AZIENDA OSPEDALIERO - UNIVERSITARIA
Città della Salute e della Scienza di Torino
SC FORMAZIONE PERMANENTE
E RAPPORTI CON L'UNIVERSITÀ

CPO
Centro di Riferimento per l'Epidemiologia
e la Prevenzione Oncologica in Piemonte

rete oncologica
PREVENZIONE PIEMONTE
REGIONE PIEMONTE

WORKSHOP

CRPT- PROGRAMMA REGIONALE DI SCREENING
PREVENZIONE SERENA

9 DICEMBRE 2024

PREVENZIONE SERENA:
L'OGGI E IL DOMANI
WORKSHOP 2024

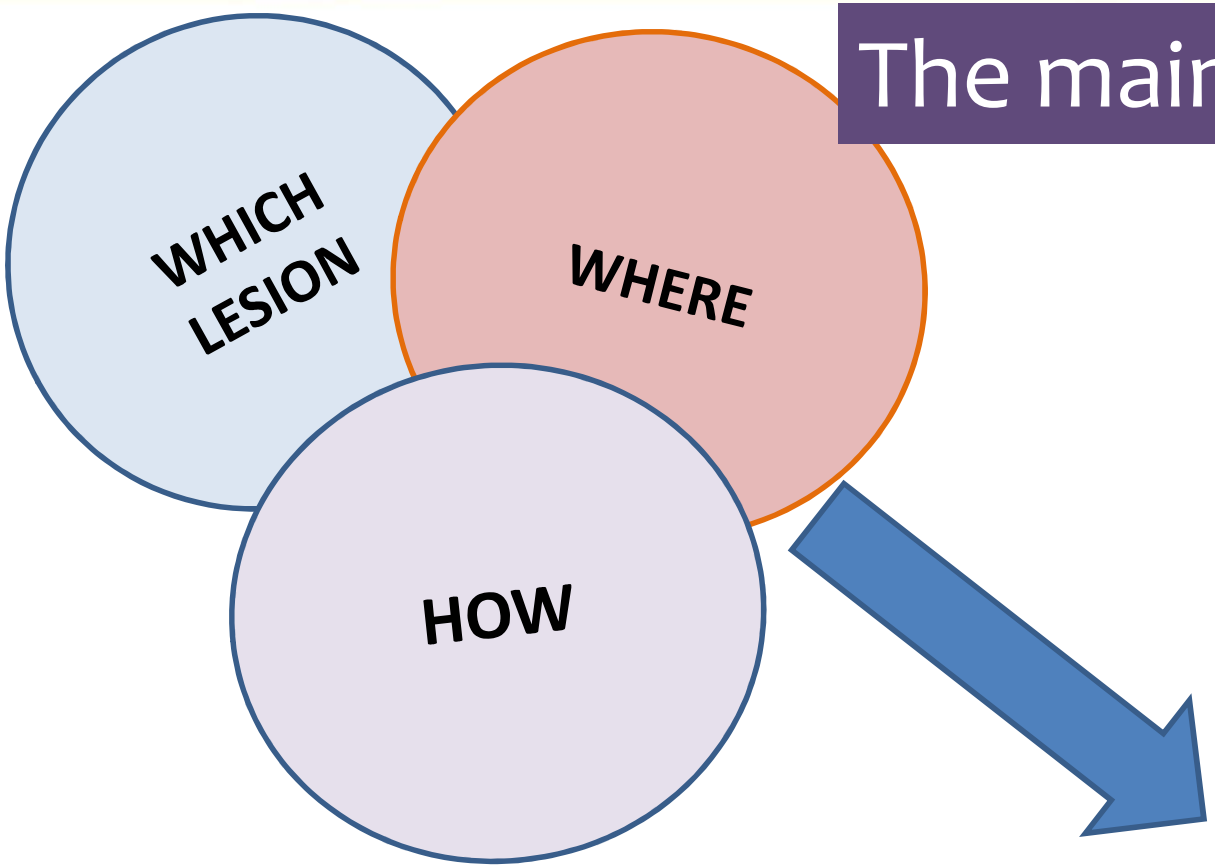
Does the perfect resection & histology report exist? *The pathologist's perspective*

PAOLA CASSONI

UNIVERSITÀ DI TORINO

AZIENDA OSPEDALIERO - UNIVERSITARIA
Città della Salute e della Scienza di Torino

The main determinants:



SCRLs measuring less than 10mm (<10mm)

- 90% of lesions identified during screening colonoscopy
- Cold Snare Polipectomy (CSP) > Hot Snare Polipectomy (HSP)*

** No significant difference between the two techniques in terms of incomplete resection rate (IRR), but significant increase in procedure time and incidence of adverse events (AEs)* in patients undergoing HSP compared to CSP [14–16]

- SCRLs <3mm: CSP > Cold Biopsy Forceps (CBF)**

*** CBF may be an alternative in cases where CSP is technically challenging* [2,3]

Courtesy of A.Mussetto

Pathologist issue:
- ✓ **Impossible to define specimen orientation & margins in CSP**
- ✓ **Endoscopist should orient/ink the specimen**

Impact on FU if SSA or HGD

Pedunculated SCRLs

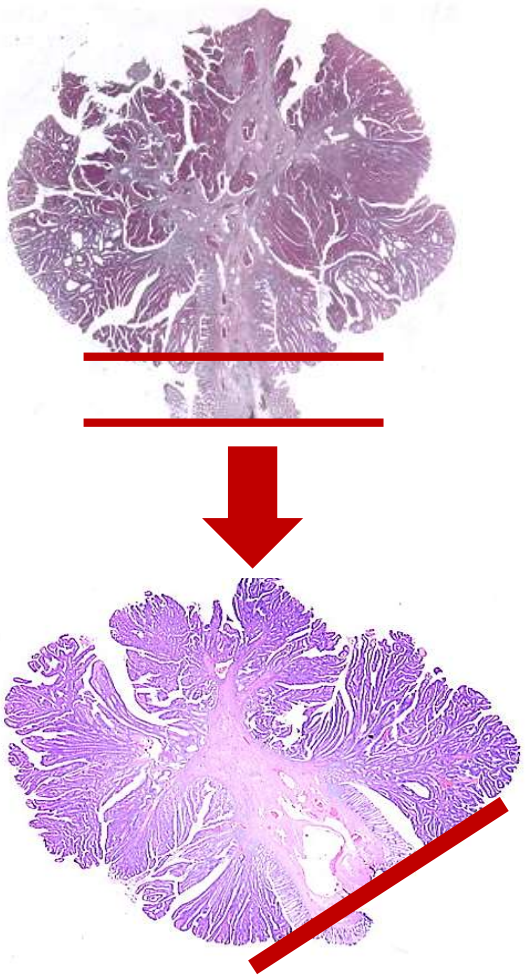
- HSP as standard of care. CSP can be considered in pedunculated SCRLs ≤10mm

- Tattoo close to the stalk is suggested in pedunculated SCRLs where malignancy is suspected (i.e ≥ 20mm, irregular pit and vascular pattern)

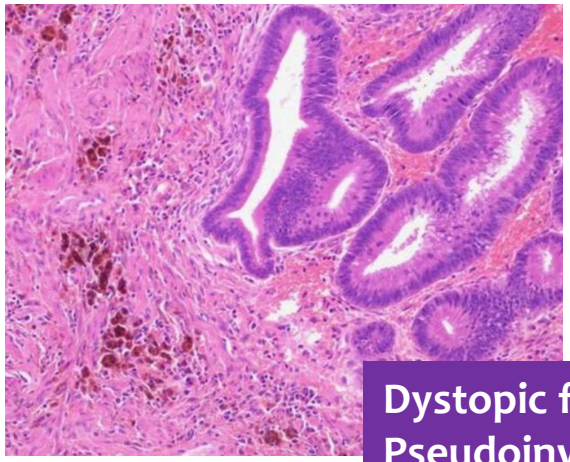
Courtesy of A.Mussetto

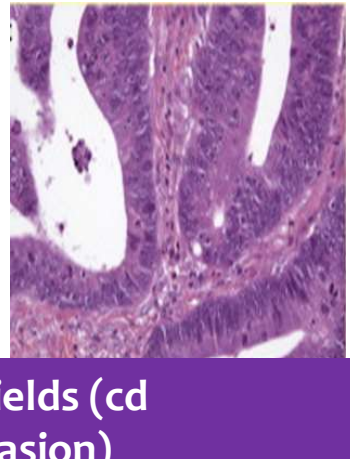
Pathologist issue:

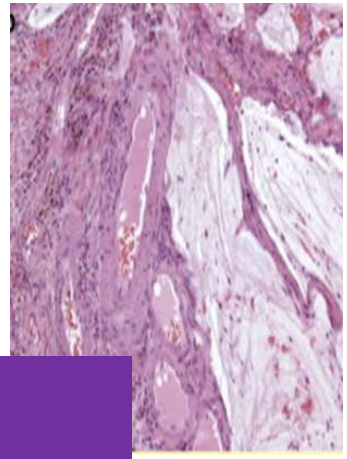
- ✓ **Possible fragmentation & stalk retraction after FF**
- ✓ **Keep attention to correct orientation for paraffin inclusion**
- ✓ **Keep attention to correct interpretation of dystopic fields (cd Pseudoinvasion)**



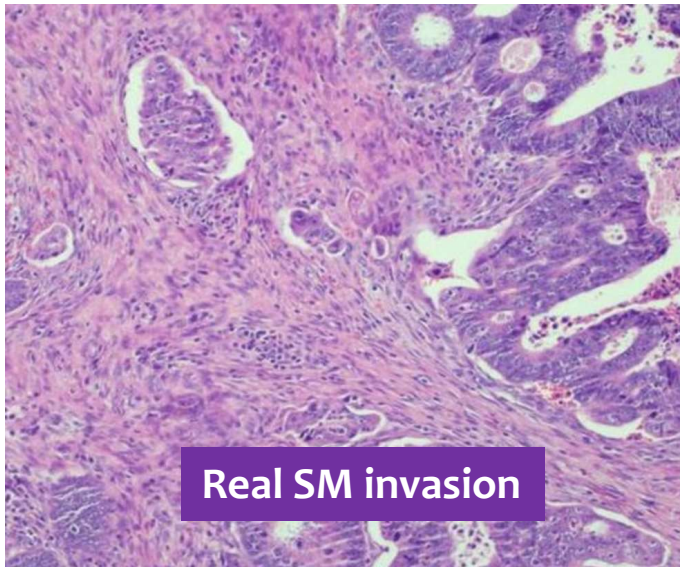
Orientation & stalk retraction artifacts







Dystopic fields (cd Pseudoinvasion)



Real SM invasion

✓ What about **pitfalls**?

Pseudoinvasion**/ epithelial misplacement (EM)** versus real SM invasion

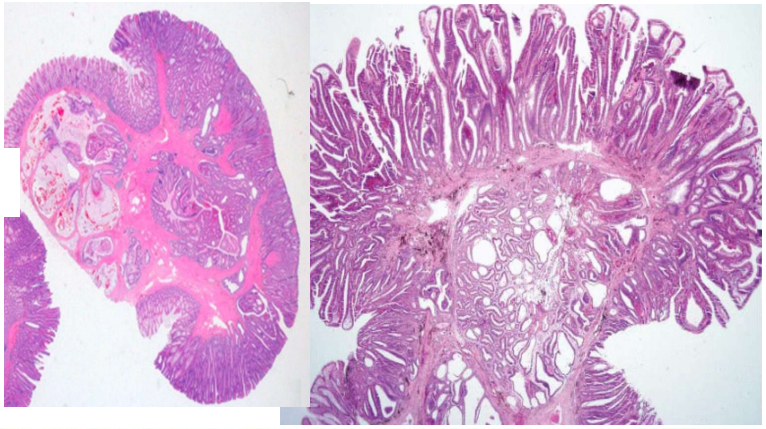
What to look for in order to recognise epithelial misplacement

