

Expert panel observations

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Gloucester and Cheltenham, UK



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Three big issues in BCSP pathology

- serrated pathology & what do we do about it
 - expected
- polyp cancers (pT1 disease) & what we do about it
 - expected
- the large adenomatous polyp of the sigmoid colon
 - not expected (certainly not the amount nor the diagnostic difficulties)



Three big issues in BCSP pathology

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- polyp cancers (pT1 disease) & what we do about it
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- the large adenomatous polyp of the sigmoid colon
 - expected but not the amount nor the diagnostic difficulties



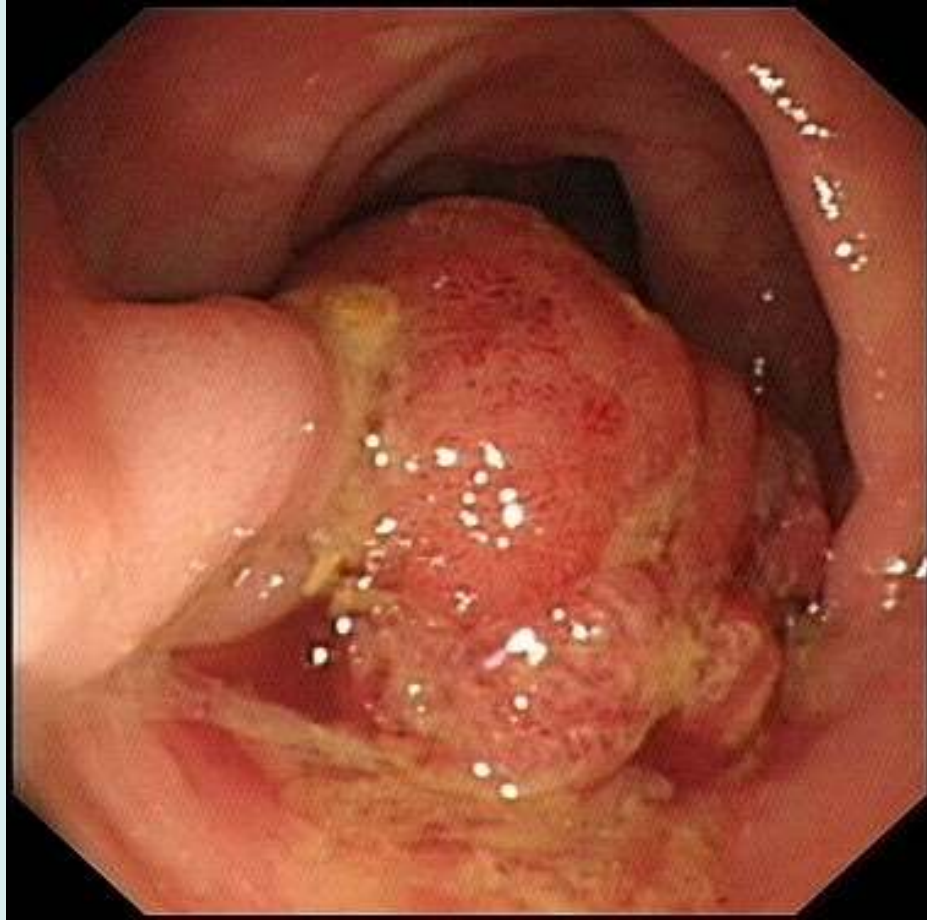
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Epithelial misplacement in intestinal adenomatous polyps

- there are clues to the appropriate diagnosis
 - site and size
 - haemosiderin and accompaniment by lamina propria
 - cytology similar to surface neoplasm
- large sigmoid colonic adenomatous polyps with such changes are selected into BCSP (they bleed)





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The question

Is this cancer in the submucosa or is it the benign phenomenon of epithelial misplacement?



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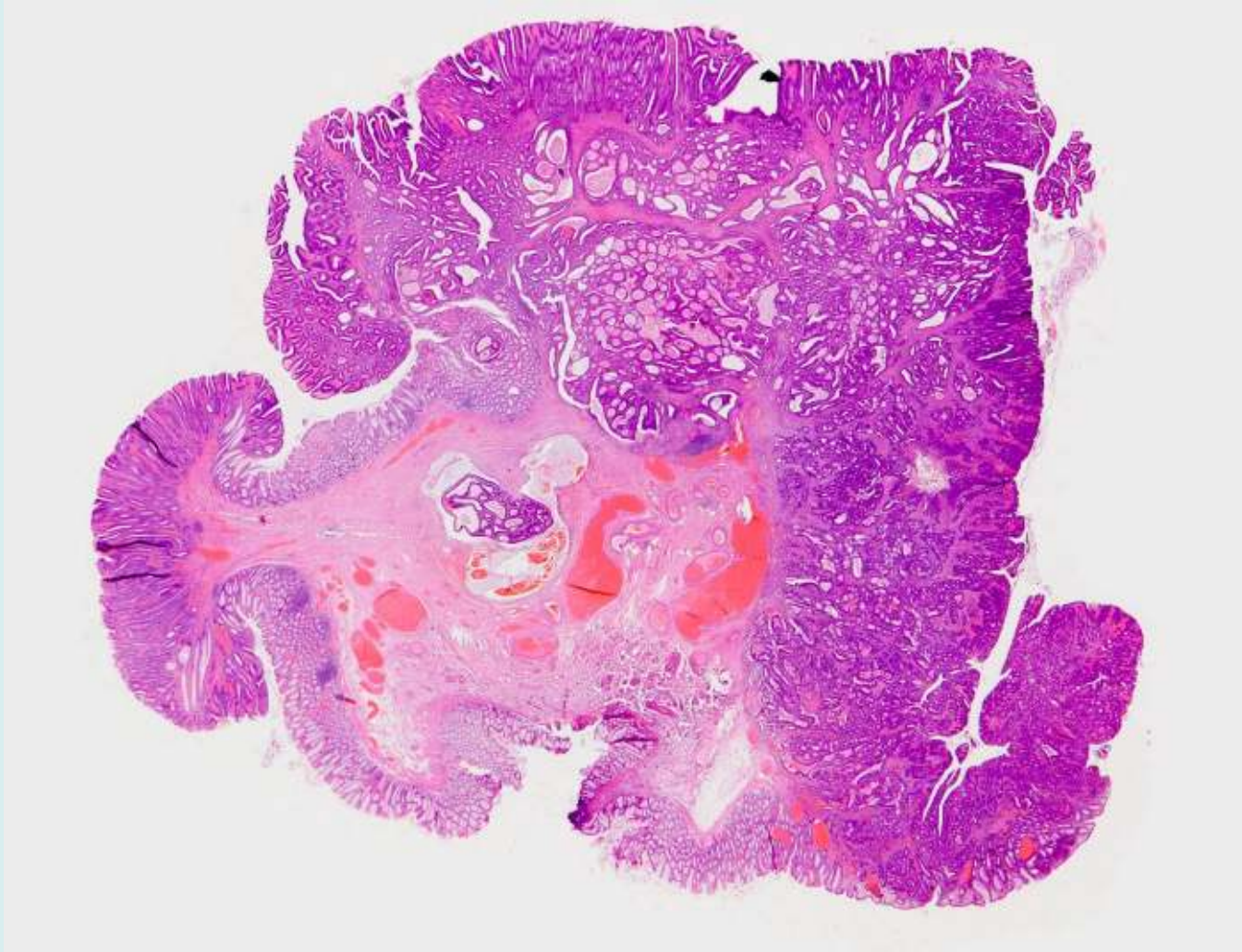
Epithelial misplacement in adenomas

- 85% in sigmoid colon
- unusual in rectum (unless there has been previous meddling)
- same epithelium as surface, accompanied by lamina propria, haemosiderin deposition
- what about misplaced epithelium at the diathermy margin?
- intense pathological mimicry of invasive cancer

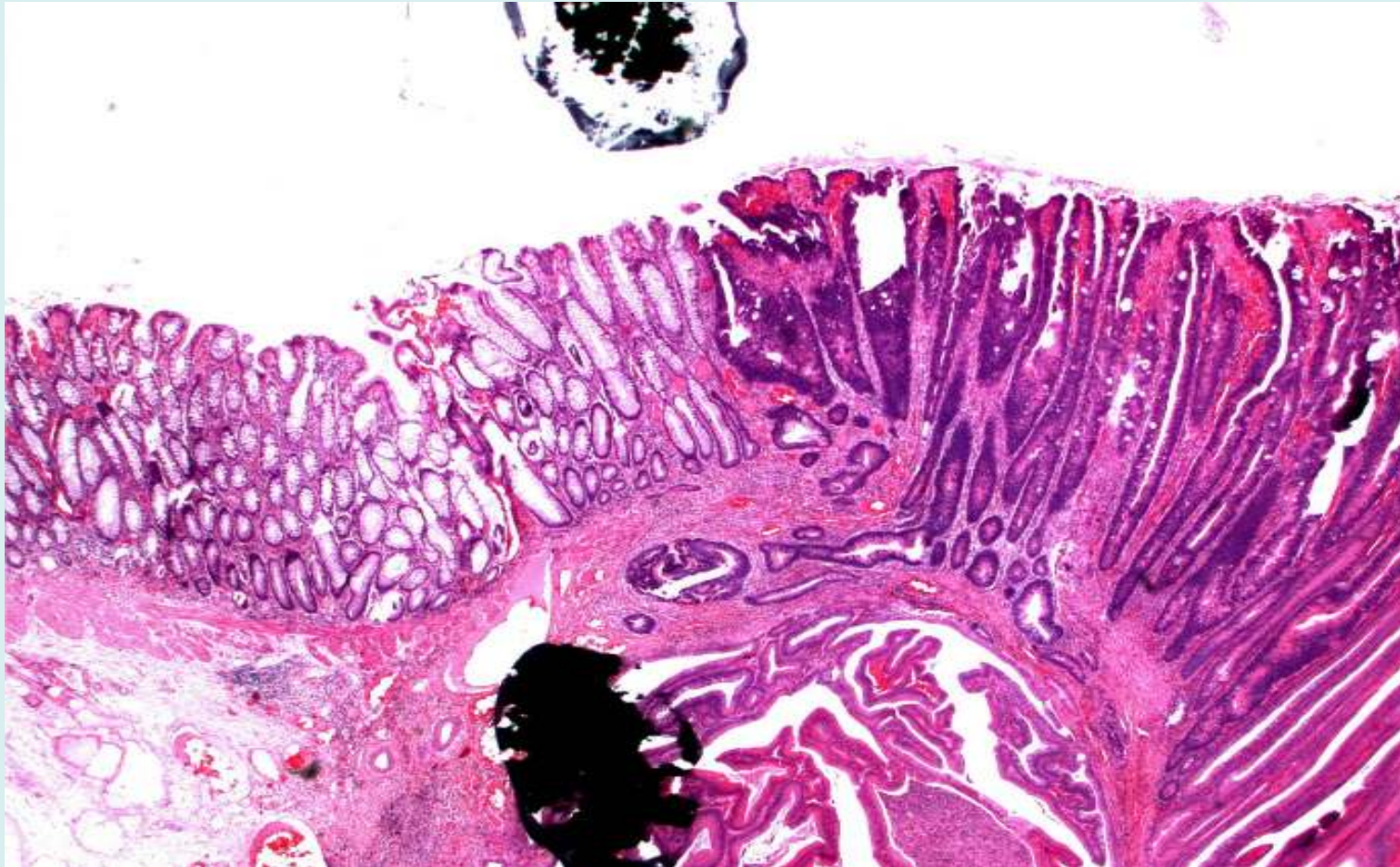


Epithelial misplacement vs invasive carcinoma

There is a very important adage in pathology:
why make two diagnoses when one will do?



