

Evaluation of Tumor Infiltrating Lymphocytes (TILs) in Urothelial Carcinoma

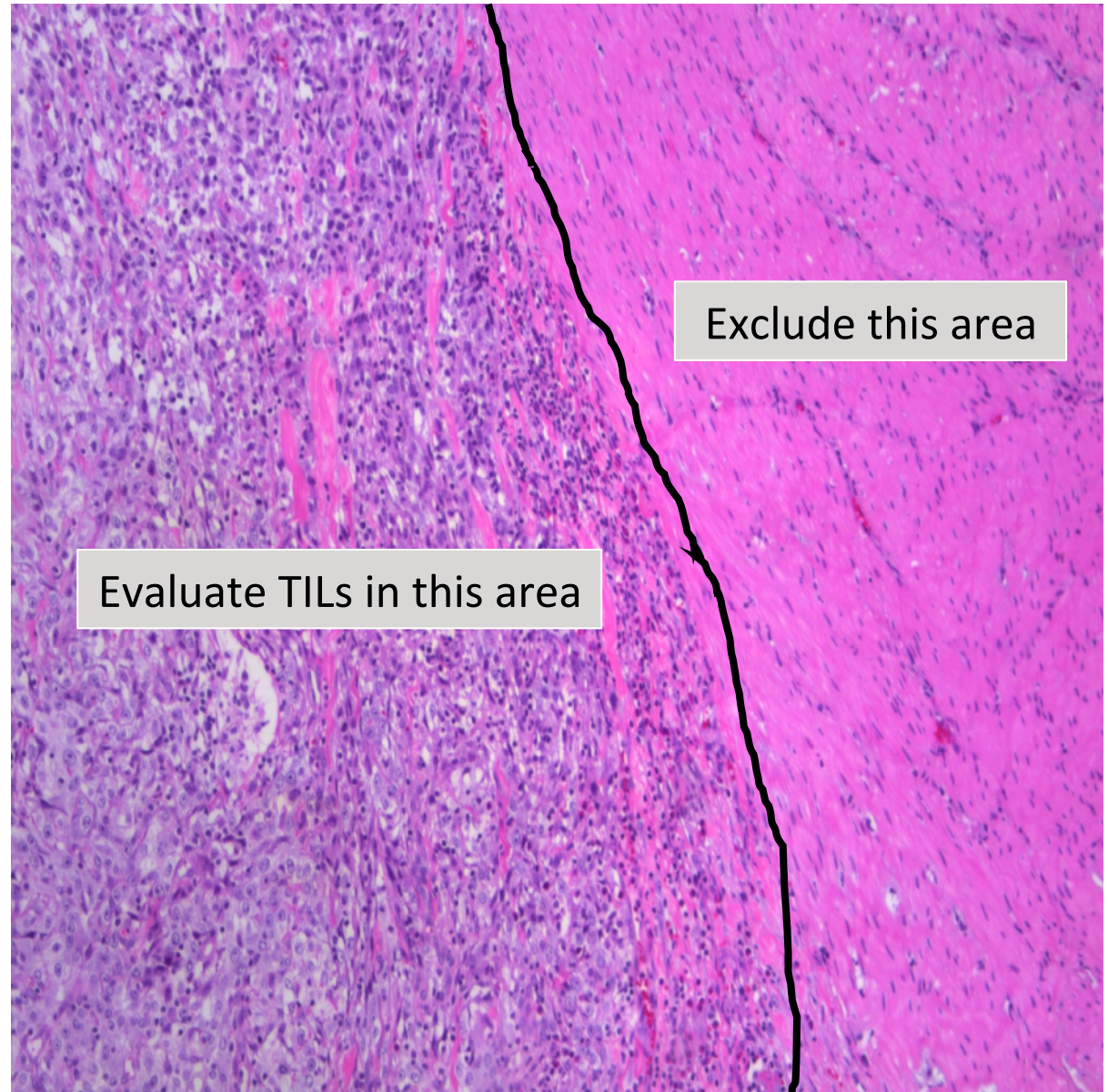
Guidelines for TILs assessment
from “International Immuno-Oncology Biomarker
Working Group”

Authors: Thomas Gevaert¹ and Yves Allory²

1- KU Leuven and AZ Klina, Belgium. 2-Université Paris-Est, INSERM and APHP, Hôpital Henri-Mondor, France.