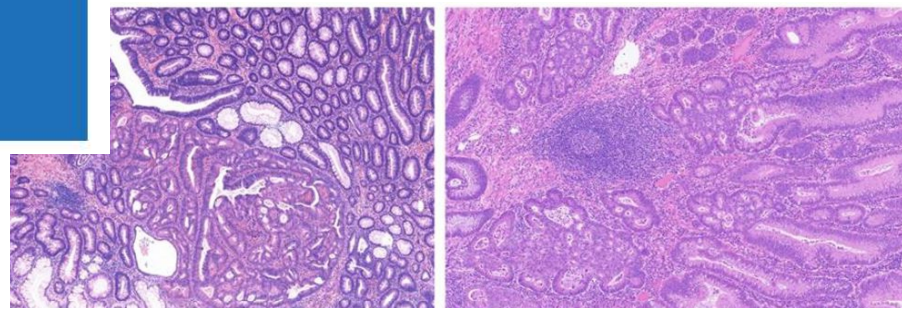
Guidance

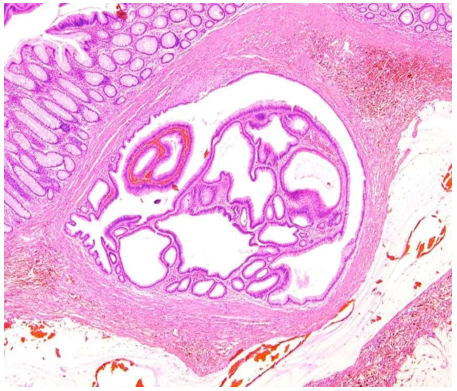
Bowel cancer screening: pathology guidance on reporting lesions

Updated 31 May 2021

- Epithelial 'differentiation'
- Lamina propria accompaniment
- Accompaniment by non-adenomatous epithelium
- Haemosiderin deposition
- Mucosal prolapse changes
- Mucus cysts
- Continuity with surface adenomatous component
- Budding ⚠
- Desmoplastic reaction to glands ⚠
- Lymphatic and/or vascular invasion ⚠







A grey area of UNDETERMINATE can be reported

Non-pedunculated SCRLs measuring between 10-19mm (10-19mm)

- SCRLs measuring less than 20mm (<20mm) should be resected during the index screening colonoscopy
- Piecemeal CSR (pCSR) could be preferred against HSR in Sessile Serrated Lesions (SSLs) without dysplasia → **In the RIGHT colon**
- Hot Snare Resection (HSR) as standard of care in cases of conventional adenomas or when there is a notable suspicion of dysplasia*

Courtesy of A.Mussetto

* pCSR should be considered as an alternative for carefully selected non-pedunculated adenomas measuring between 10-19mm in the right colon and/or in unfit patients to reduce the risk of peri-procedural and late complications

Pathologist issue:
- ✓ **Impossible to define specimen orientation & margins in pCSR**
- ✓ **Endoscopist should orient/ink the specimen**

→ **Impact on FU if SSA or HGD**

Non-pedunculated SCRLs measuring 20 mm and above (≥20mm) without features of SMIC

- Adequate characterization according to internationally validated classifications using high-resolution white light and chromoendoscopy should be recommended
- For SCRLs proximal to the rectum and at low risk of SMIC (i.e JNET2a), either en bloc or piecemeal resection may be performed*,**

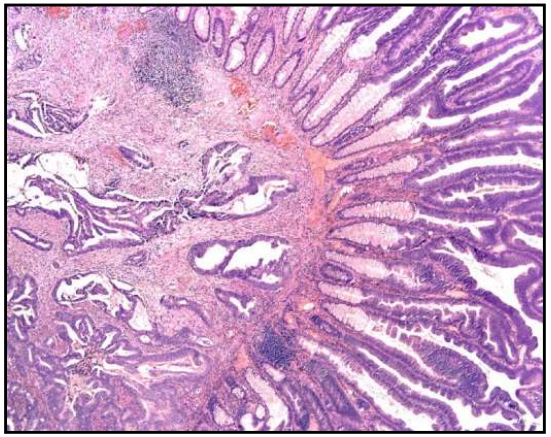
Courtesy of A.Mussetto

*In the case of piecemeal resection, it is recommended to resect the lesion in as few pieces as possible and to complete the procedure with thermal ablation of the margin, ** pCSR could be considered *for SSLs ≥20mm without dysplasia and* carefully selected non-pedunculated adenomas measuring between 10-19mm in the right colon and/or in unfit patients to reduce the risk of peri-procedural and late complications

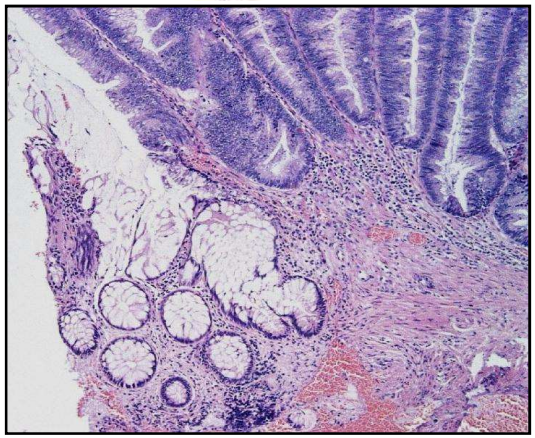
- For SCRLs in the rectum with a low risk of SMIC (JNET2a), en bloc resection should be preferred if feasible (i.e en bloc EMR or ESD)