Epithelial misplacement - continuity

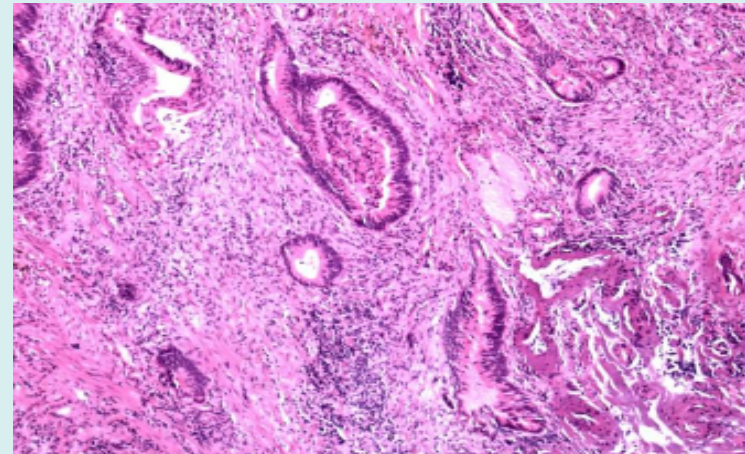
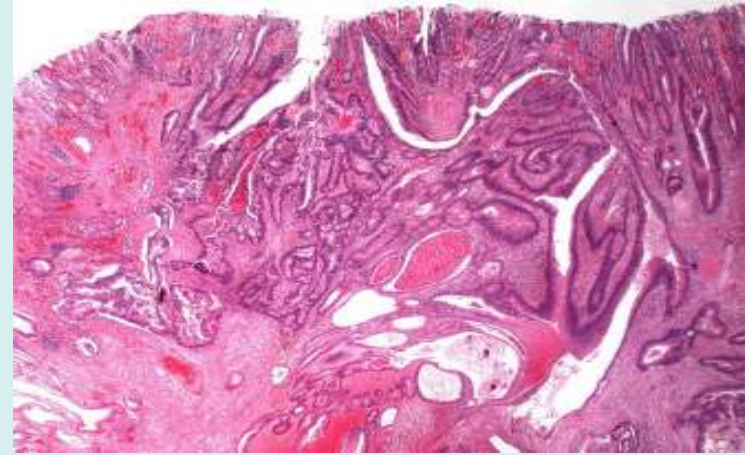


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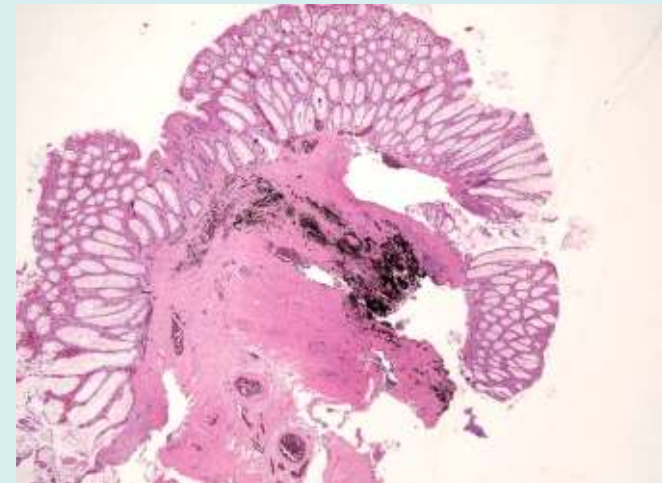
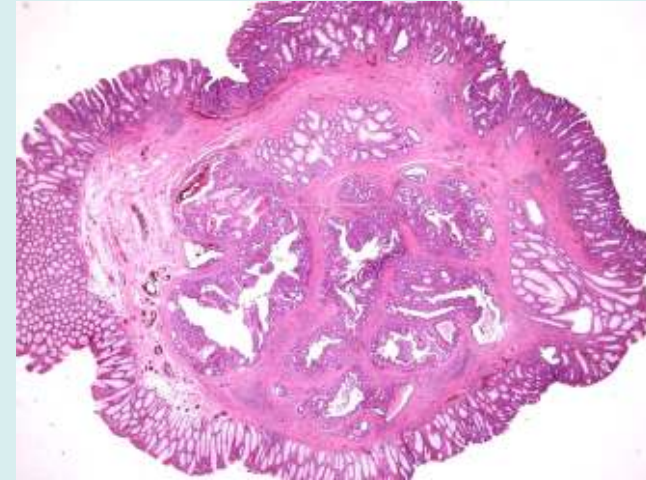
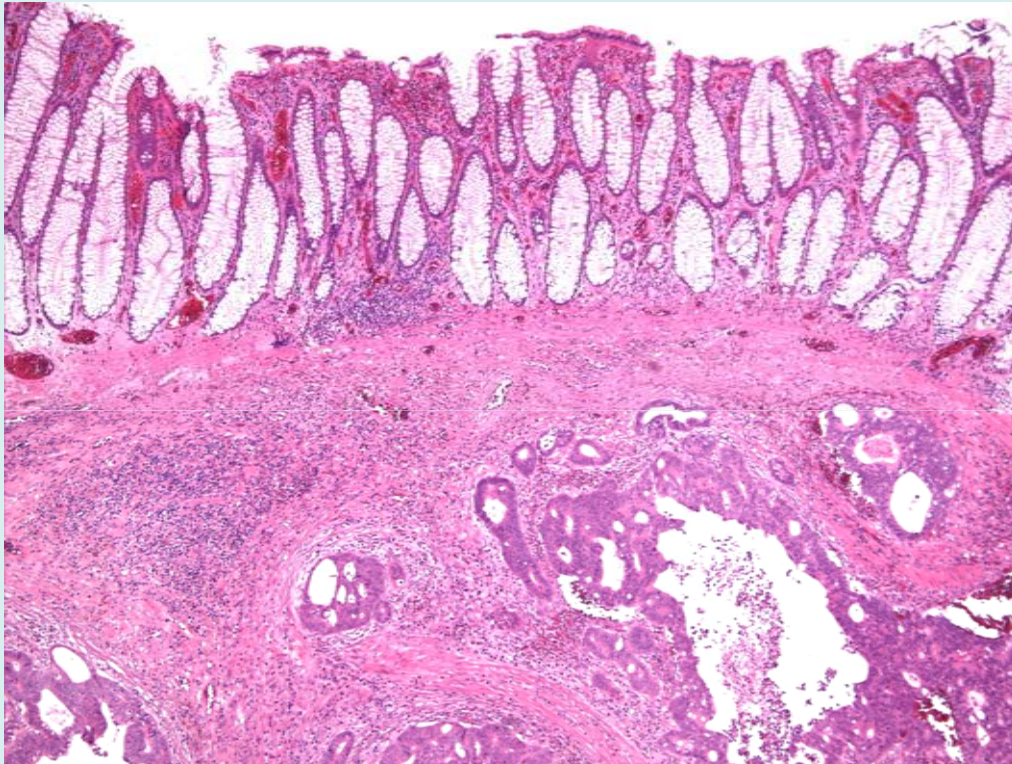


67M. BCSP. Sigmoid colonic polyp. Diathermy artefact disconcerts...

- the changes of epithelial misplacement can be made to look much worse by diathermy artefact
- and it's at that margin



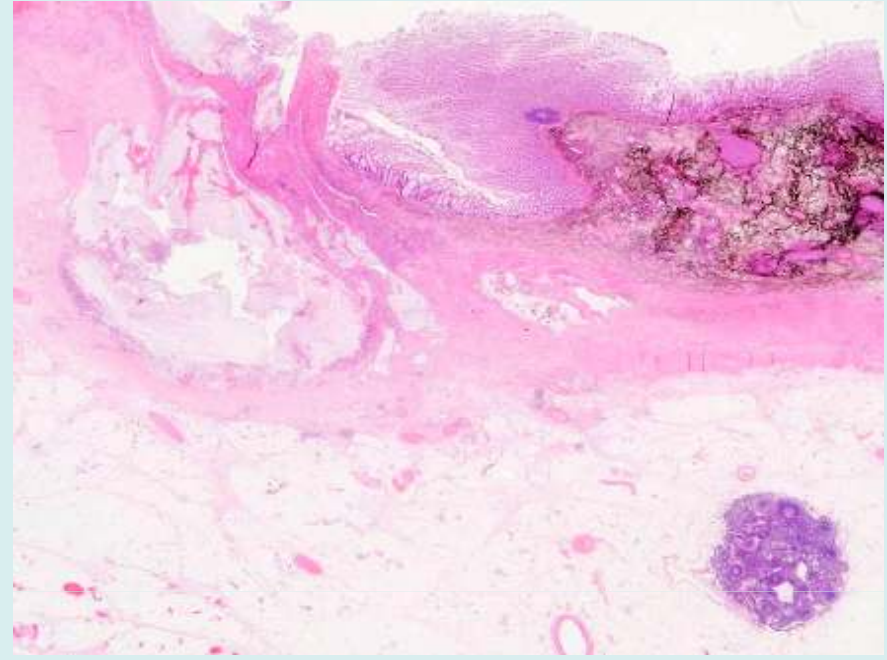
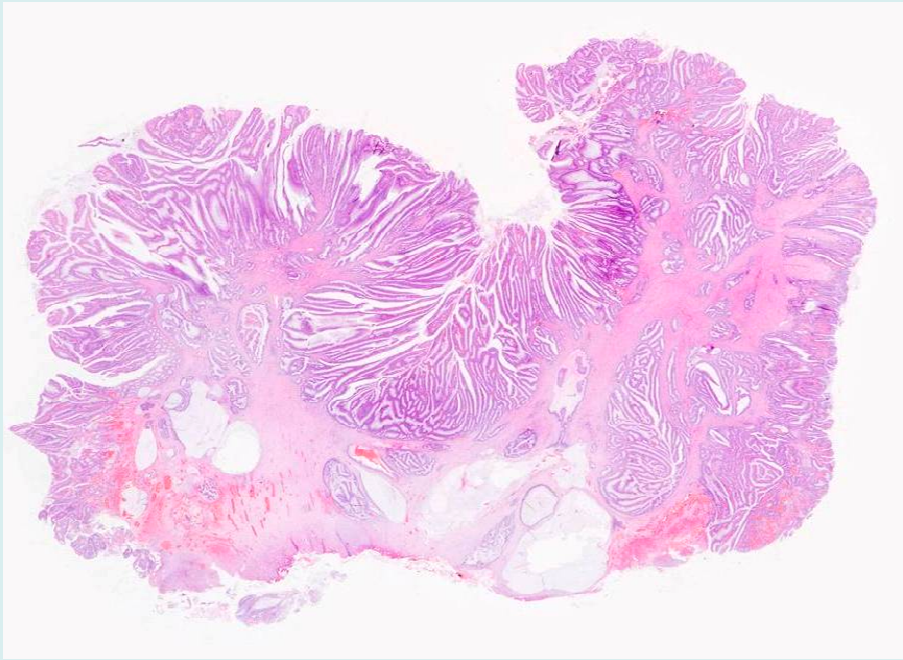
67M. BCSP. Sigmoid polyp. Previous biopsies and now polypectomy - it's the company it keeps



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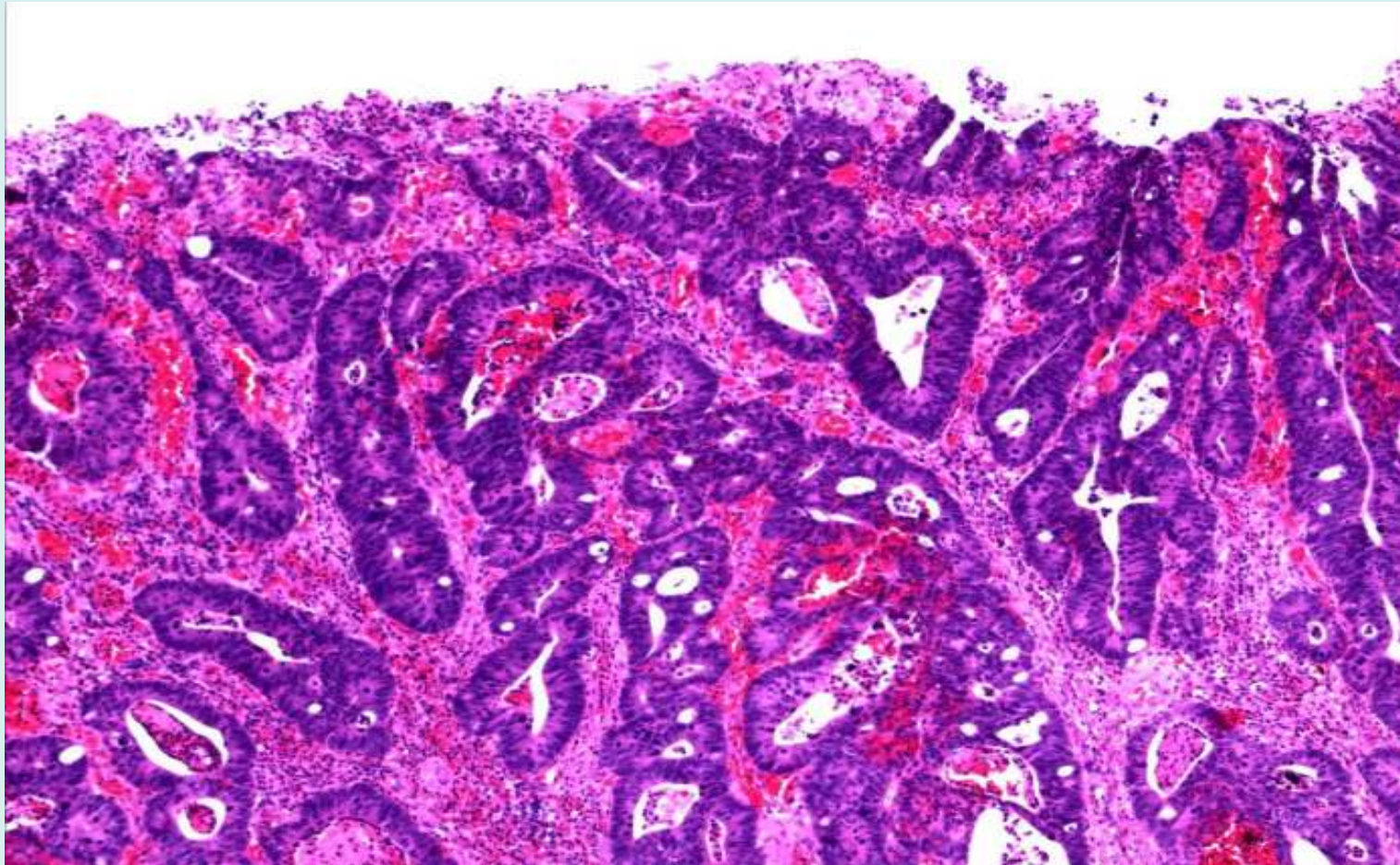


BCSP polyps - we need to keep our minds open....



