12th BDIAP Seminar for Trainees in Histopathology
Approach to Cut-Up

Urology

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General points

• Cancer centres, robotic surgery
• Look up previous histology and current imaging
• TNM Staging (state year or edition used)
• Use reporting proformas
• Photography for meetings etc
General points

• Good cut up is the selection of all the informative areas of the specimen in the smallest number of blocks required.
• Every block you take should be justifiable.
• More blocks does not = better cut up!
• If biobanking routinely performed, fresh (unfixed) specimens will be sliced and sampled within 20min of surgical removal.
• By AP or trainee BMS/pathologist
Lecture outline

• We will cover the following cancer resections:
  – Prostatectomy
  – Radical nephrectomy
  – Partial nephrectomy
  – Nephroureterectomy
  – Cystectomy
  – Orchidectomy
PROSTATECTOMY

• Correctly orientate the specimen
• Ink specimen
• Weigh specimen without SVs
• Remove apex & cruciate
• Remove base & cruciate
• Megablock the whole prostate
Apex  Seminal vesicles  Base  Prostate megablocks from apex to base
RADICAL NEPHRECTOMY

- Bivalve on receipt. Usually not necessary to ink.
- Take a hilar block to include ureter, vessels & nodes if seen.
- Sample adrenal if present (if tumour is present important to state if contiguous with the renal tumour or a separate deposit)
- Serially slice each half of the kidney.
- Take a block of background kidney.
- Measure tumour size.
- Describe tumour appearance:
  - Solid or cystic?
  - Colour (golden yellow, brown, friable, white areas)
- Document extent of local tumour spread:
  - Capsular invasion?
  - Renal sinus invasion?
  - Pelvicalyceal invasion?
  - Renal vein invasion?
<table>
<thead>
<tr>
<th>Hilum</th>
<th>Adrenal</th>
<th>b/g kidney</th>
<th>Tumour + renal sinus</th>
<th>Tumour + capsule</th>
</tr>
</thead>
</table>

![Images of tissue samples with blue arrows pointing to specific areas.](image-url)
PARTIAL NEPHRECTOMY

- Ink the renal resection margin.
- Serially slice.
- Describe & measure the tumour.
- Note macroscopic distance to renal resection margin.
- Smaller tumours can be embedded in toto.
- Larger tumours can be sampled focusing on the interface between tumour & margin and tumour & capsule.
NEPHROURETERECTOMY

• Bivalve kidney on receipt.
• If tumour in ureter can ink around the area of palpable tumour.
• Take ureteric margin.
• Serially slice ureter.
• If tumour in ureter, note extent of local spread into ureteric wall or beyond. Usually embed entire tumour. Serially slice each half of the kidney. If no obvious tumour take one or two blocks from the kidney.
• If tumour in kidney, sample the lower and upper ureter, then serially slice each half of the kidney. Note tumour size and spread. Sample tumour with deepest spread.
Ureteric margin
Lower ureter
Upper ureter
B/G kidney
Tumour with renal sinus and parenchyma
CYSTOPROSTATECTOMY

- Ink, remove prostate & divide bladder into anterior/posterior or left/right halves on receipt
- Shave the urethral margin
- All embed the prostate (or at least alternate slices)
- Take ureteric margins (usually sent separately)
- Serially slice each half of the bladder
- If obvious tumour note size and extent of spread, especially if extravesical tumour (= pT3b)
- If no obvious tumour but site of previous TURBT apparent, block the entire area
- If appears normal consider extensive blocking of the mucosa
<table>
<thead>
<tr>
<th>Urethral margin</th>
<th>Entire prostate in megablocks apex to base</th>
<th>Ureteric margins</th>
</tr>
</thead>
</table>

- Bladder wall in area of previous TURBT
- Background bladder wall
CYSTECTOMY IN WOMEN

• Usually includes uterus, tubes, ovaries, urethra and anterior vaginal wall (anterior exenteration).
• Ink urethra, left and right bladder.
• Remove urethra.
• Remove uterine body, tubes, ovaries.
• Divide bladder into left and right halves.
• Serially slice and all embed urethra.
• Serially slice each half of bladder and sample as per cystoprostatectomy protocol.
• Sample uterus, tubes, ovaries as per benign gynae protocol if no obvious tumour involvement.
ORCHIDECTOMY

• Bivalve testis on receipt.
• Serially slice cord and each half of the testis.
• Tumour location.
• Tumour size.
• Tumour appearance:
  – Uniform / heterogenous
  – Solid / cystic
  – Soft & necrotic / haemorrhagic
• Tumour spread:
  – Into tunica, hilar soft tissue, epididymis or cord
Cord margin & base

Background testis

Tumour blocks with rete and tunica
Thank you!

Any questions?