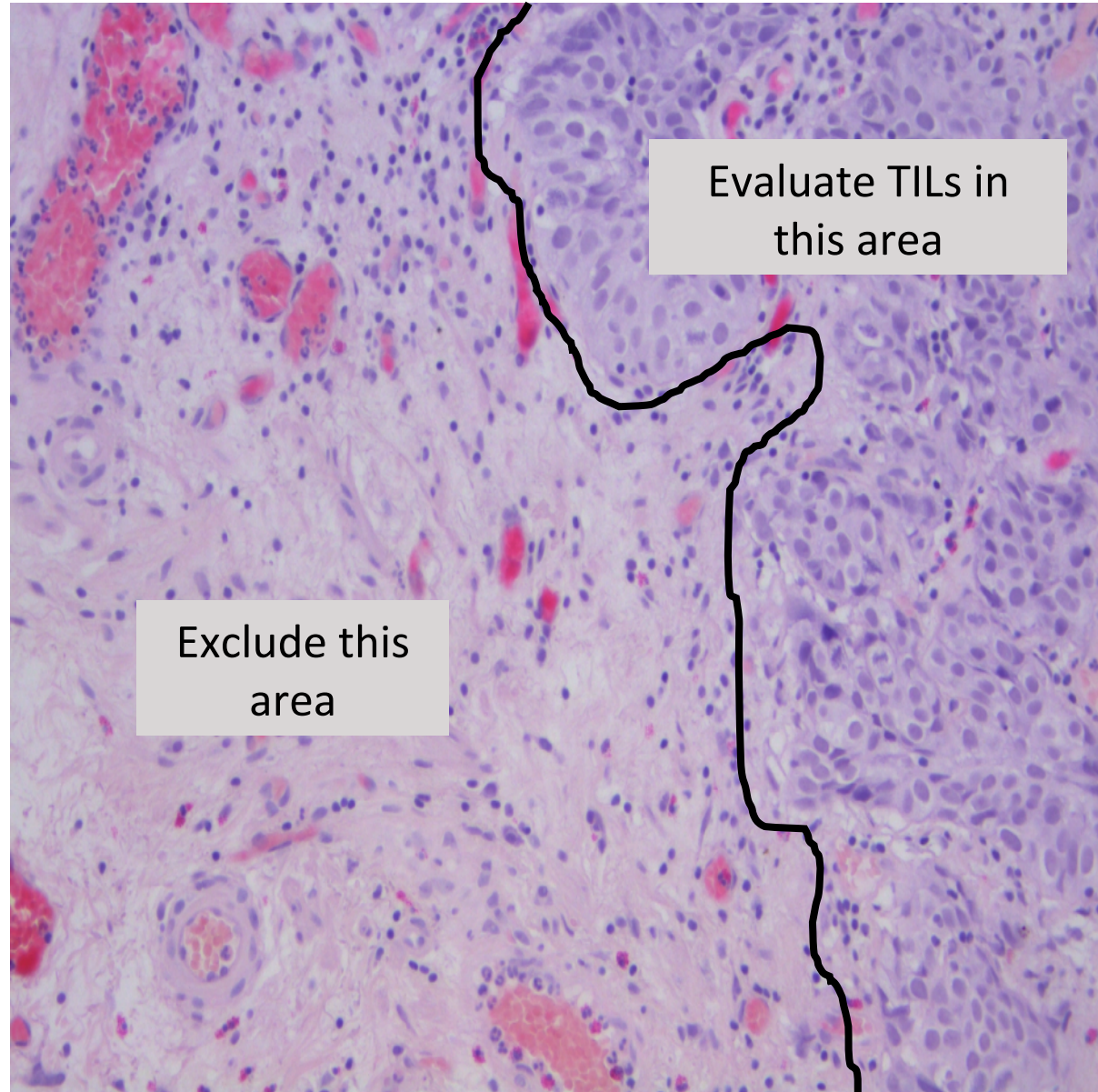
Define area for TILs evaluation

- TILs should be evaluated within the borders of the invasive tumor
- The invasive edge is included in the evaluation, but not reported separately
- Immune infiltrates outside of the tumor borders are not included