- 62M. Sigmoid colonic polyp - difficult endoscopic resection (left) - site tattooed
- subsequent perforation and resection (left)
- do we allow epithelial misplacement in the muscularis propria? Yes - we have now seen it several times

'Enhancement' of dysplastic change with inflammation and superficial ulceration



Review mechanisms for difficult BCSP/BSW cases

BCSP/BSW local reporting pathologist



Review by local/network BCSP/BSW GI pathologists



Review by regional lead for BCSP/BSW Pathology



National Expert Board



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National Expert Board

- three pathologists - you need a majority for this highly subjective and difficult assessment
- funded by BCSP
- organised by NAS
- cases are getting more and more difficult...
- but we are learning...



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Original pathologist(s)	Expert Board Pathologist A	Expert Board Pathologist B	Expert Board Pathologist C
Mixed	Cancer	Cancer	Cancer
Benign	Benign	Benign	Benign
Cancer	Cancer	Cancer	Cancer
Equivocal	Cancer	Cancer	Cancer
Cancer	Benign	Benign	Benign
Equivocal	Cancer	Cancer	Cancer
Benign	Benign	Benign	Benign
Mixed	Benign	Benign	Benign
Cancer	Benign	Benign	Benign
Benign	Cancer	Cancer	Cancer
Equivocal	Cancer	Cancer	Cancer
Equivocal	Cancer	Cancer	Cancer
Equivocal	Cancer	Benign	Cancer
Benign	Benign	Benign	Benign
Cancer	Benign	Equivocal	Equivocal
Cancer	Benign	Benign	Benign
Equivocal	Benign	Benign	Benign
Equivocal	Benign	Equivocal	Benign
Cancer	Benign	Equivocal	Suspicious

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Cancer	Benign	Benign	Benign
Equivocal	Cancer	Cancer	Cancer
Benign	Benign	Benign	Benign
Mixed	Benign	Benign	Benign
Cancer	Benign	Benign	Benign
Benign	Cancer	Cancer	Cancer
Equivocal	Cancer	Cancer	Cancer
Equivocal	Cancer	Cancer	Cancer
Equivocal	Cancer	Benign	Cancer
Benign	Benign	Benign	Benign
Cancer	Benign	Equivocal	Equivocal
Cancer	Benign	Benign	Benign
Equivocal	Benign	Benign	Benign
Equivocal	Benign	Equivocal	Benign
Cancer	Benign	Equivocal	Suspicious

What helps.....

- lamina propria accompaniment
- haemosiderin
- mucus lakes



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What helps.....

- site: 87% in SC. Elsewhere if previous meddling. DC and other parts occasionally: rectum very rare unless meddling
- continuity between surface component and submucosal component (we live in a 3D world...)
- similar cytology and architecture
- muscular proliferation and mucosal prolapse changes
- evidence of acute necrosis



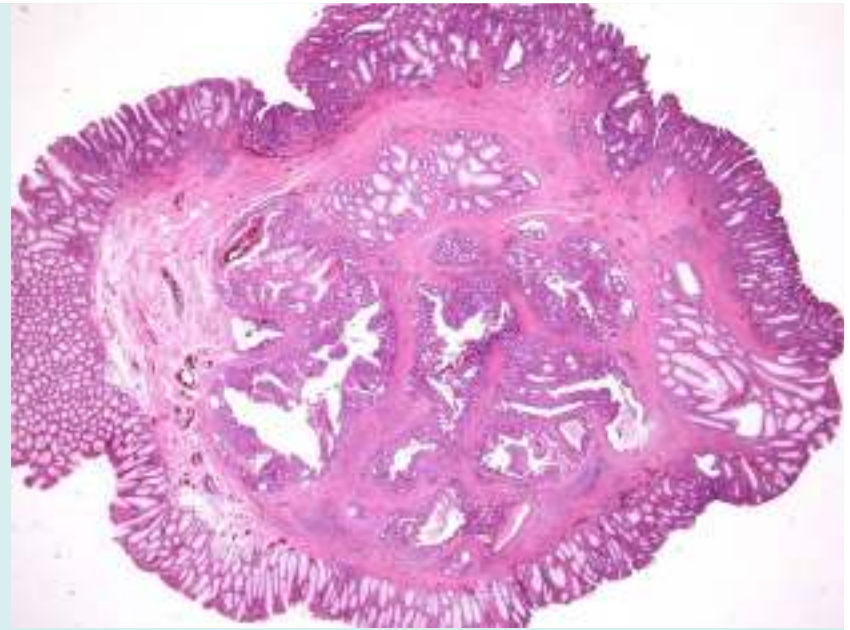
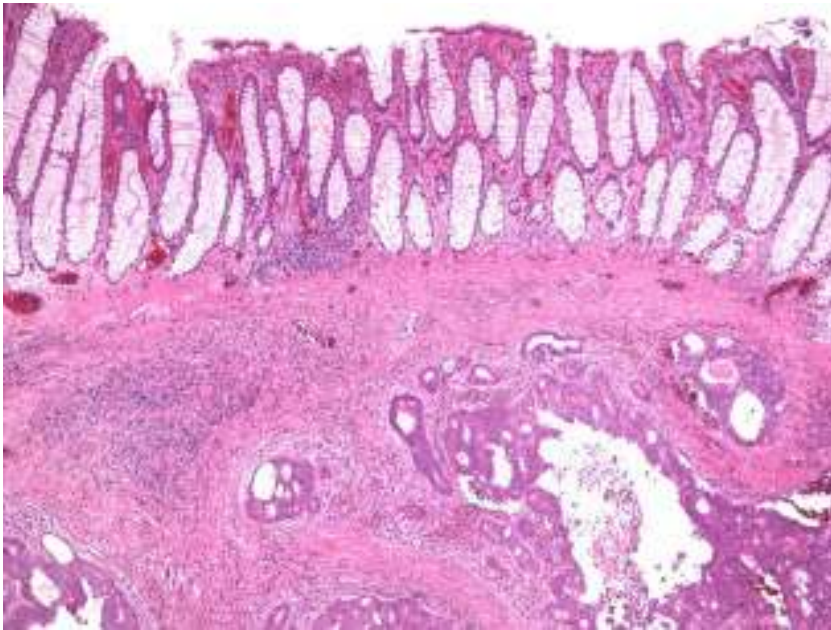
What helps.....

- why make two diagnoses? - if there is classical misplacement in one area.....
- isolated glands
- budding
- desmoplastic reaction
- true vascular invasion (!)

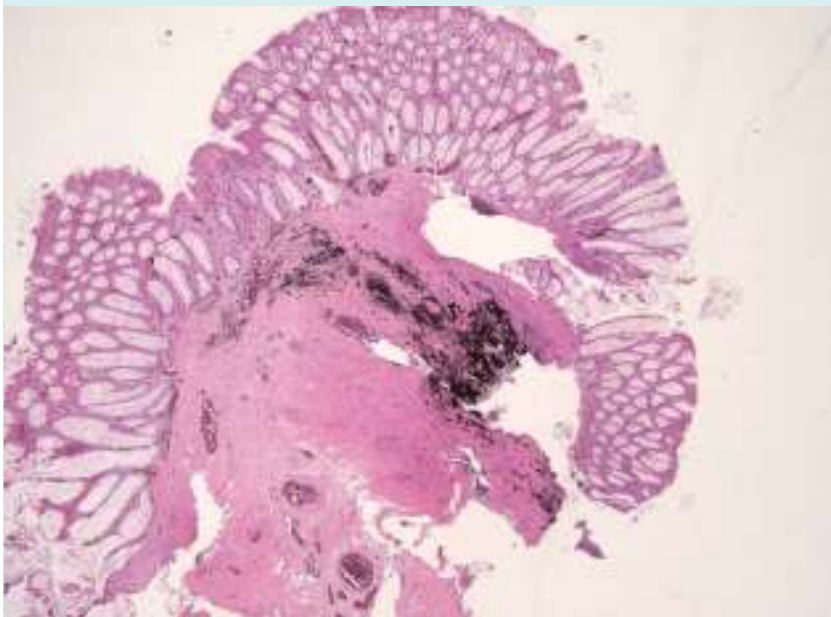


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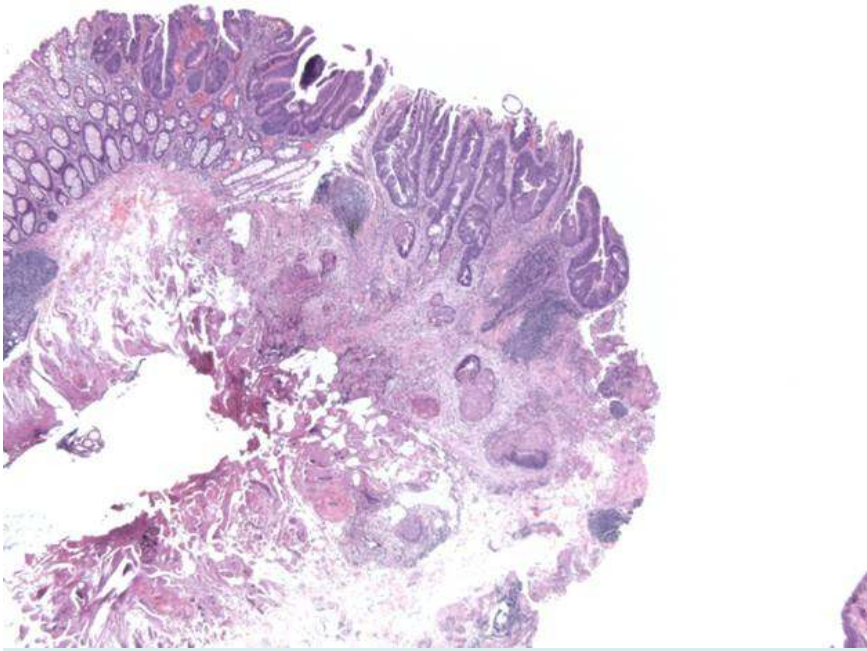


Cancer		Epithelial misplacement	Epithelial misplacement	Epithelial misplacement
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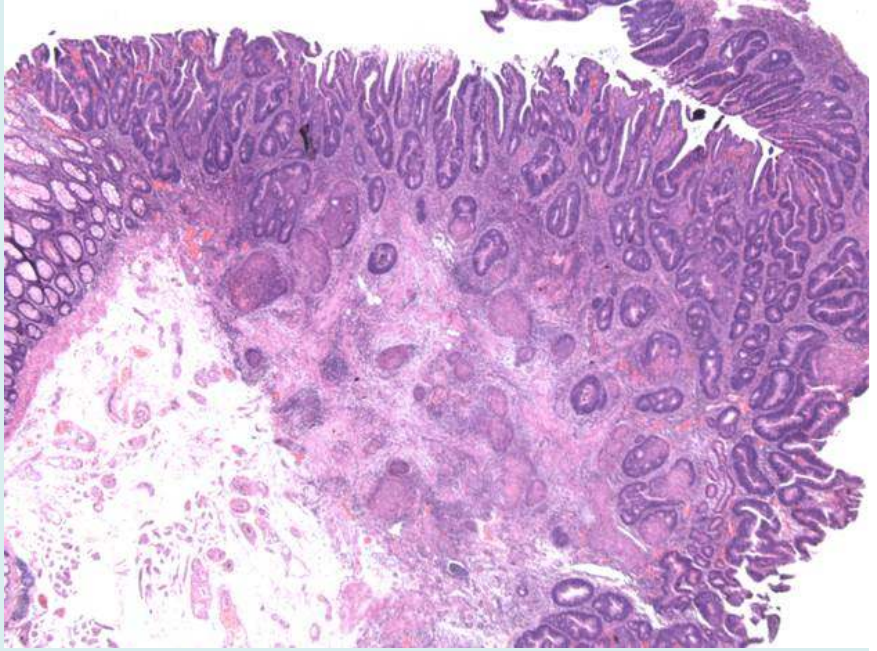
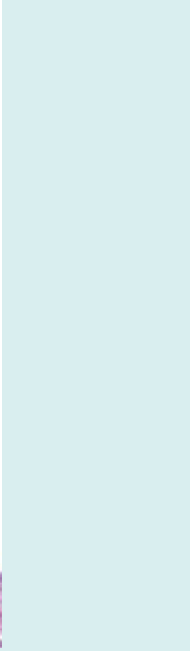


