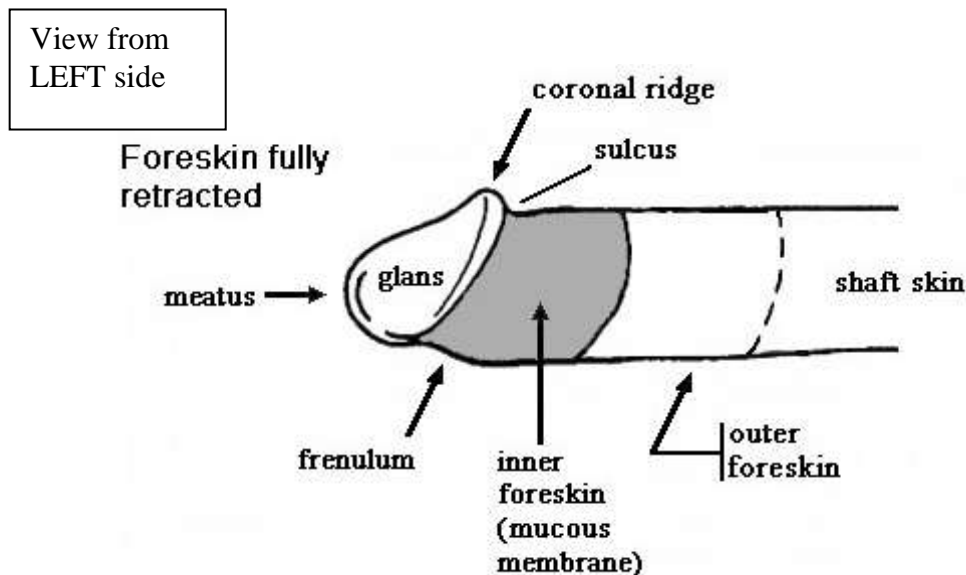
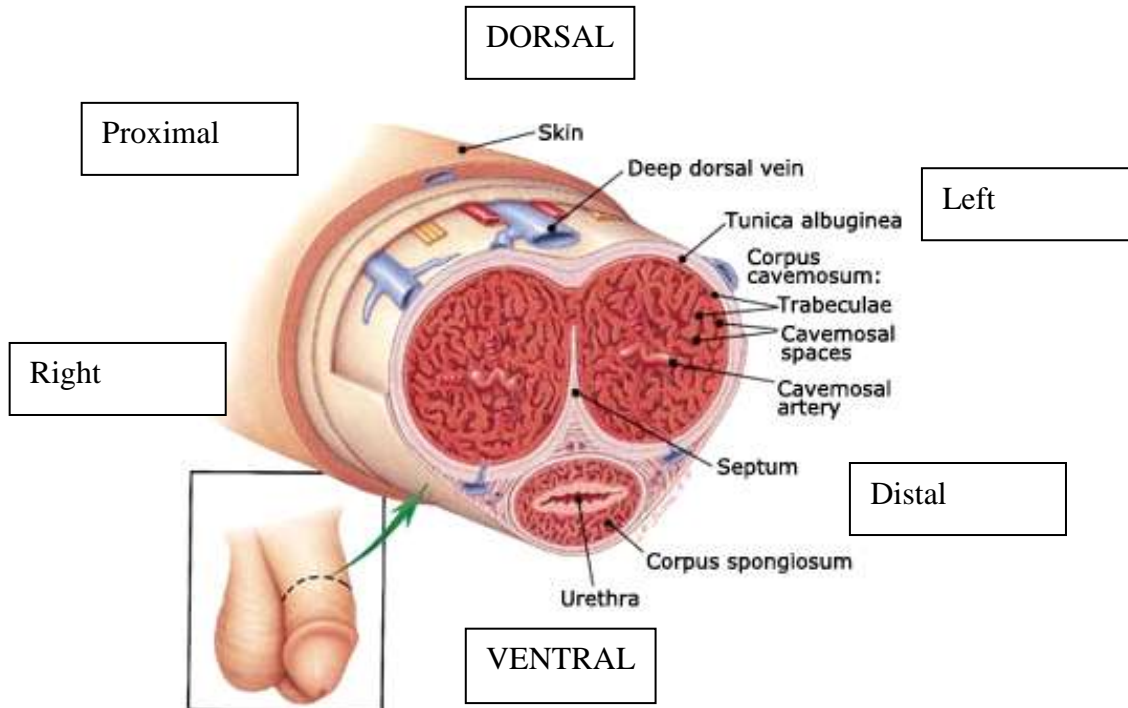


BASIC ANATOMY

Orientating the specimen is essential. The urethra runs within the corpus spongiosum which expands to form the glans. The frenulum of the foreskin is on the ventral aspect.



