequency		
 for management of keratinising squamous metaplasia 		
• trauma		
For bladder carcinoma or carcinoma in-situ, with or without prior treatment (e.g.		
chemotherapy, radiotherapy, BCG) –includes other organs:		
male – prostate (cystoprostatectomy)		
female - female reproductive organs		
female - female reproductive organs		
• urethra – female, or male (if pre-operative urethral biopsies contain carcinoma or		
carcinoma in-situ (CIS)		
pelvic lymph node sampling		
Also includes adjacent organs if locally advanced tumour		
Urethral biopsies		
For investigation of urethral caruncle, polyps, strictures, inflammatory lesions, benign		
conditions (malakoplakia, polyps, Rephrogenic adenoma/metaplasia) and tumours		

COMPETENCE	DATE COMPLETED	REFERENCE TO PORTFOLIO
Jrethrectomy		
For urethral stricture:		
 at cystectomy, for known urethral involvement by carcinoma or carcinoma in-situ (CIS) (see cystectomy above) 		•
• following previous cystoprostatectomy, where urothelial carcinoma or carcinoma in- situ (CIS) was found in the prostate/prostatic urethra i.e. secondary urethrectomy		
for tumour recurrence/metastases in urethra		
for urethral carcinoma		

INDICATIVE READING LIST

RCPath Tissue Pathways: <u>https://www.rcpath.org/resourceLibrary/urological-tissue-pathways.html</u>

RCPath Cancer Datasets: http://www.rcpath.org/profession/publications/cancer-datasets.html

- For Prostatic carcinoma (2016),
- Adult renal parenchymal neoplasms (2017),
- Testicular neoplasms (2014)
- Tumours of the urinary collecting system (2013)

Abrahams PH, Spratt JD, Loukas M, Van Schoor AN. McMinn's and Abrahams' Clinical Atlas of Human Anatomy. 8th ed. Elsevier; 2019.

Allen DC, Cameron RI (Eds.) Histopathology Specimens: Clinical, Pathological and Laboratory Aspects. 3rd ed. Springer-Verlag London Ltd; 2017.

Amin MB, Tickoo SK. Diagnostic Pathology: Genitourinary. 2nded. Elsevier, 2016.

Brierley J, Gospodarowicz MK, Wittekind C (Eds.) TNM Classification of Malignant Tumours. 8th ed. Wiley-Blackwell; 2016.

Colvin RB, Chang A. *Diagnostic Pathology: Kidney Diseases*. 2rd ed. Elsevier; 2015.

Goldblum JR, Lamps LW, McKenny JK, Wyers L. Rosai and Ackerman's Surgical Pathology. 11th ed. Elsevier; 2017.

Orchard G, Nation B. (Eds.) *Histopathology (Fundamentals of Biomedical Science)*. 2nd ed. OUP Oxford; 2017.

Survarna K, Layton C, Bancroft J. Buncroft's Theory and Practice of Histological Techniques. 8th ed. Elsevier; 2018.

DECLARATIONS

I declare that I have satisfactorily completed all components of this training logbook, satisfying part of the requirements for the Advanced Specialist Diploma in Specimen Dissection- Urological Pathology of the Institute of Biomedical Science and the Royal College of Pathologists

Signed		
Name		
Date		
I declare that		stactorily completed all components of this training logbook satisfying part of
the requirements for the Advanced Specia	alist Diploma in Specimen D	issection - Urological Pathology of the Institute of Biomedical Science and the
Royal College of Pathologists	\sim	
Signed (consultant pathologist supervisor)		
Name		
Date		