Misplacement of high grade
dysplastic & non-neoplastic
epithelium

Previous biopsies and tattooing



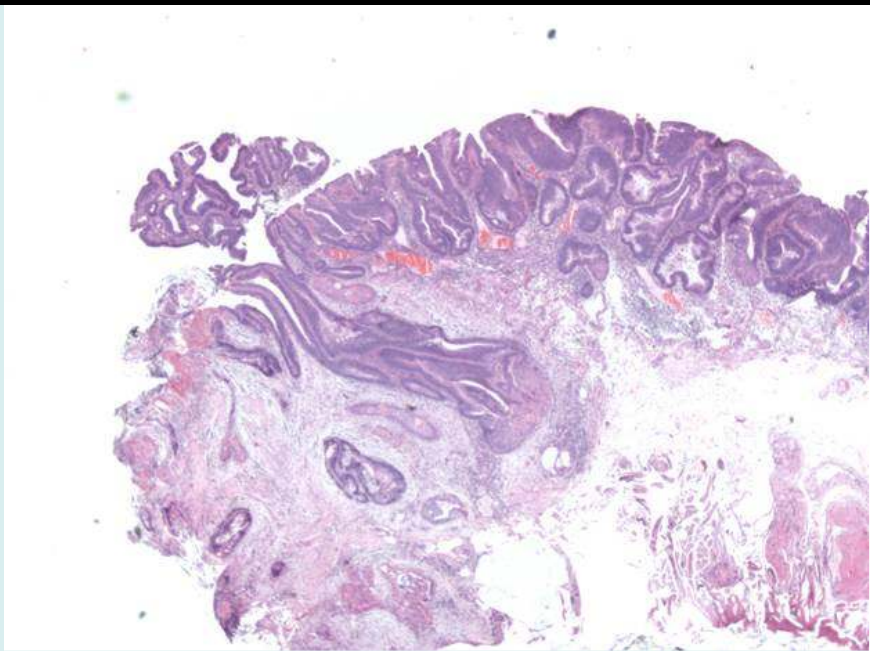
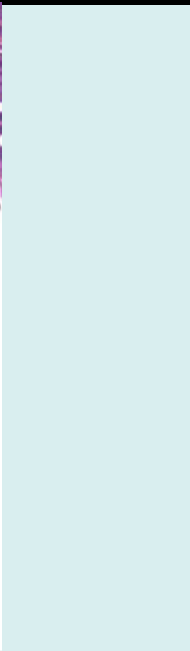
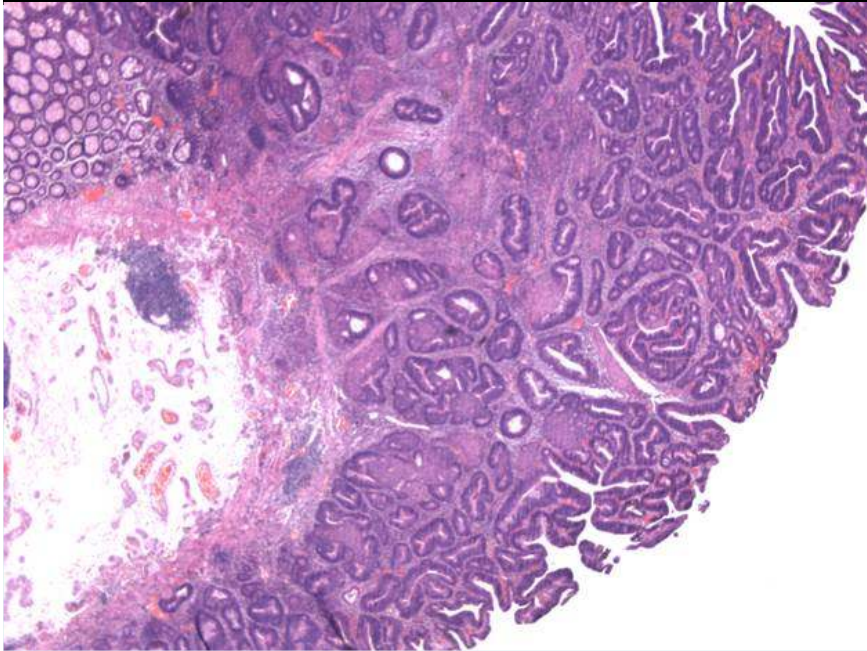
**Epithelial
misplacement**

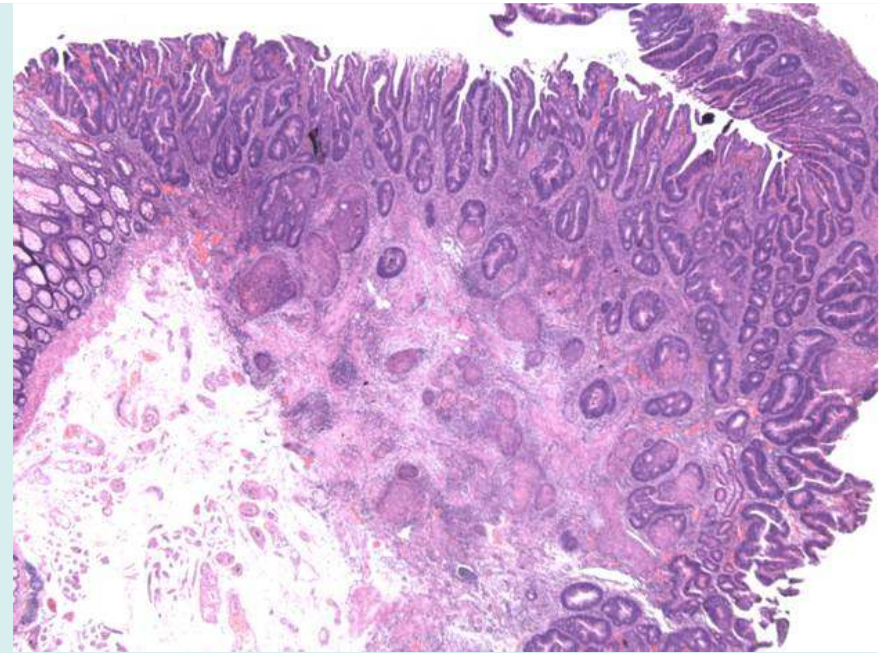
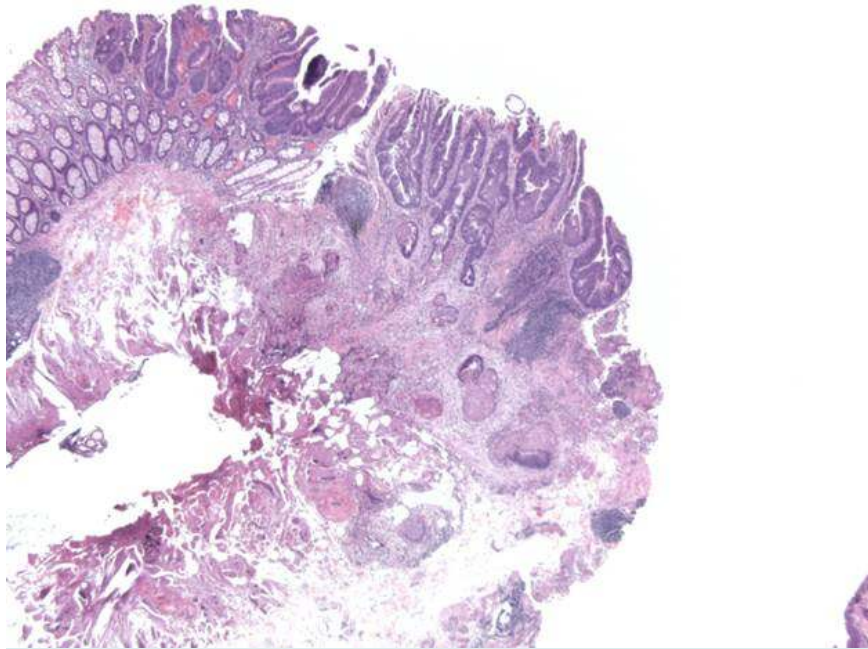


**Epithelial
misplacement**

Equivocal

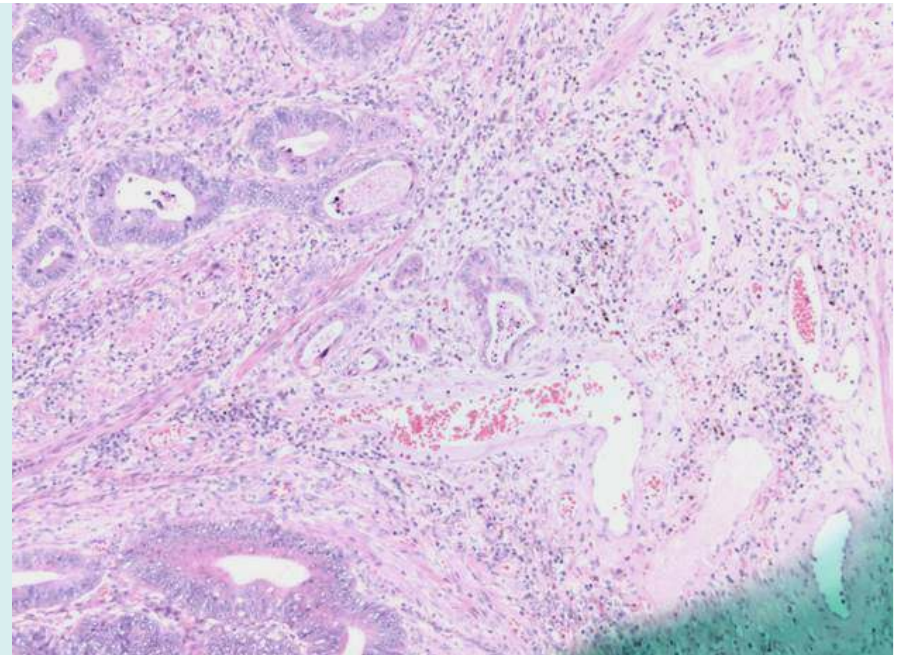
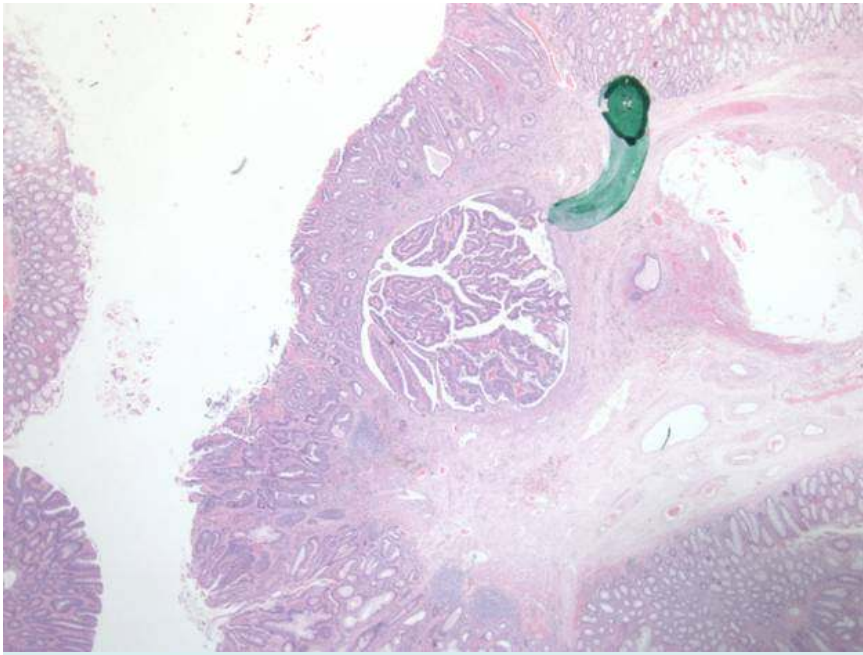
**Epithelial
misplacement**