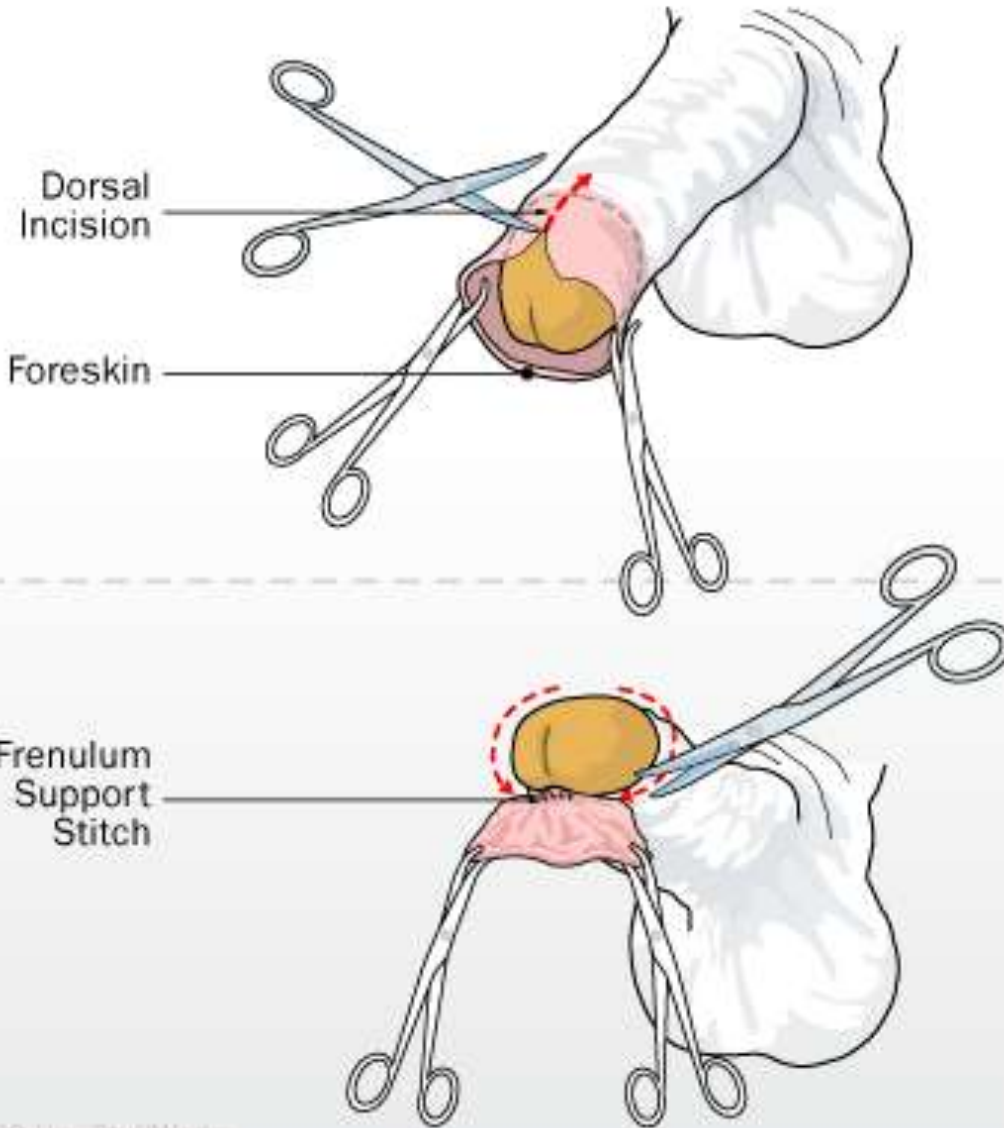
FURTHER REFERENCE:

Cottrell AM, Dickerson D, Oxley JD.
Suspected penile cancer: a method to improve handling of pathology specimens. BJU Int. 2008 May;101(10):1325-8.