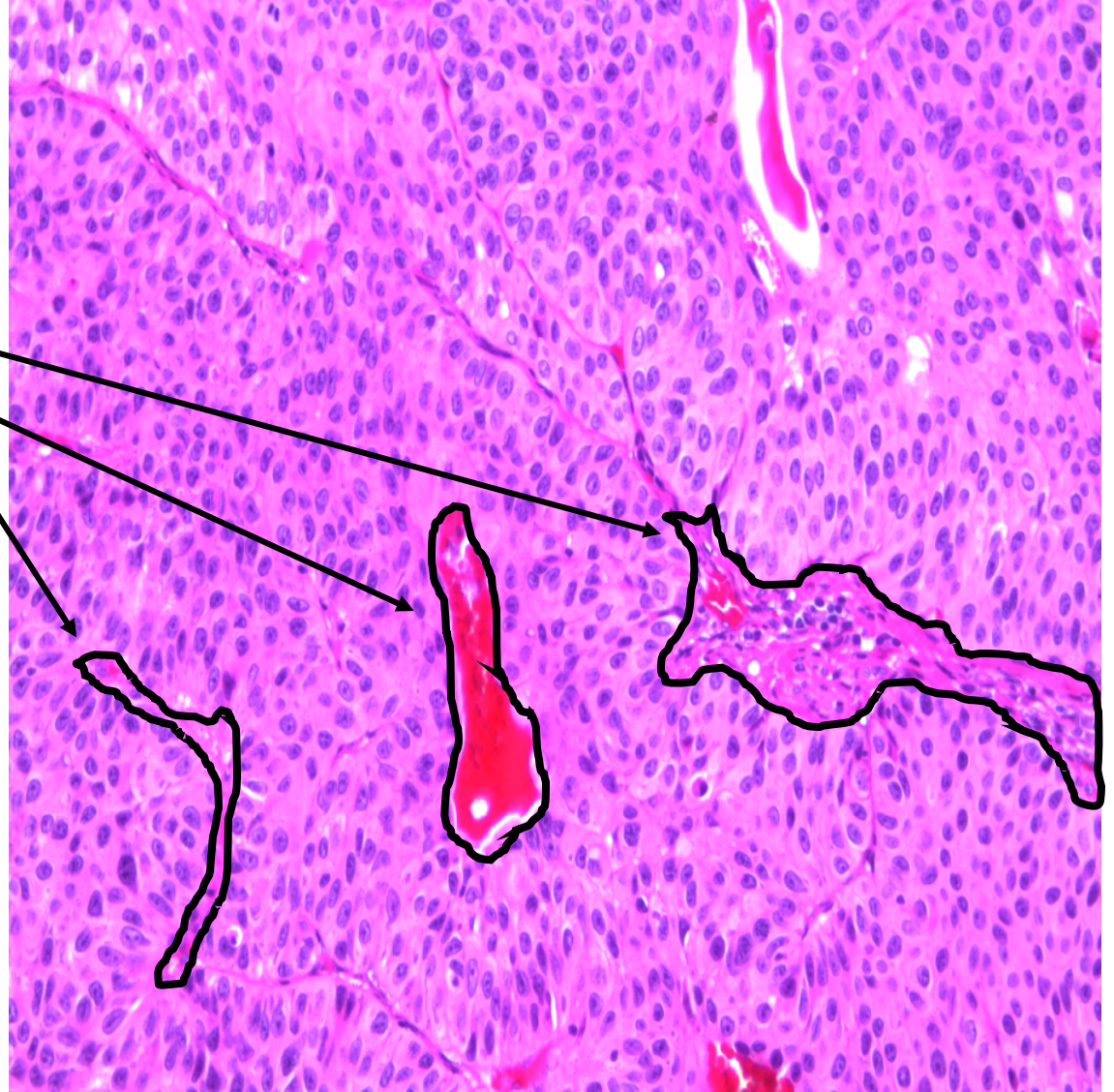
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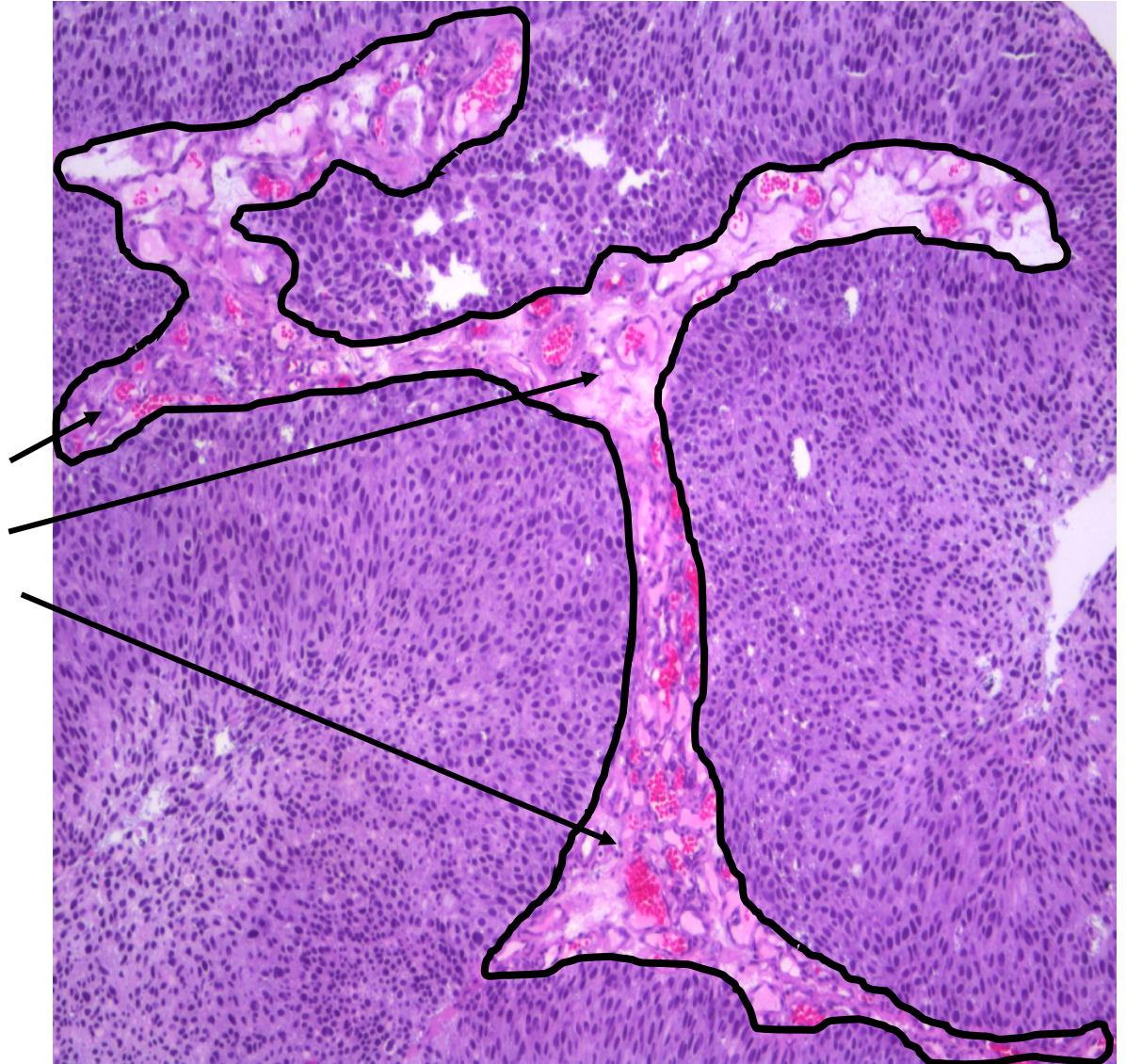
Define area for TILs evaluation