Descending colonic polyp
Previous attempted removal

Additional difficulty of morular change



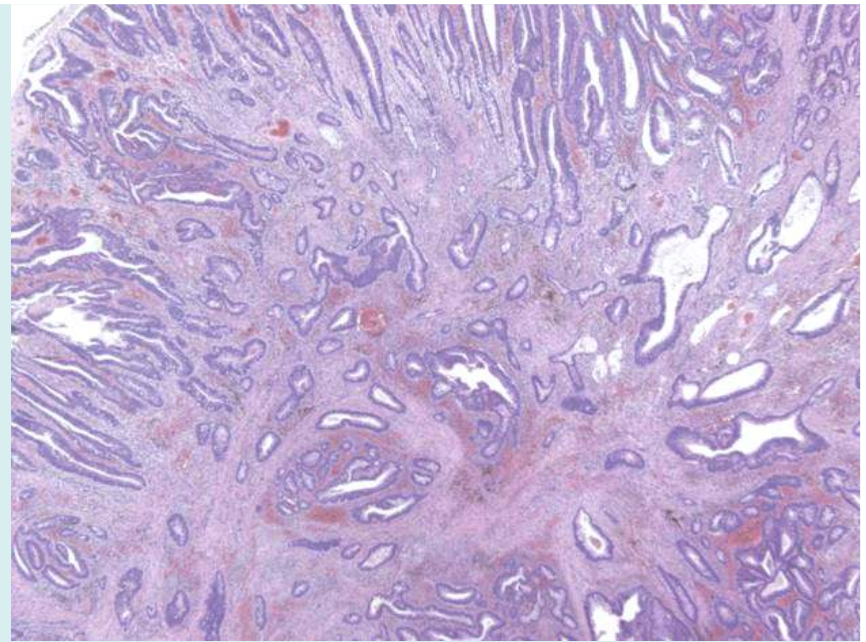
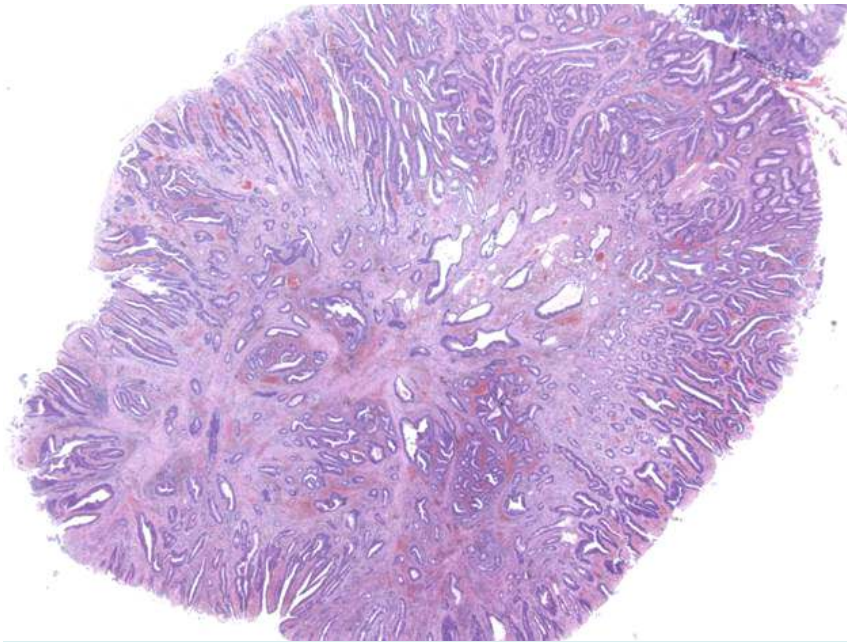
Cancer		Both: cancer and EM	Both: cancer and EM	Both: cancer and EM
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morphology different
definite desmoplastic reaction
definitely submucosal

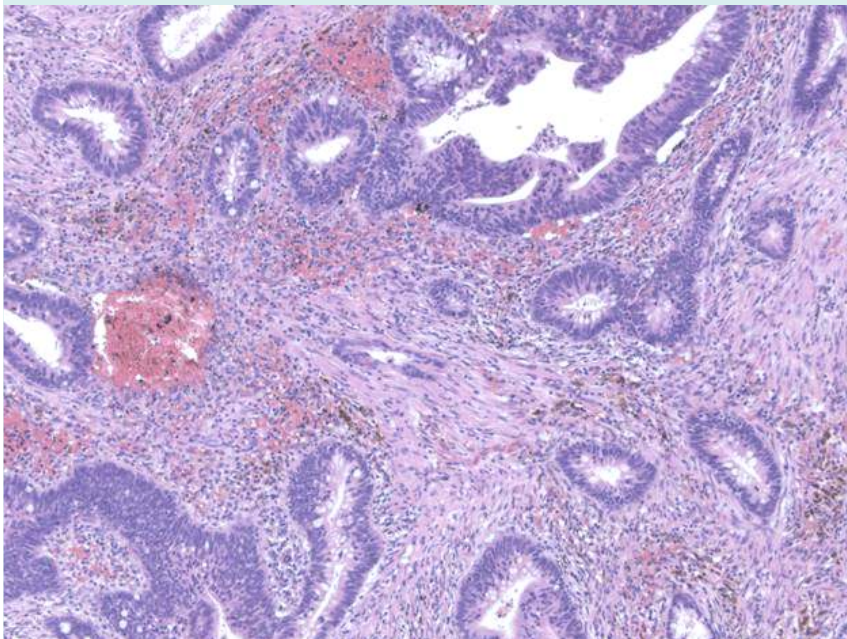


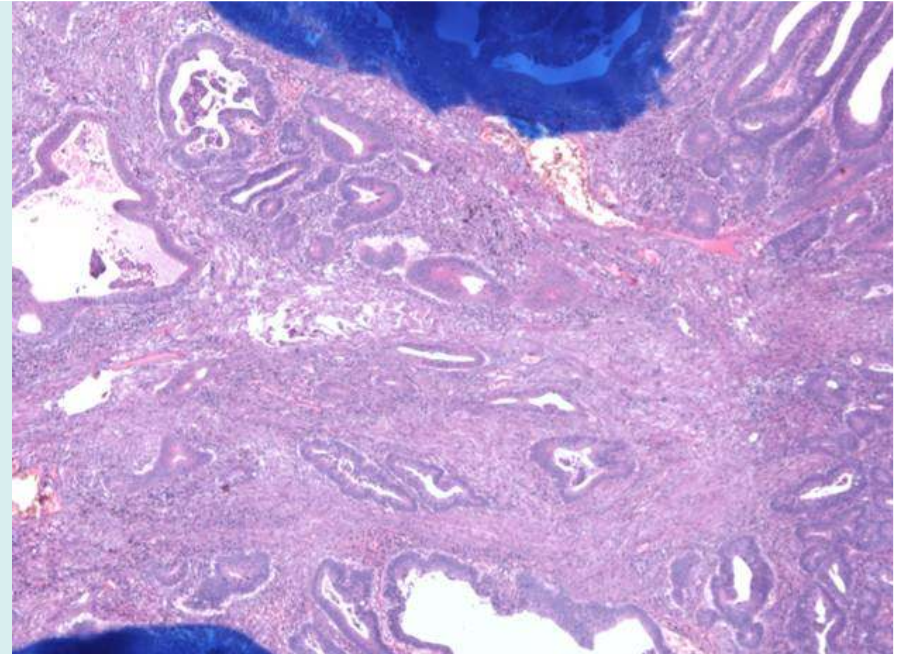
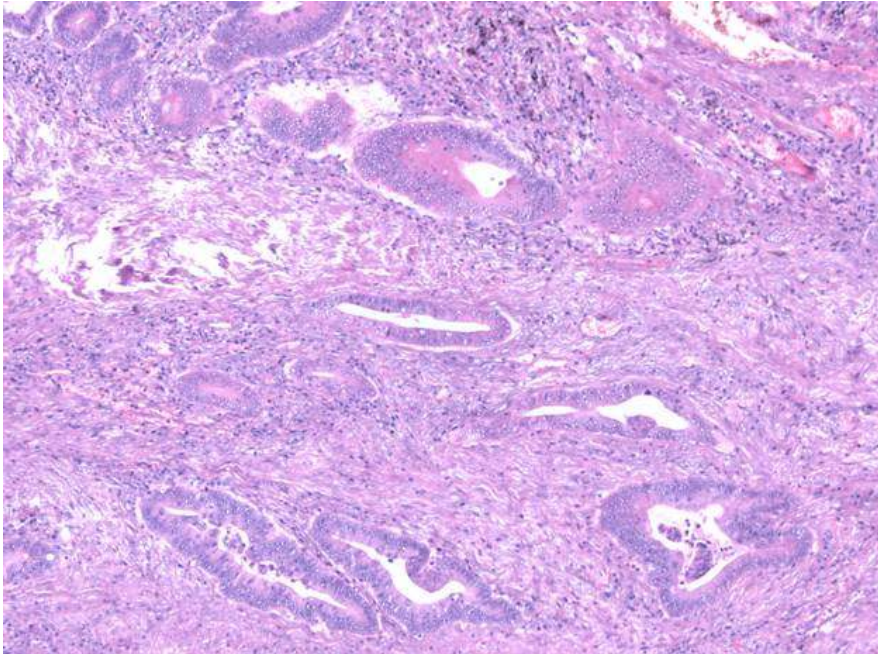
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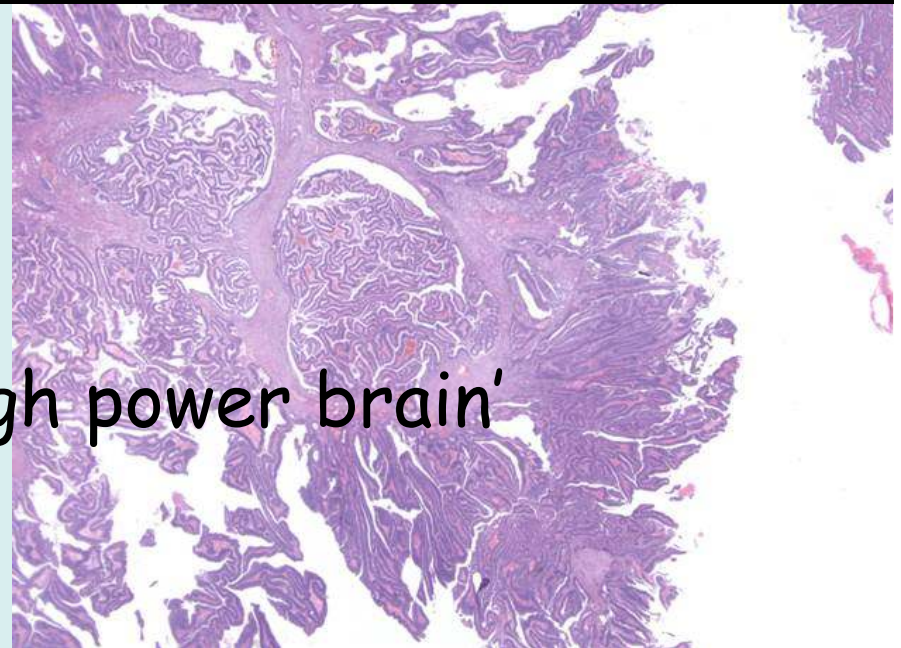
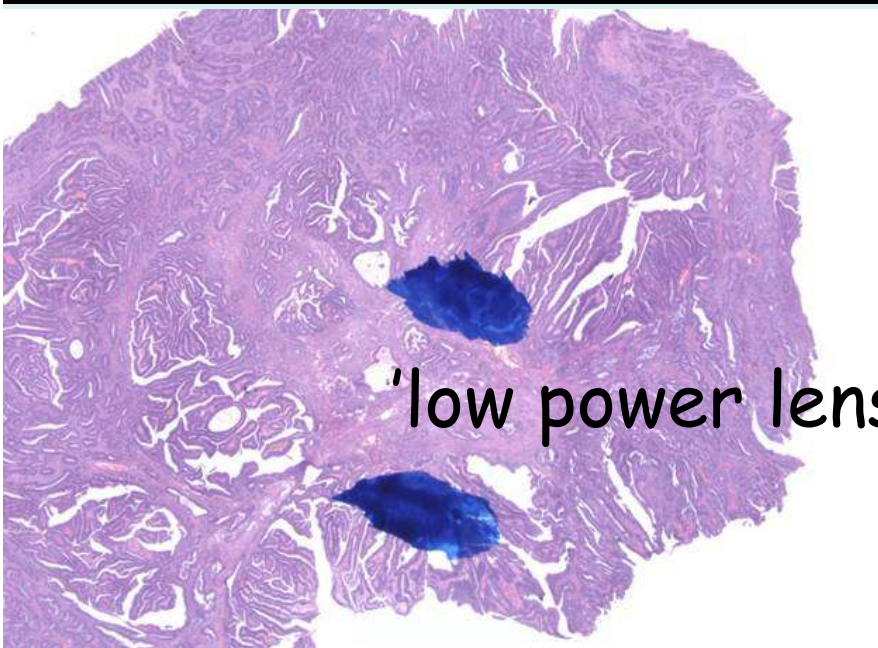