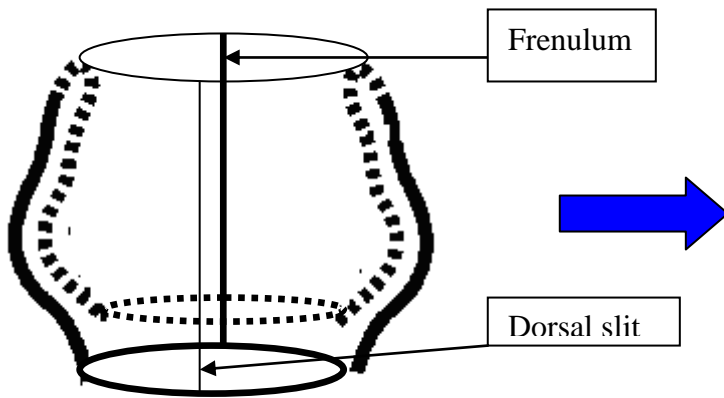
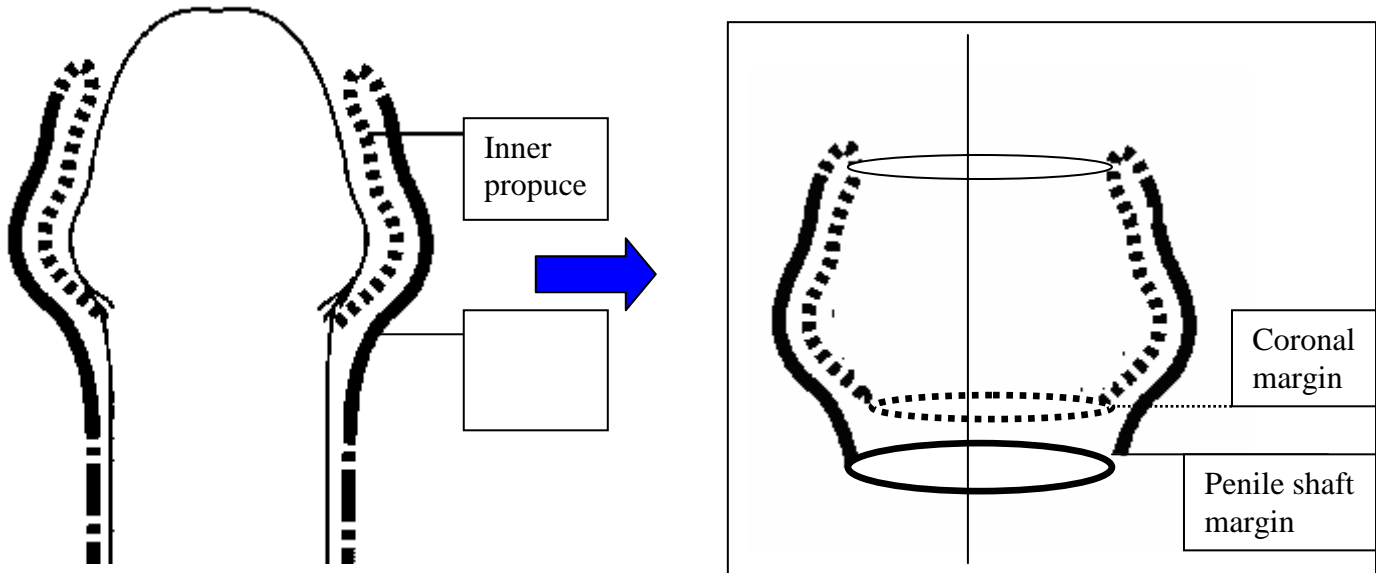
CUT-UP PROTOCOL - FORESKIN SCC

Surgical procedure:

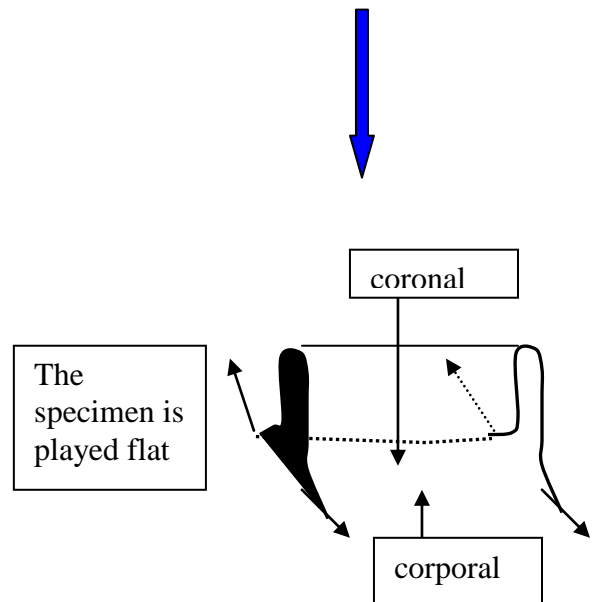
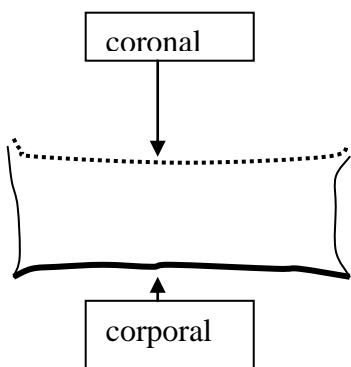
How Circumcision Works Adult Procedure



What happens before receiving the specimen?
Circumcision



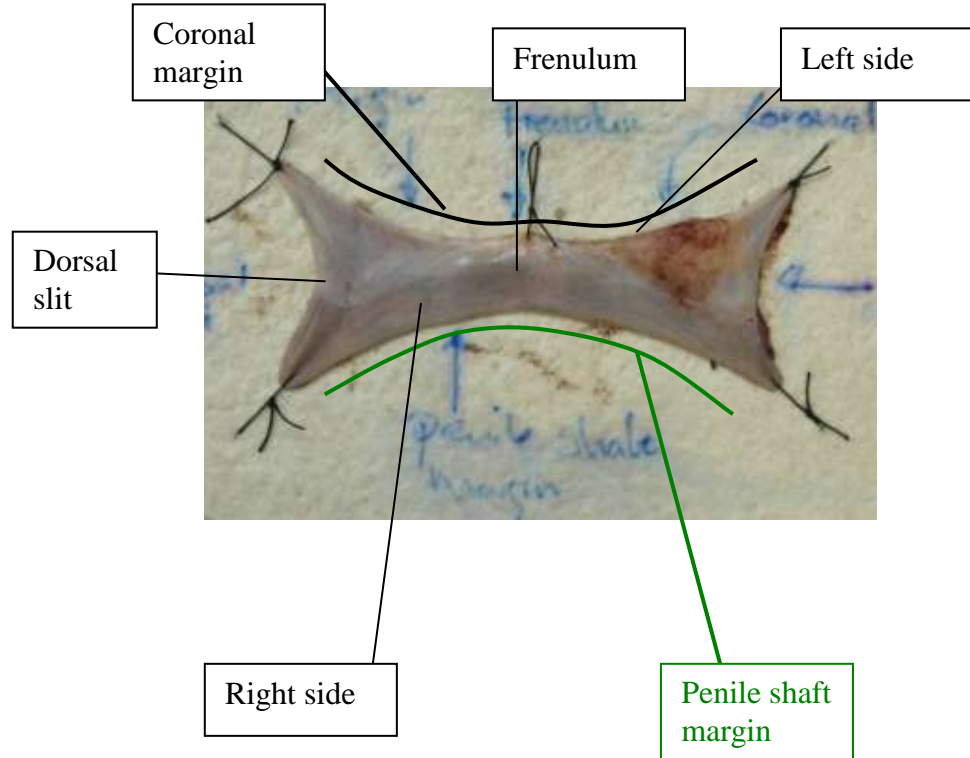
During the procedure the foreskin is cut along the dorsal slit and then along the corporal and coronal margins to create a near rectangular sheet