Include TILs evaluation in stroma pertaining to fibrovascular cores of **INVASIVE** papillary structures

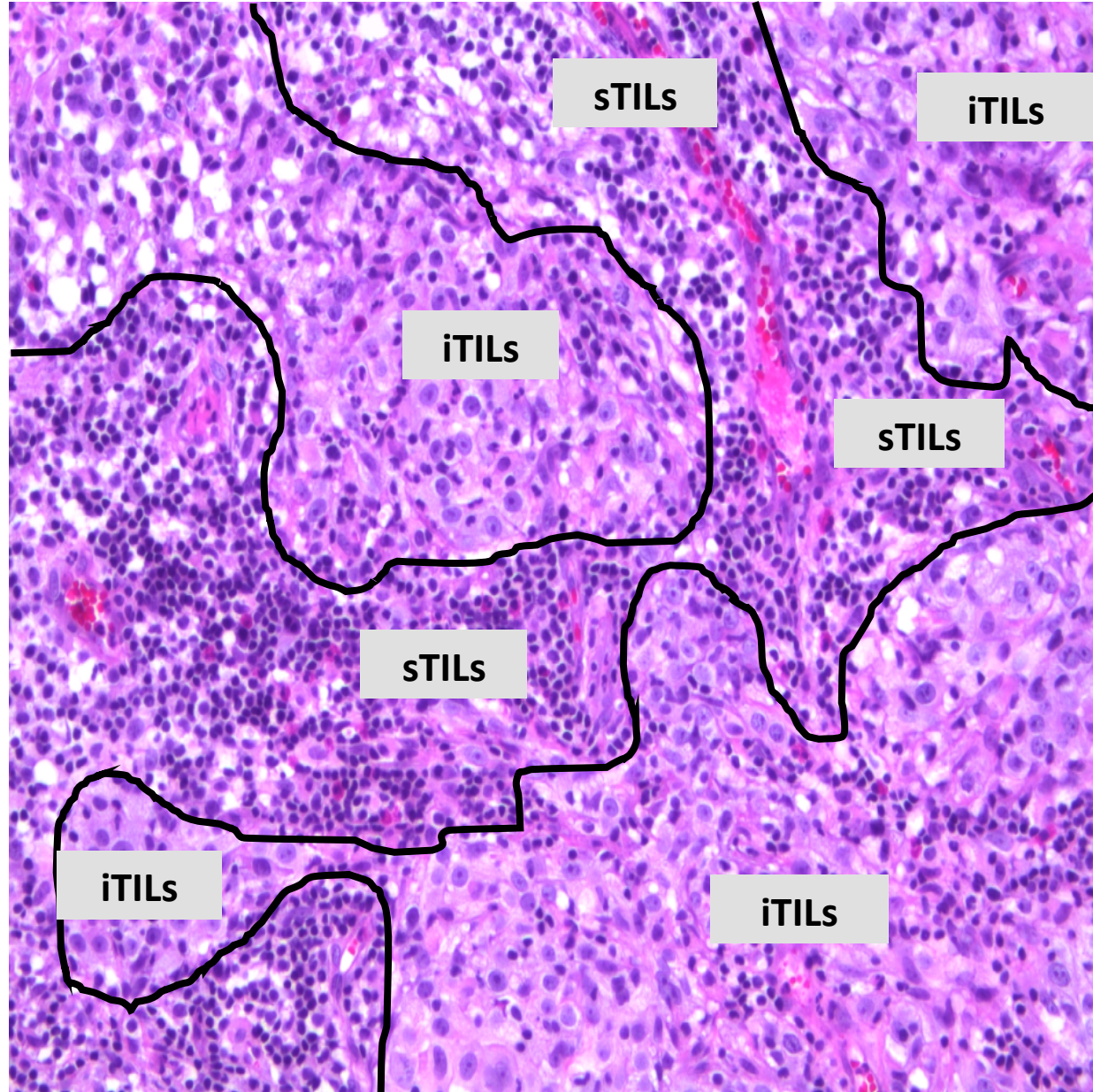


Define area for TILs evaluation