Variable (5 GI pathologists)		Cancer but very difficult	Equivocal	Equivocal
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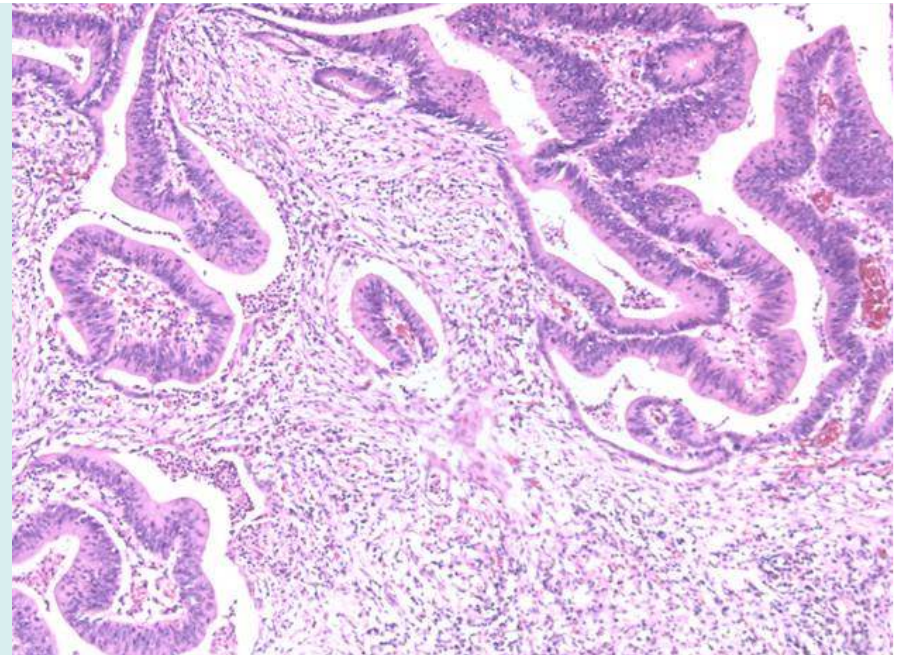
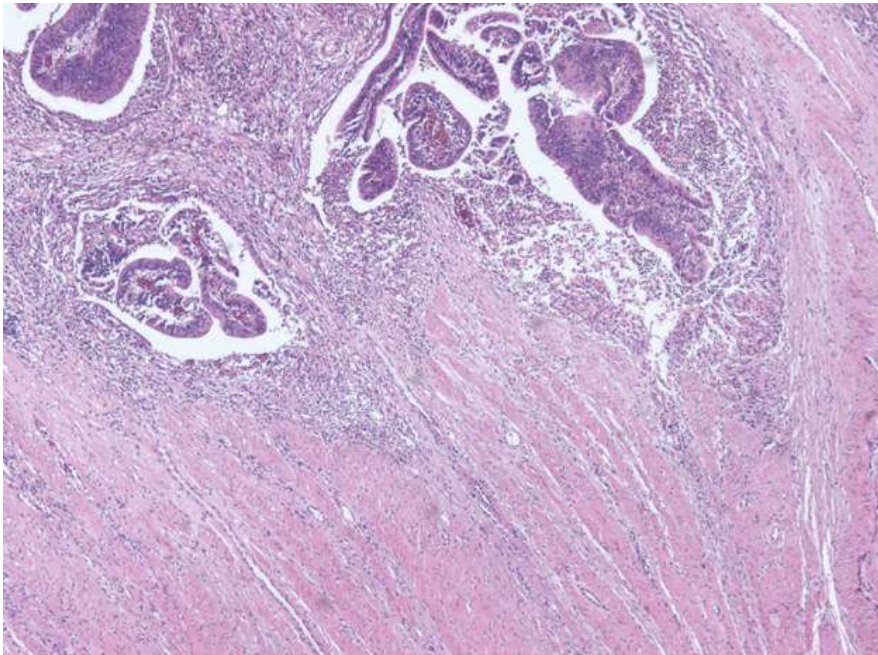




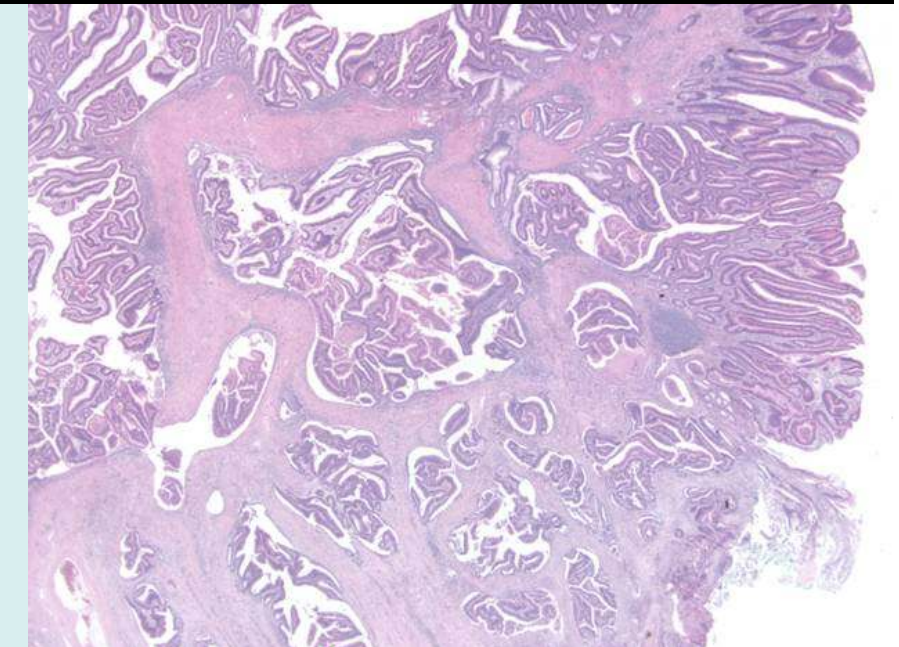
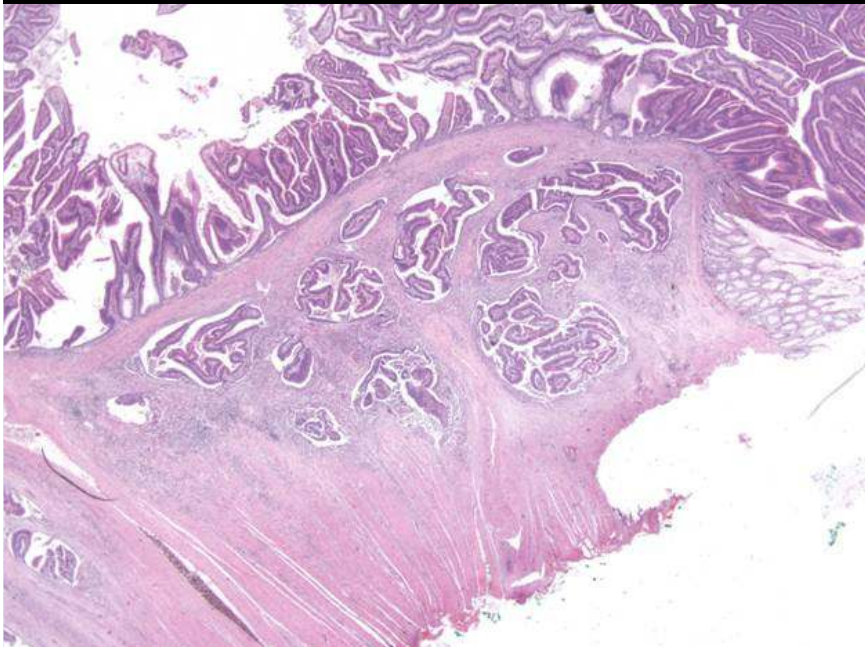
Cancer		Epithelial misplacement	Epithelial misplacement	Epithelial misplacement
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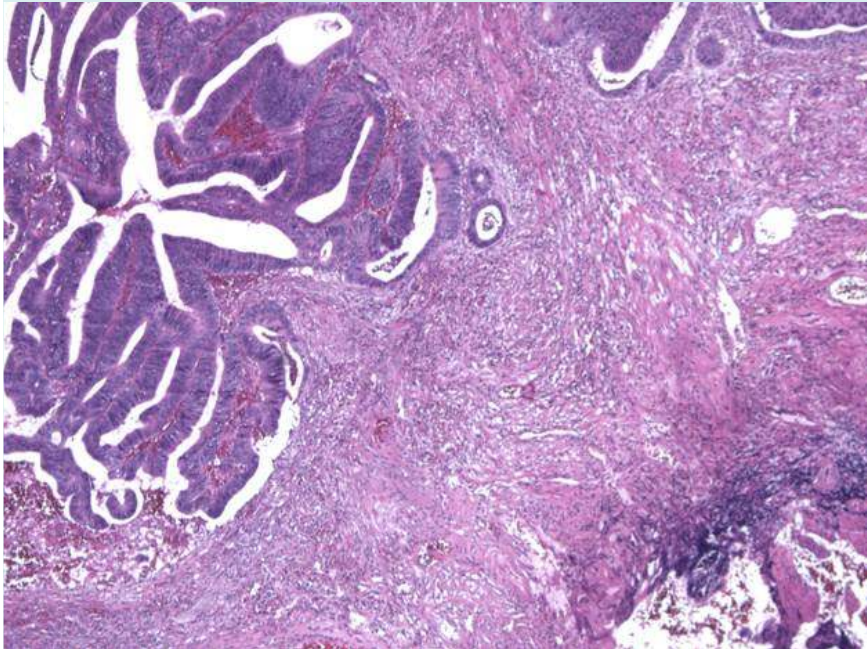
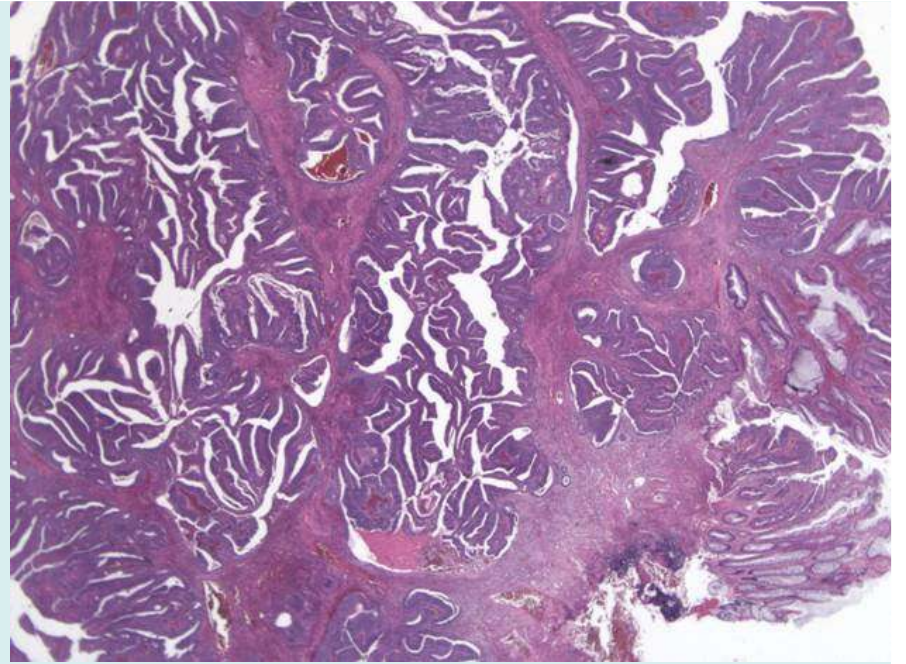
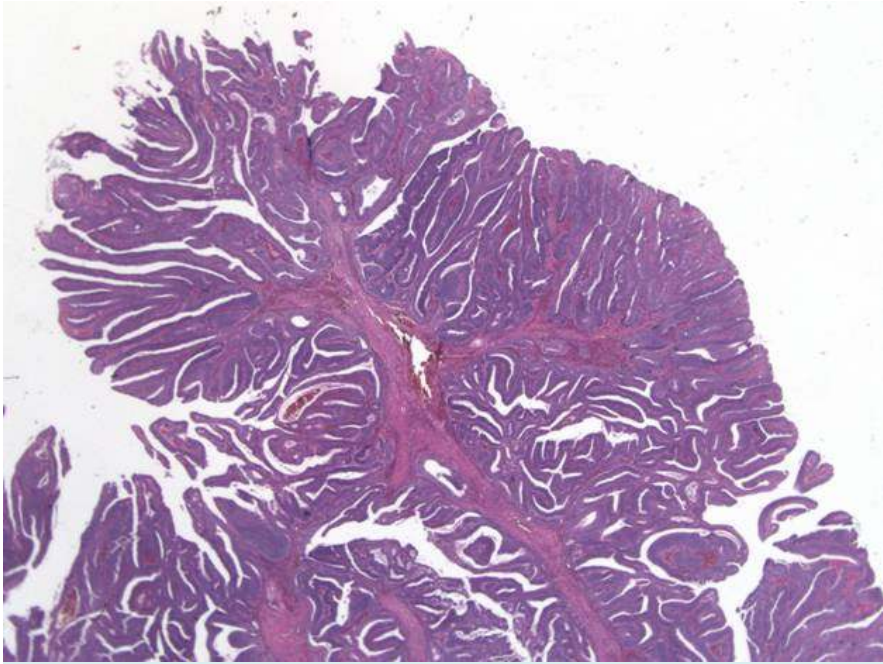