I. Orientate specimen,:

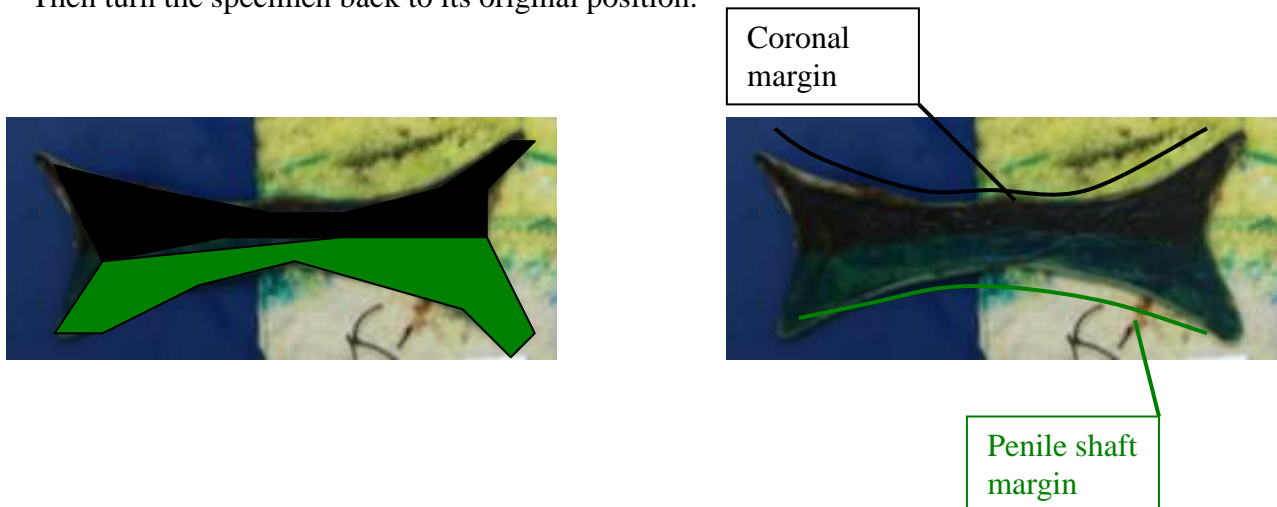
The specimen is usually received pinned on a board with good orientation and labelling. As in the picture below the specimen is opened and pinned resection margin down:

- Coronal margin
- Penile shaft margin
- Right side
- Left side
- Frenulum
- Dorsal slit. (note dorsal slit is not a resection margin)



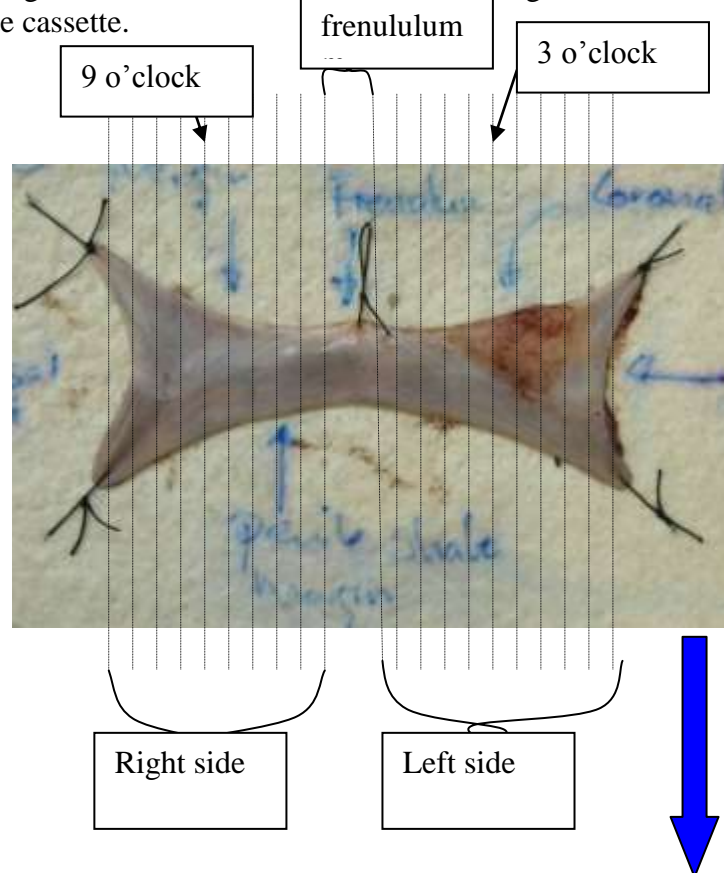
II. **Take photograph** and then remove the specimen from the board and turn it over keeping the orientation:

- Ink the deep and peripheral margins the coronal margin black and the penile shaft margin green.
- Then turn the specimen back to its original position.