Exclude TILs evaluation in stroma pertaining to fibrovascular cores of **NON-INVASIVE** papillary structures



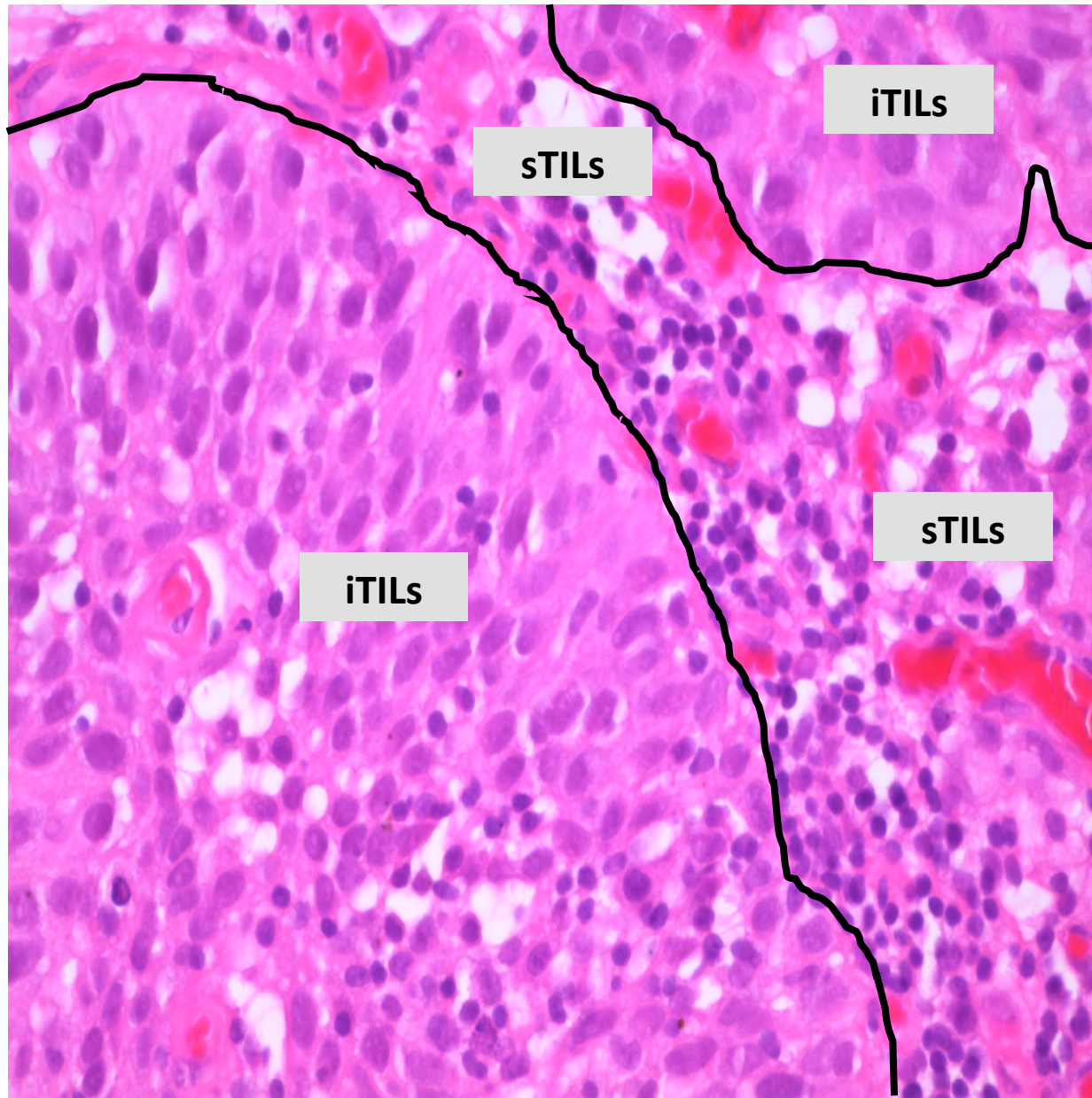
Determine the localization of inflammatory infiltrate