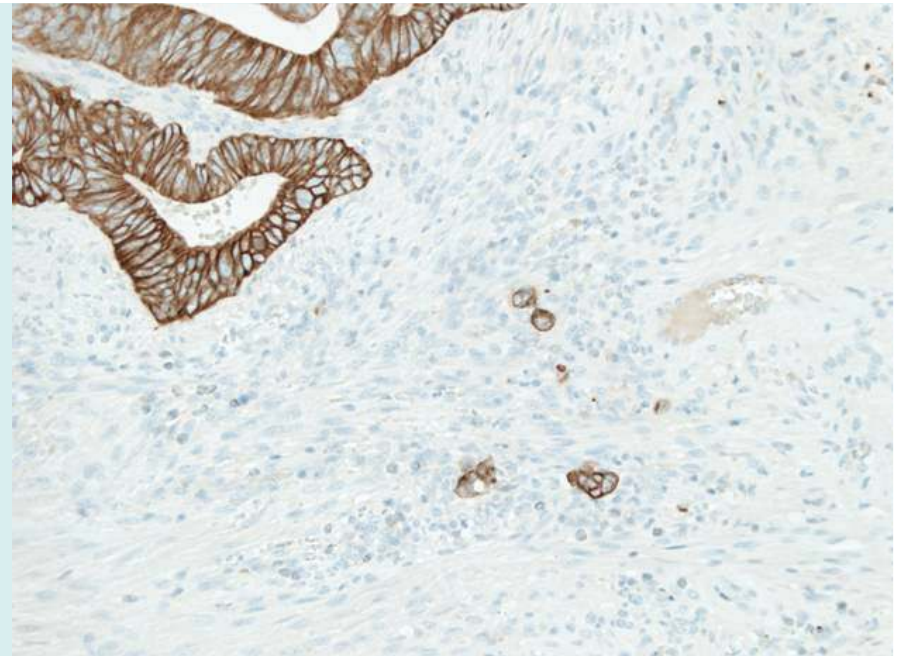
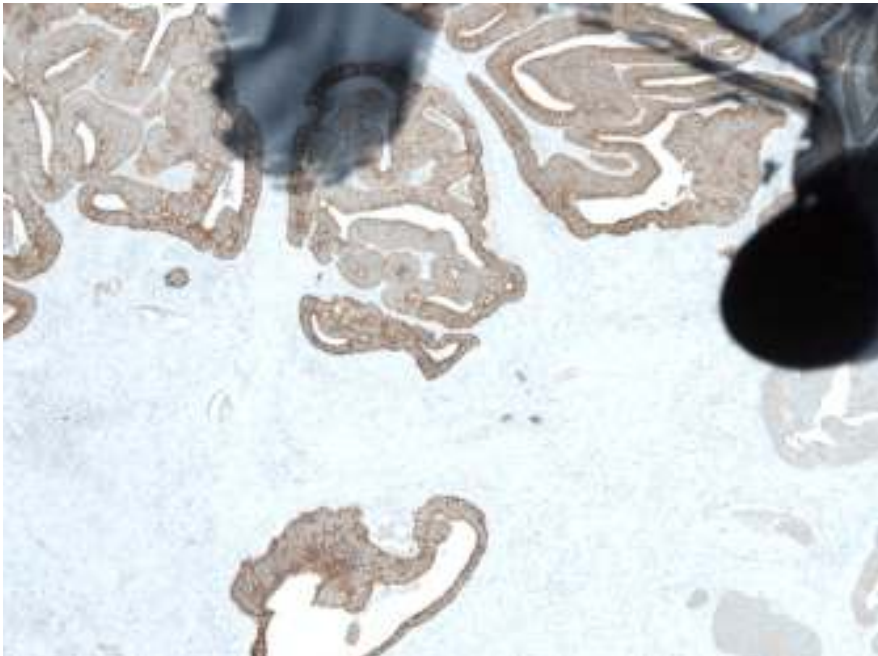
'low power lens, high power brain'



Cancer		Epithelial misplacement	Epithelial misplacement	Epithelial misplacement
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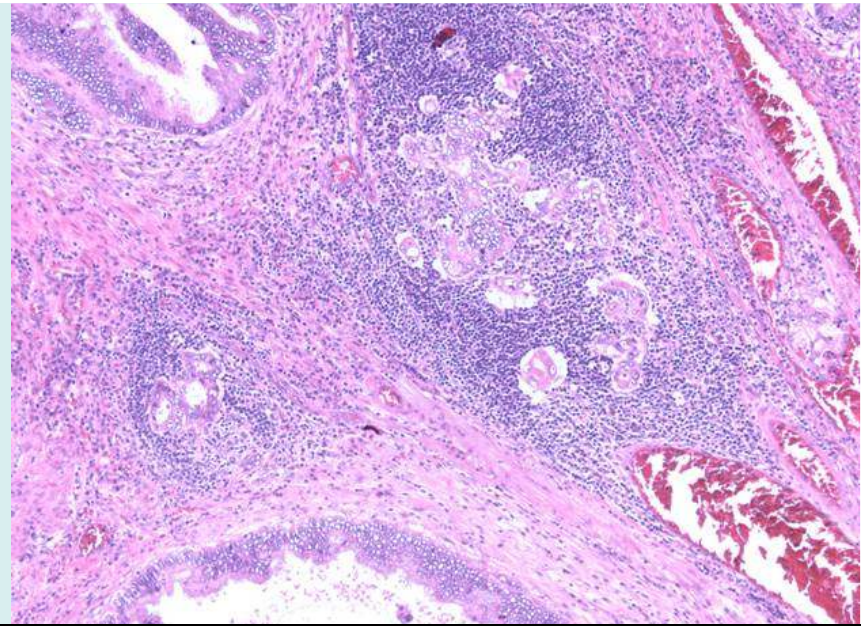
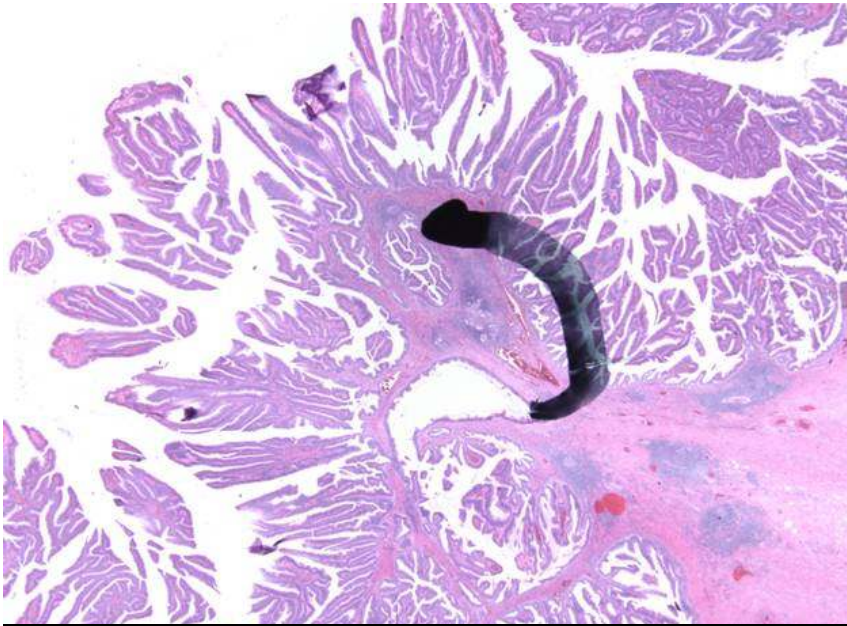
Cancer		Epithelial misplacement	Epithelial misplacement	Epithelial misplacement
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Epithelial destruction in EM because of inflammation & necrosis

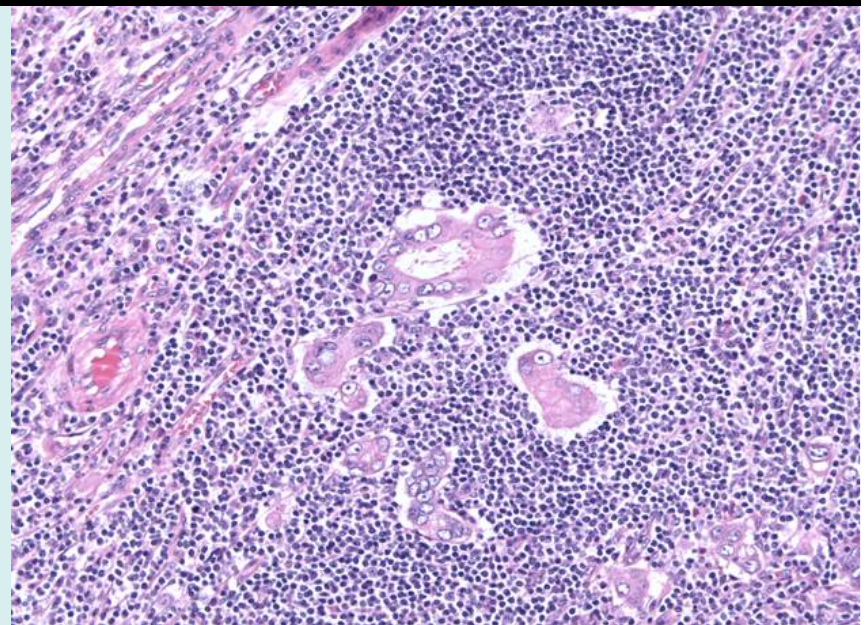
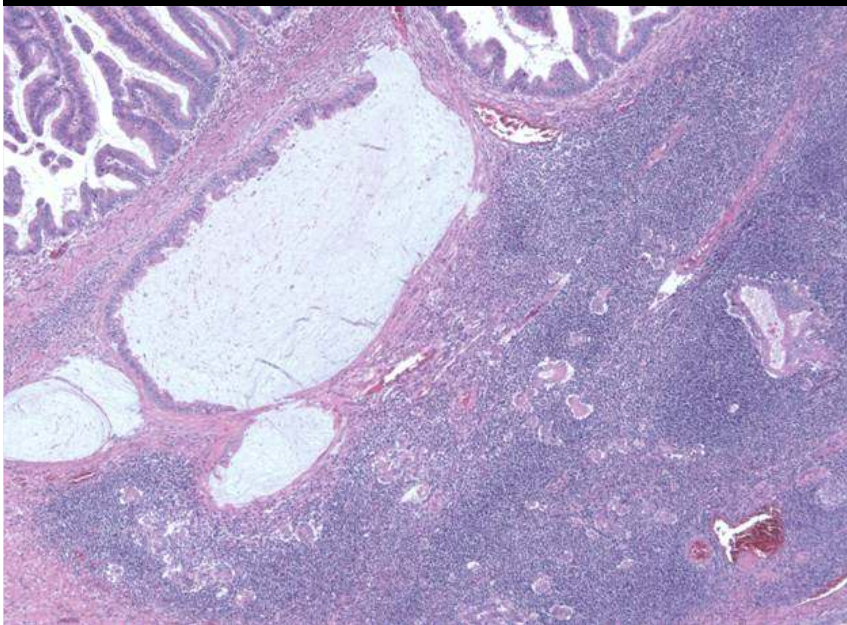