III. Put the foreskin back to its original position and start sectioning from right to left:

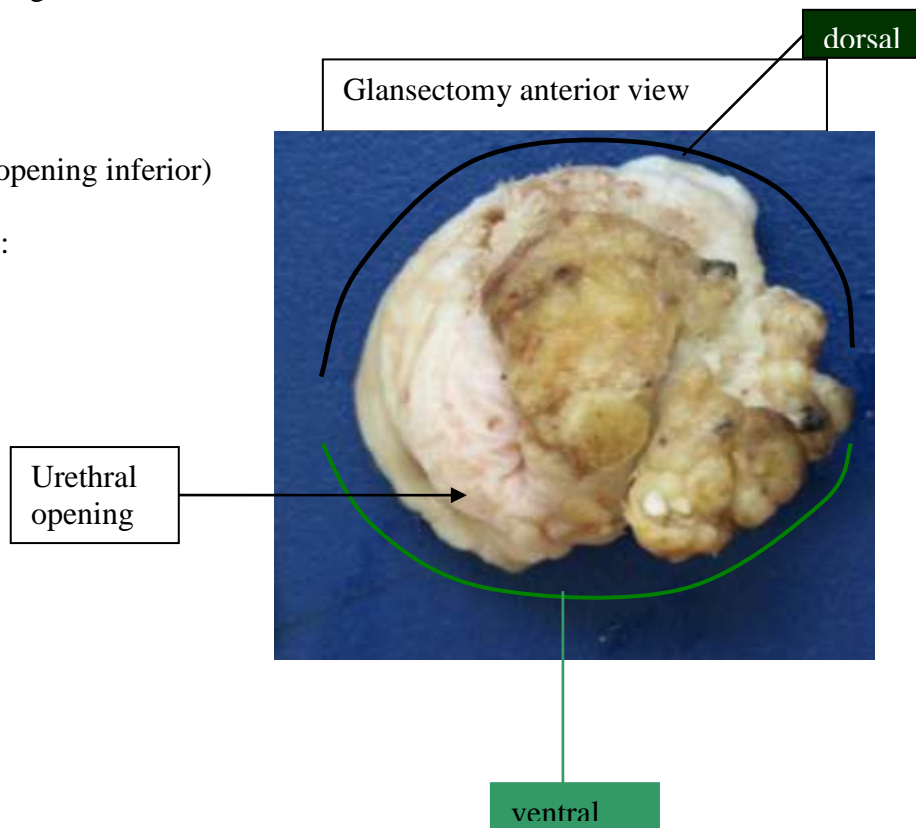
- Block all the specimen ideally
- When dictating take right side from dorsal slit to the frenulum e.g. A1 to A6
- Take 9 o'clock in separate cassette.
- Take the frenulum in separate cassette e.g. A7
- The left side in serial slicing from the frenulum to the dorsal slit e.g. in A8 to A14
- Take 3 o'clock in separate cassette.