Intra-tumoral TILs (iTILs)

Stromal TILs (sTILs)

Determine the localization of inflammatory infiltrate



iTILs

sTILs

iTILs

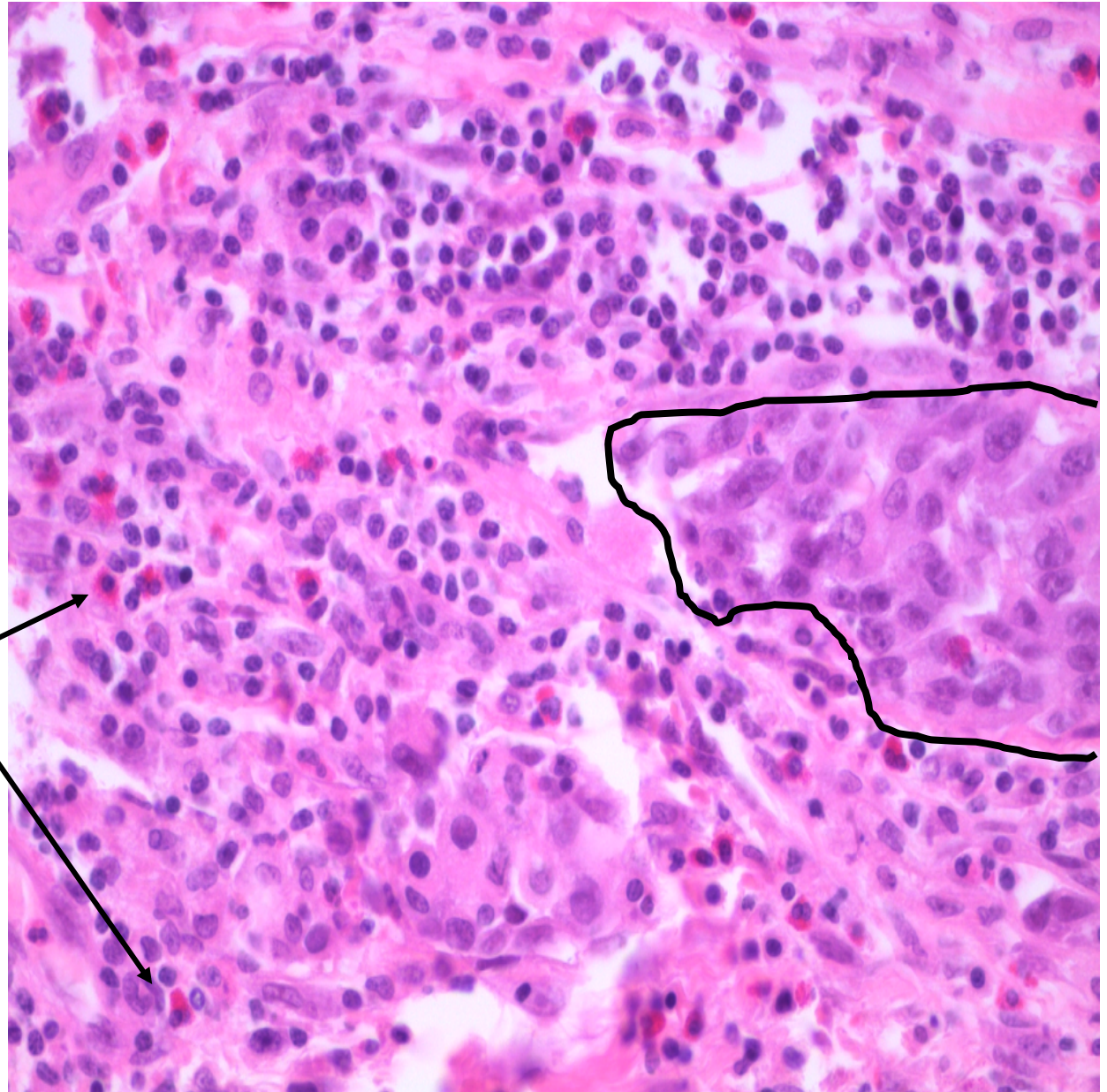
sTILs

Intra-tumoral TILs (iTILs)

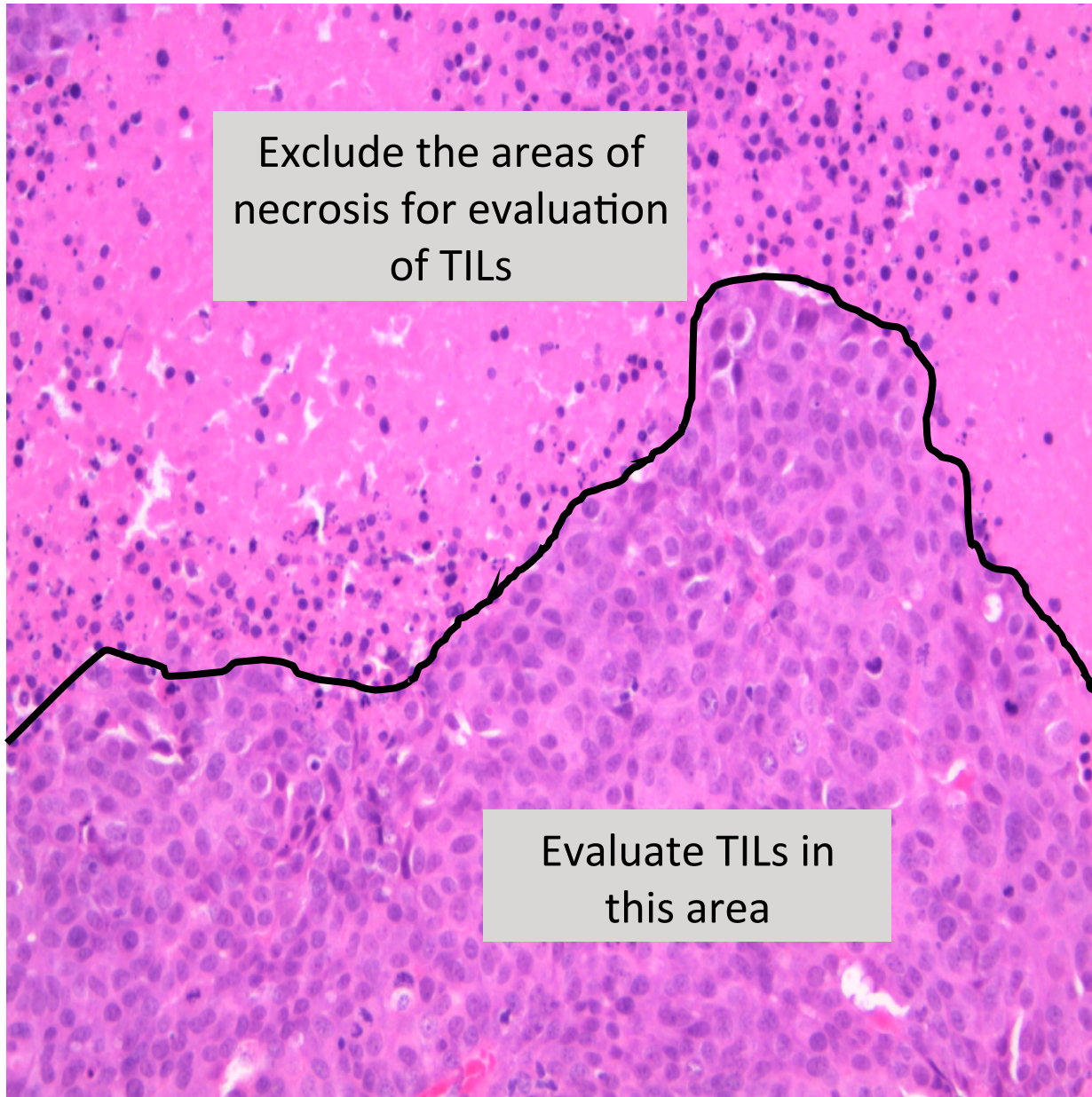
Stromal TILs (sTILs)