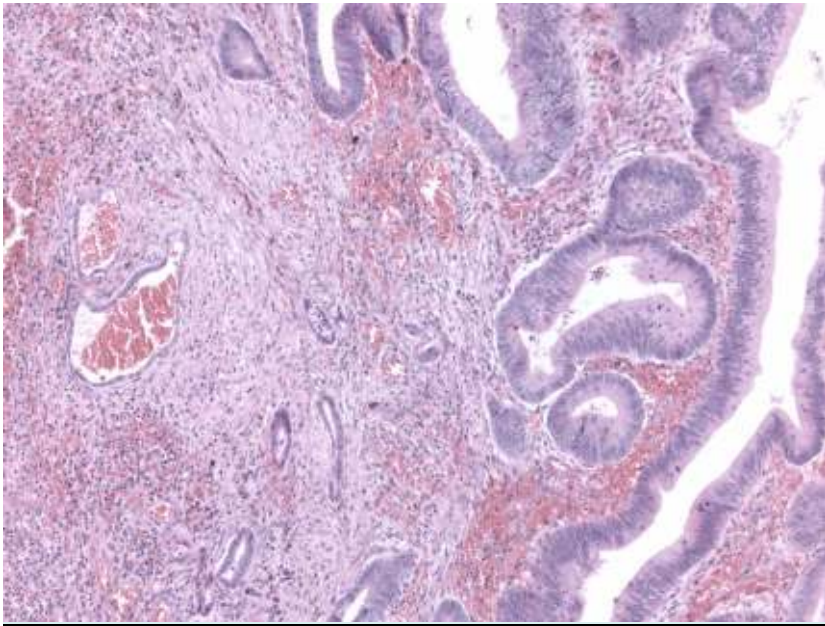
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Equivocal	EM and 'intramucosal adenocarcinoma'	'Superficial adenocarcinoma'	'Can't make a firm diagnosis here'
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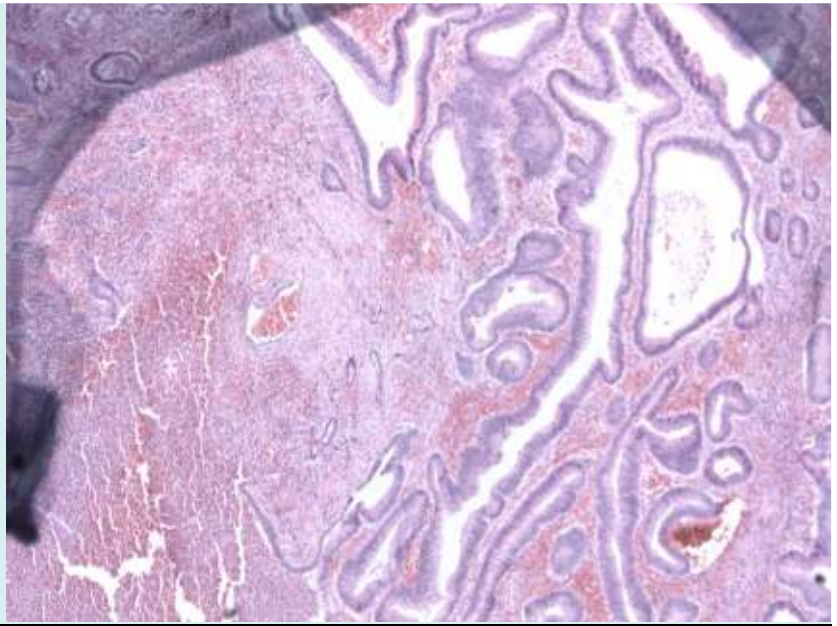




Malignant

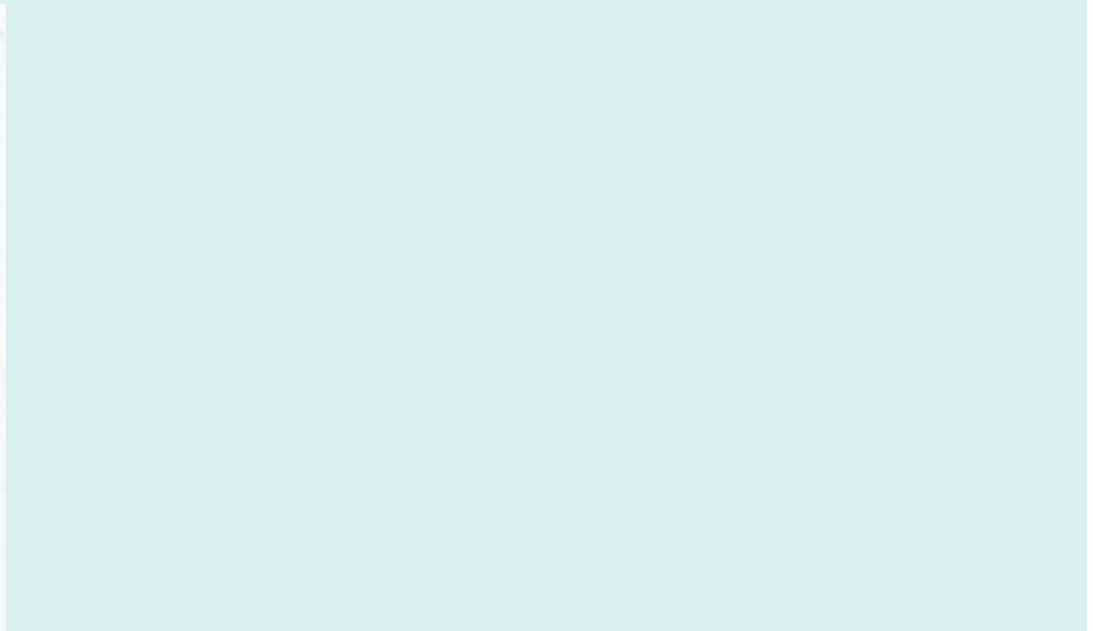
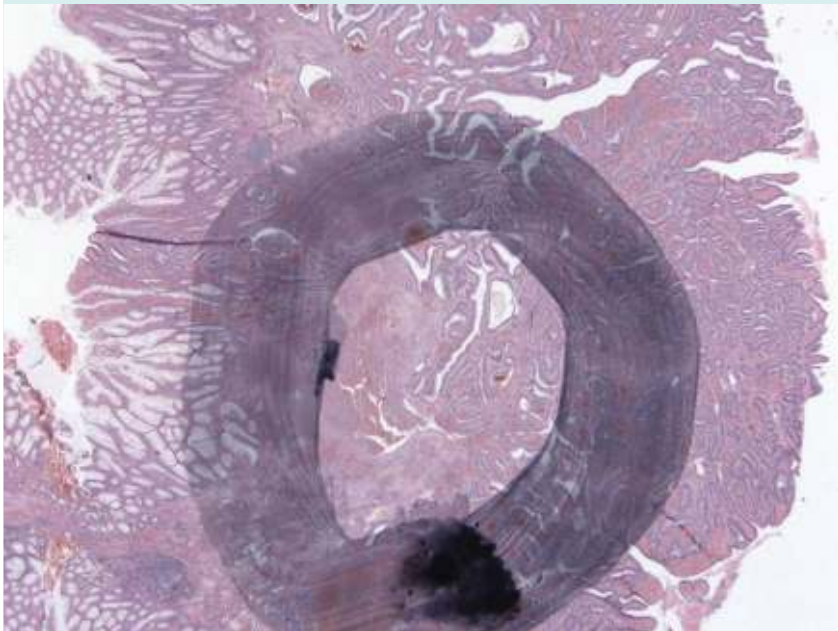


**Epithelial
misplacement**



**Epithelial
misplacement**

**Epithelial
misplacement**



The results so far (December 2010)

65 cases referred to Expert Board (20 in 2009; 45 in 2010)

Complete agreement between originating pathologist(s) and EB 17

Original diagnosis equivocal but EB diagnosis certain 22

Diametrically opposite diagnosis: originating pathologist(s) and EB 19

Both epithelial misplacement and cancer 4

Too difficult for EB 3



Some questions

- is this the most extra-ordinary pathological phenomenon of all time?
- sudden high volume of very difficult cases: Jo/Jolene pathologist struggles; 'experts' struggle - all because of BCSP
- in the UK, are we too conservative when it comes to the diagnosis of colorectal cancer (thanks, Basil) (cf the Far East)?
- is cancer in continuity 'twixt its mucosal and submucosal components always, sometimes or never?
- is epithelial misplacement in continuity 'twixt its mucosal and submucosal components always, sometimes or never?



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Practicalities

- this is effectively three second opinions - it takes time
- we are aware of some 65 day breaches
- do you want a quick report or a good one?
- patient patience (and that of clinician and SSP) is the name of the game - please get involved!



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Practicalities

- unlikely to change immediate management
- more of a prognostic call for the patient (life insurance, etc)
- we advise a rapid return to the site & removal of anything remaining by EMR, etc
- we have no idea of the implication of epithelial misplacement at a margin
- and margin involvement alone is the most controversial aspect of the management of pT1 cancers

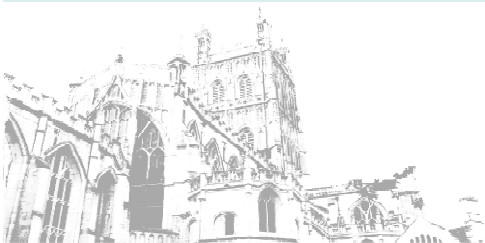
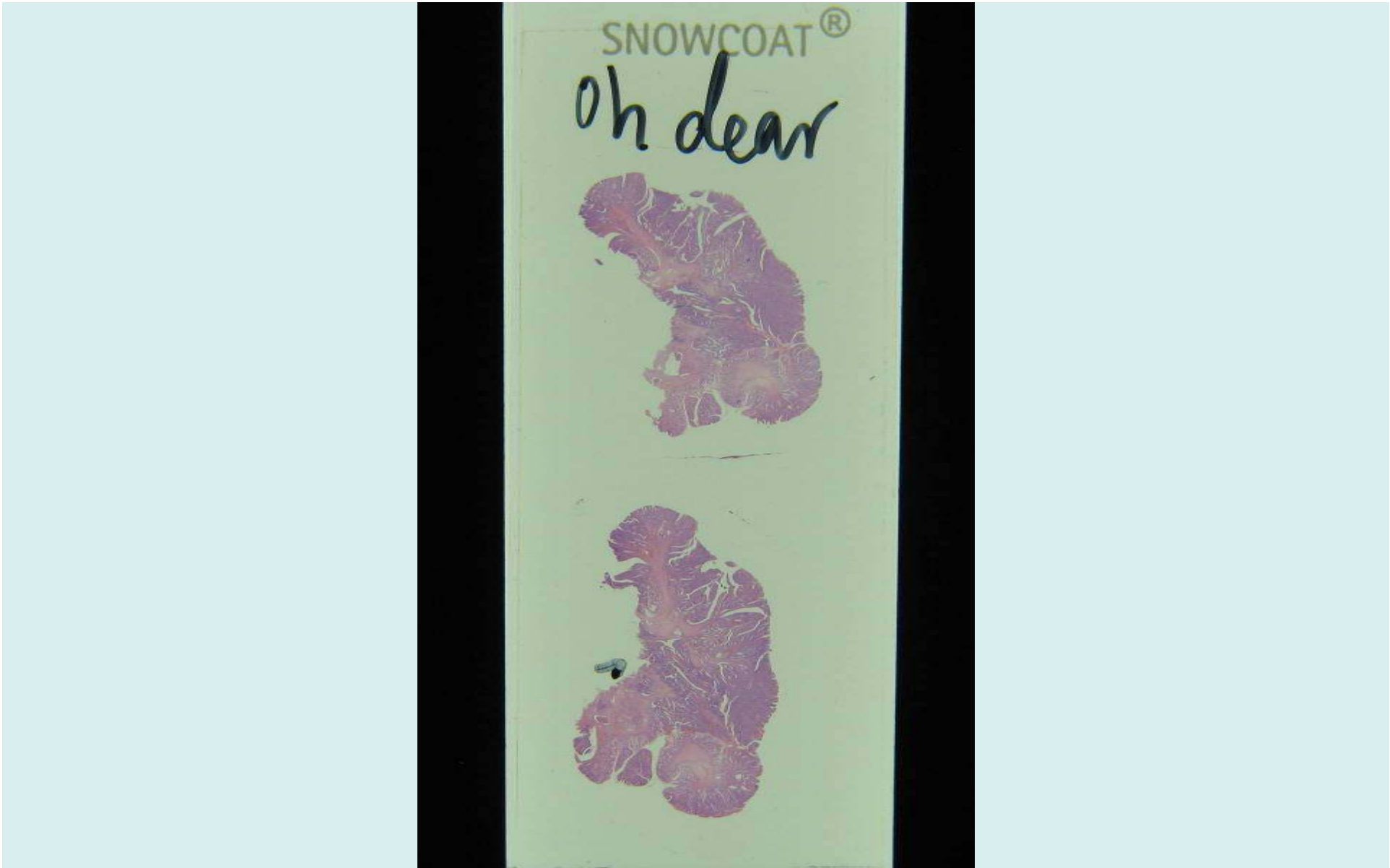




The team



Julietta Patnick and Richard Winder, BCSP Central



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Thanks for listening!



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