Pathologist issue:

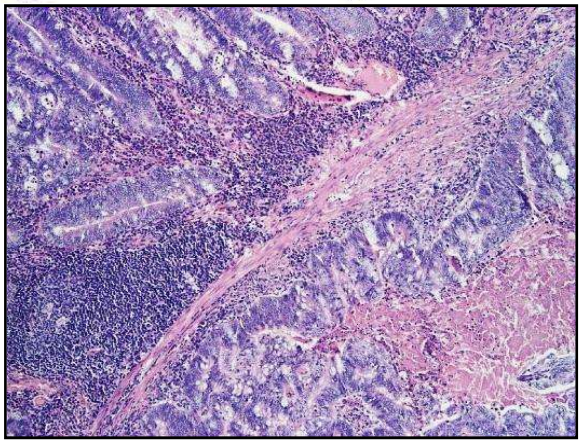
- ✓ **Impossible to define margins in piecemeal resections**
- ✓ **Eventual limitation in defining SMI**
- ✓ **Endoscopist should orient/ink the specimen**



1) SUBMUCOSAL INVASION IDENTIFICATION



2) LATERAL MARGIN ASSESSMENT

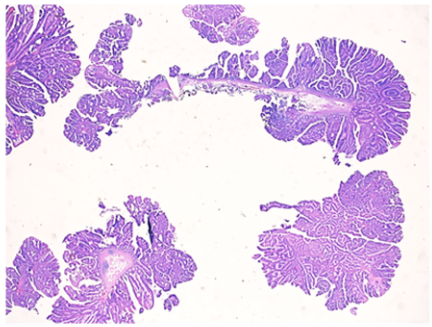


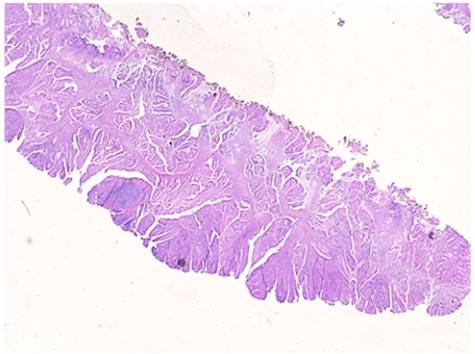
3) QUALITATIVE PARAMETERS OF RISK

Pathologist issue:

- ✓ difficulties in defining specimen orientation can limit 1)
- ✓ fragmentation does not allow 2) and impacts on 3)
- ✓ Endoscopist orient ation of fragments helps

Histologic Staging and *Piecemeal* Resection





ORIENTATION OF THE MICROTOMY PLANE

"…Pieces should be oriented by the Endoscopist with their submucosal side facing the plate…"

MICROSTAGING

European Guidelines for Quality Assurance in Colorectal Cancer Screening

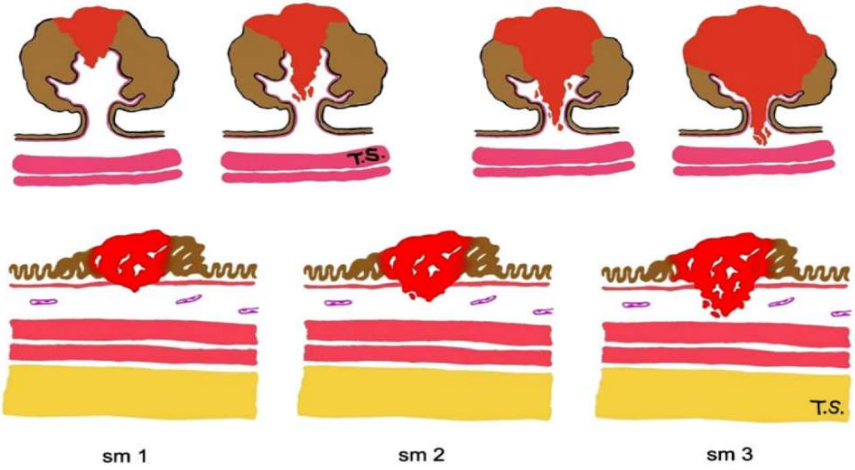
European Commission

[Quirke, Risio , Lambet, Vieth 2010]

Neither the Kikuchi (for sessile lesions) nor Haggitt (for polypoid tumors) are easy to use in practice. The depth and the width of invasion provides a more objective measure.