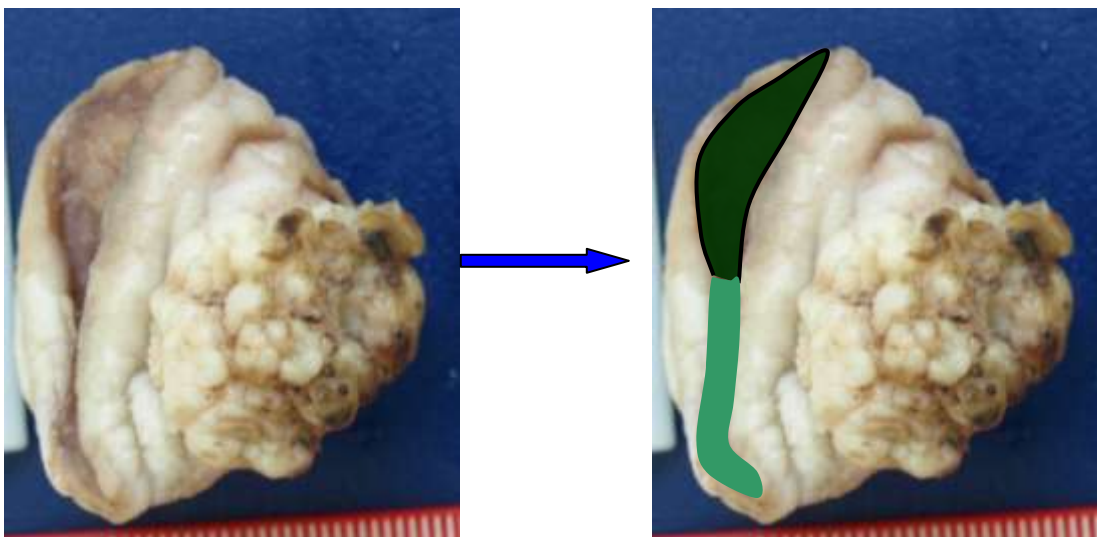
CUT-UP PROTOCOL – GLANSECTOMY

- I. Orientate the specimen: Look at the shaft resection margin and identify the corpora spongiosum with the urethra running through it – this is VENTRAL. Now orientate left and right. Either ink left green and right black or ventral green and dorsal black – BUT DICTATE WHICH YOU HAVE DONE.

1. Inferior (urethral opening inferior)
2. Corporal margin
3. Peripheral margin:
 - Dorsal
 - Ventral

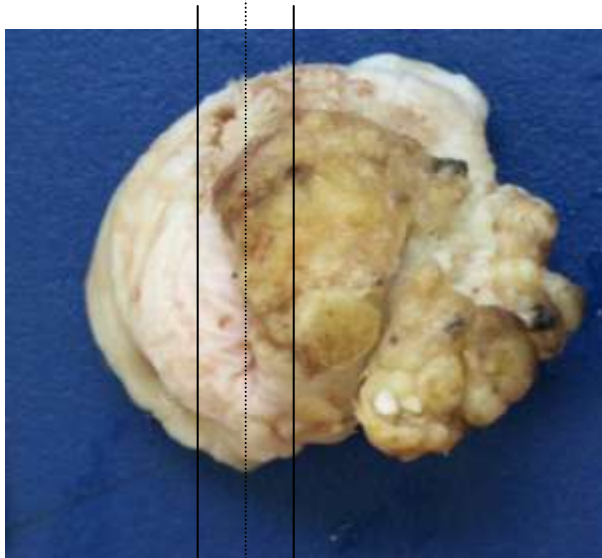


- II. Turn the specimen to face the resection margin and ink the corporal (deep) and peripheral resection margin (**dorsal black, ventral green**).



CUT-UP PROTOCOL – GLANSECTOMY

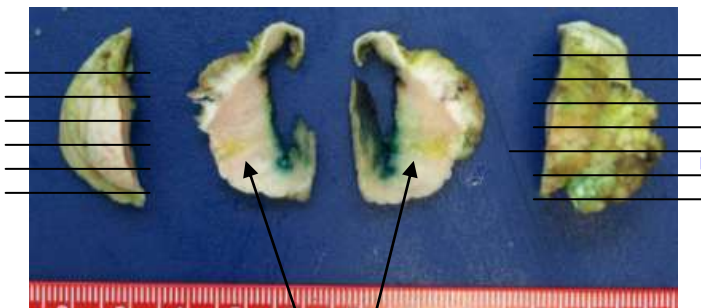
- III. Lay specimen, resection margin along the board, and take one sagittal slice through the urethra, then take two parallel sagittal slides to the right and left. Imbed these slides urethral side down.



Two sagittal slices taken by doing 3 sagittal slices first through the urethra.
Notice corporal and urethral margins dorsal black ventral green

Second slice right
First slice urethra
Third slice left

- IV. Make serial transverse slices of the left and right sections. Imbed the two sagittal slices urethral face down and take all the other slices. (you do not have to put the corners through as it is difficult to interpret).



Imbed these slices urethral side down

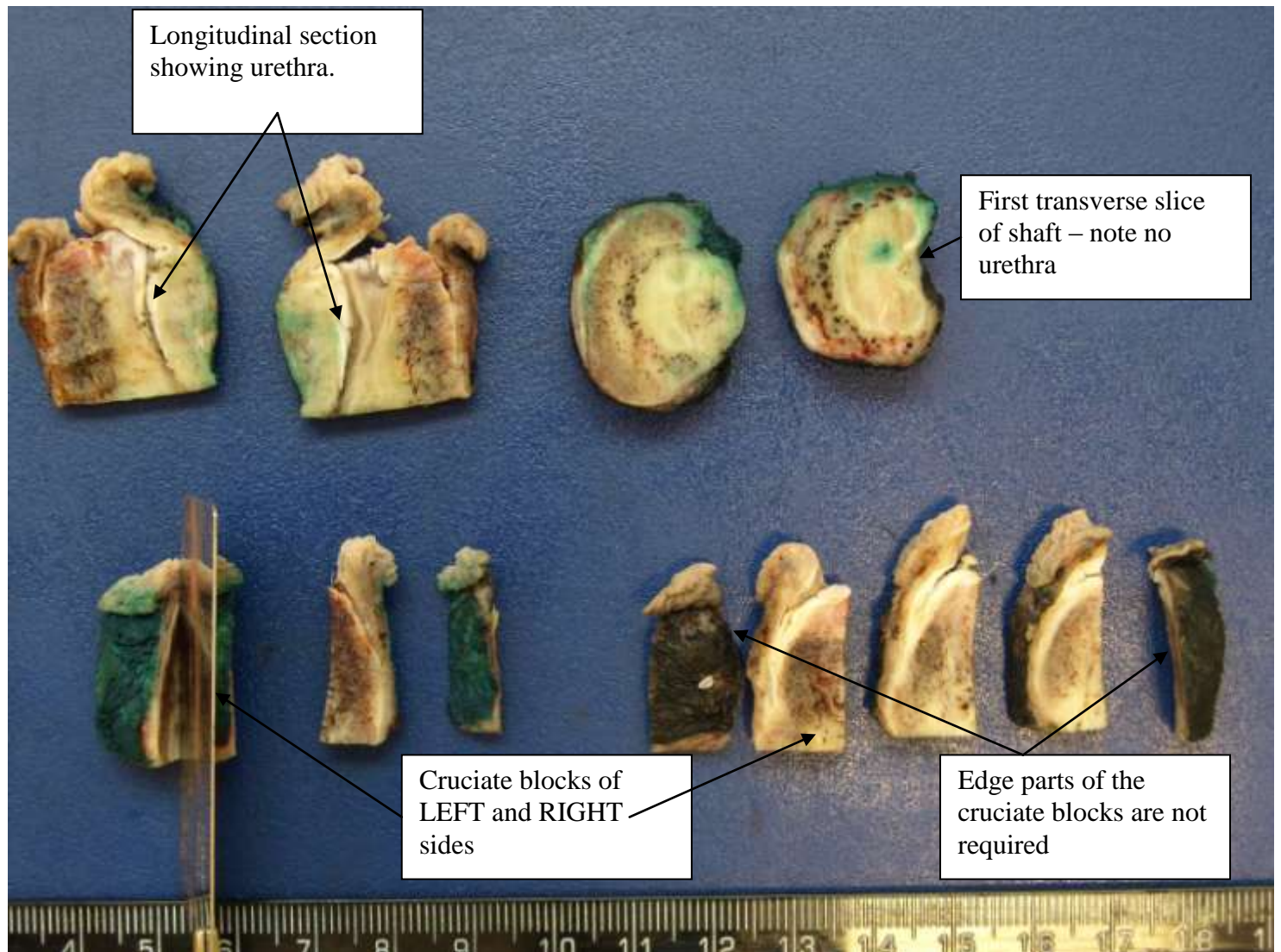


CUT-UP PROTOCOL FOR PARTIAL PENECTOMY

This is very similar to total penectomy but fewer transverse sections of the shaft are required. The urethra often retracts so it is necessary to take two transverse sections of the shaft before longitudinal blocks of the penis are taken. Once again cruciate blocks of the left and right sides are taken.

1. Orientate specimen.
2. Photograph and describe specimen
3. Ink left green and right black
4. Slice two transverse sections of shaft so that urethral margin is sampled. Embed these cut surface down BUT state this in macroscopic details. These can always be flipped if involved but it is important to get a urethral margin.
- 5 Hopefully the urethra can now be probed – slice along this dorsal/ventral so that you bisect penis longitudinally into left and right side.
- 6 Slice parallel to this slice on both sides (3mm thickness)– embed urethra down in big blocks.
7. The left and right side are sliced as cruciates and embedded.

The final specimen looks as per photograph:



CUT-UP PROTOCOL FOR TOTAL PENECTOMY

- Orientate and photograph
- Use corpus spongiosum as guide.
- Use left and right rather than dorsum and ventral.
- Sometimes you receive the urethra separately
- The skin resection margin is usually shorter
- Sometimes the urethral resection margin is shorter than the penectomy resection.
- DON'T USE SMALL BLOCKS

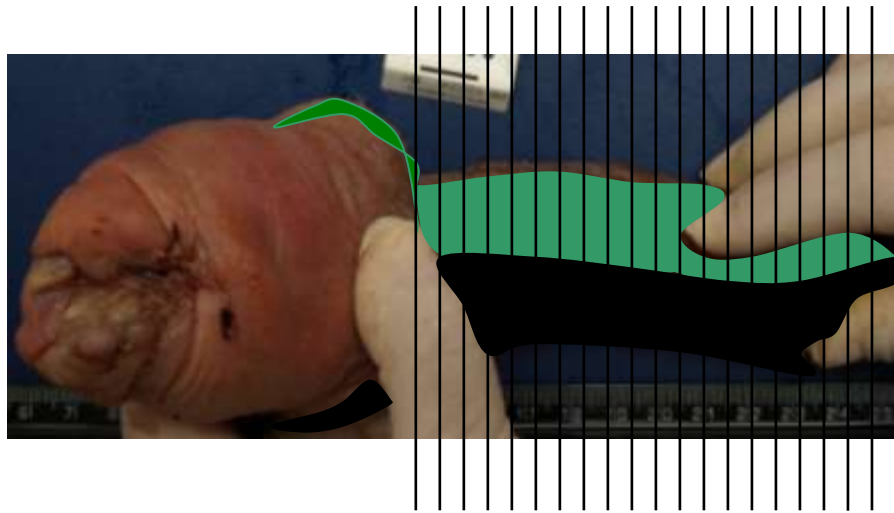
1- Orientate (use corpus spongiosum and urethra as a guide) and take photograph:



2- Ink the resection margin **right black left green,**



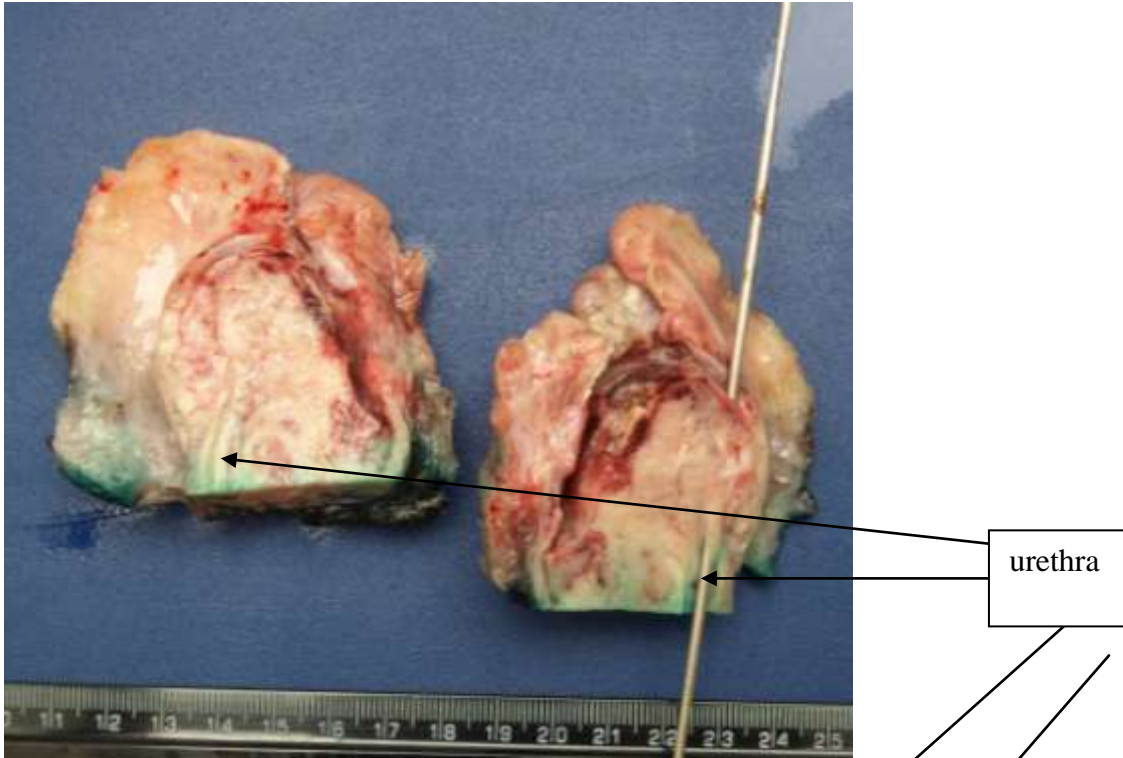
3- Serially slice the specimen in transverse sections until the length of the distal part fits into a large block, as demonstrated in the picture



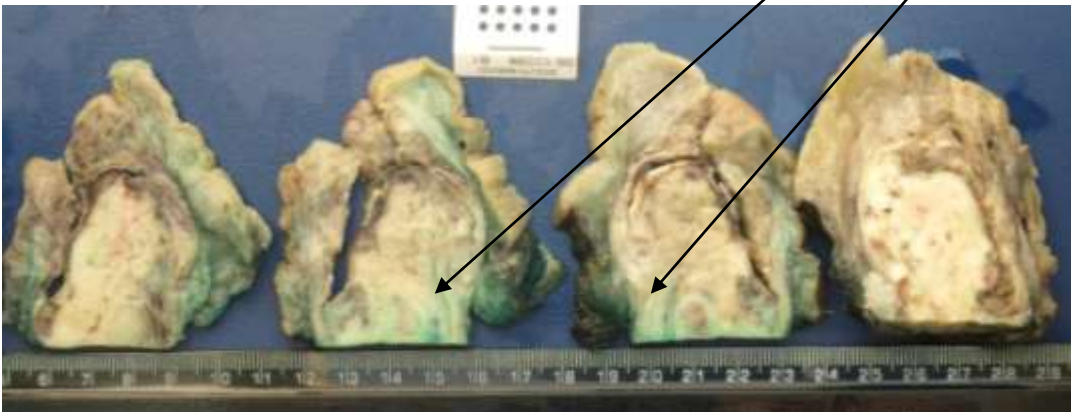
After taking the transverse sections (take a photograph). Dictate which cassette contains the proximal resection margin. If the urethral resection margin is shorter then dictate which slice contains the urethral resection margin. **Take these slices in large blocks.**

4- Take the proximal part of the specimen, Probe the urethra from proximal end and section along longitudinally, then take a slice at each side, left and right.

- First slice through the urethra.



- Take to parallel slices to the urethral slice, thus having a total of 4 slices.



5-

- Embed the first two slices urethral side down in large blocks.
- Then take VERTICAL cruciate sections of the two lateral pieces.
- The edge parts of the cruciate blocks are difficult to interpret microscopically and these don't need to be embedded.

FURTHER