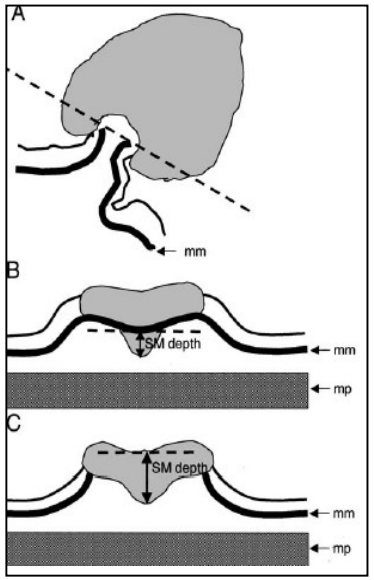
Each classification has advantages and disadvantages.

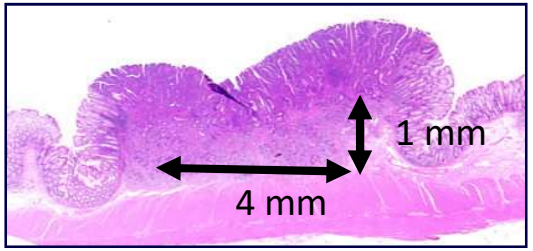
All approaches need to be evaluated on large series from screening programmes to derive evidence-based recommendations.

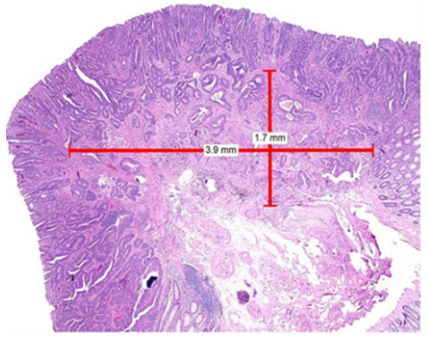


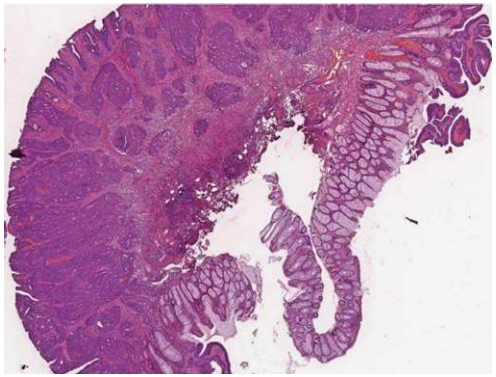
Haggitt Levels

Kikuchi Levels





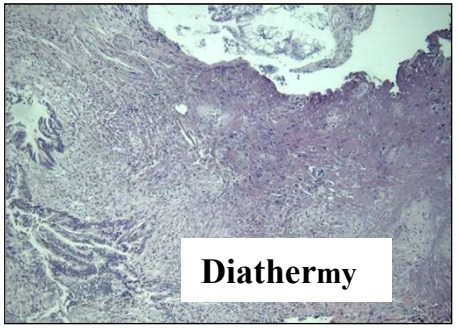




RESECTION MARGINS

Positive surgical margin is an adverse prognostic factor in pT1 CRC, for the presence of **residual disease** and/or for **LNM**

	LNM
JSCCR 2019 [9]	Yes: Positive vertical margin [1]
NCCN 2021 [12]	Yes: Positive type unspecified
ESMO 2020 [10]	No risk [2]
ESGE-ESDO 2019 [11]	Yes: Positive margin (<1 mm) or cannot be assesed
ASGE 2020 [13]	Yes: Positive margin in non-pedunculated <1 mm in pedunculated



Controversial definition

ESGE

<1 mm

JSCCR

at the submucosal margin of the resected specimen

[1] Positive vertical margin is defined as carcinoma exposed at the submucosal margin of the resected specimen by JSCCR guidelines. [2]. Positive resection margin (<1 mm) is considered only a risk for local recurrence in ESMO guidelines. Its recommended management comprises additional excision or local surveillance.

MULTIDISCIPLINARY DISCUSSION

Review > J Clin Pathol. 2024 Mar 20;77(4):225-232. doi: 10.1136/jcp-2023-208803.

Risk assessment in pT1 colorectal cancer

Emma Jane Norton [1], Adrian C Bateman [2]

The nature of histopathological examination means that microscopic features are commonly more difficult to assess in routine diagnostic practice than published criteria may initially suggest. Factors hampering histopathological examination include sampling variability, tangential cutting and other difficulties with orientation, fragmentation, diathermy artefact and tumour-related issues. While

In our experience, the ability to quantify LNM risk in this setting is valuable during multidisciplinary team (MDT) discussions and clinician–patient interactions. Where relevant, the *Royal College of*

ALWAYS!!!

Endoscopic submucosal dissection for superficial gastrointestinal lesions: European Society of Gastrointestinal Endoscopy (ESGE) Guideline – Update 2022

ESGE recommends that when there is a diagnosis of lymphovascular invasion, or deeper infiltration than sm1, or positive vertical margins, or undifferentiated tumor, or, for colorectal lesions, budding grade 2 or 3, this should be considered a high risk (noncurative) resection, and complete staging and strong consideration for additional treatments should be considered on an individual basis in a multidisciplinary discussion.

Practical issue:

At the end of the histology report add the need of MDT

TO THE BEST OF OUR KNOWLEDGE:
Check list and standardized report for pT1 CRC according to guidelines

Materiale inviato :
Polipo Sessile di 15 mm del retto.

Notizie Cliniche :
Polipo Sessile di 15 mm del retto.

Descrizione Macroscopica :
Formazione polipoide sessile di cm 1,5, sezionata a metà.

Descrizione Microscopica :
Idoneità ai fini di eventuali analisi molecolari:
Campione ADEGUATO (Criteri richiesti >50% e >100 cellule tumorali selezionate, sec linee guida aggiornamento AIOM-SIAPEC-IAP 10-11-2010), blocchetto A1, selezione tumorale: sì.

Eseguite indagini immunoistochimiche con anticorpi per:
- MLH-1 (Ac. monoclonale Leica, clone ES05);
- PMS-2 (Ac. monoclonale Leica, clone EP51);
- MSH-2 (Ac. monoclonale Leica, clone 79H11);
- MSH-6 (Ac. monoclonale Leica, clone EP49).

Diagnosi:
ADENOCARCINOMA DI BASSO GRADO INFILTRANTE LA TONACA SOTTOMUCOSA, INSORTO SU ADENOMA TUBULO-VILLOSO CON DISPLASIA DI ALTO GRADO (c.d. ADENOMA CANCERIZZATO).

Staging sec VIII edizione UICC, 2017**: pT1.**

SEDE DELLA NEOPLASIA: Retto
TIPO DI NEOPLASIA: Adenocarcinoma senza componente mucinosa
GRADO ISTOLOGICO: Basso grado
TIPO DI INVASIONE NEOPLASTICA: Infiltrativa
PROFONDITA' DI INVASIONE: Tumore che invade la sottomucosa (**pT1**)
LIVELLO DI INVASIONE DELLA SOTTOMUCOSA:
Profondità di invasione della sottomucosa: 1.5 mm
Ampiezza di invasione sottomucosa: 3 mm
INVASIONE VASCOLARE EMATICA O LINFATICA: Non evidente sulle sezioni esaminate
INVASIONE PERINEURALE: Non evidente sulle sezioni esaminate
BUDDING TUMORALE: BD1 (0-4 buds)
INFILTRATO LINFOCITARIO PERINEOPLASTICO: moderatamente rappresentato
MARGINI DI RESEZIONE: Indenni (distanza minima dal margine profondo 2 mm).

Necessaria discussione multidisciplinare.

Espressione immunoistochimica delle proteine del mismatch repair (MMR)

Le cellule della neoplasia presentano espressione immunoistochimica (++) per la proteina codificata dal gene **MLH-1** (controllo interno positivo).
Le cellule della neoplasia presentano espressione immunoistochimica (++) per la proteina codificata dal gene **PMS2** (controllo interno positivo).
Le cellule della neoplasia presentano espressione immunoistochimica (++) per la proteina codificata dal gene **MSH-2** (controllo interno positivo).
Le cellule della neoplasia presentano espressione immunoistochimica (++) per la proteina codificata dal gene **MSH-6** (controllo interno positivo).

CONCLUSIONI

L'espressione immunoistochimica delle proteine MMR risulta compatibile con uno stato di stabilità dei microsatelliti (MSS).