Only mononuclear leukocytes should be scored

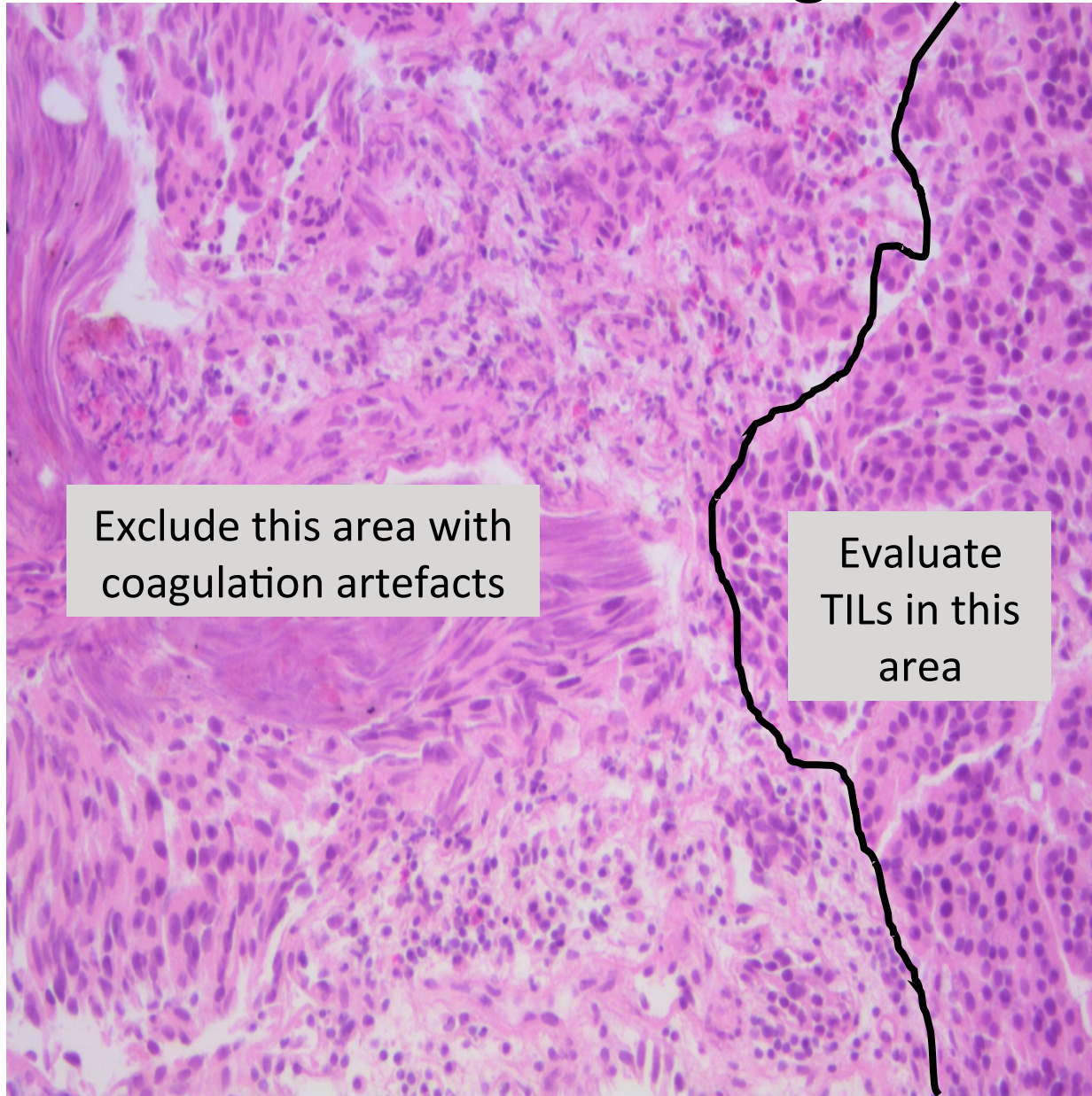
- Exclude polymorphonuclear leukocytes from the assessment of TILs
- In this case the frequent eosinophils should be excluded
- Include lymphocytes and plasma cells



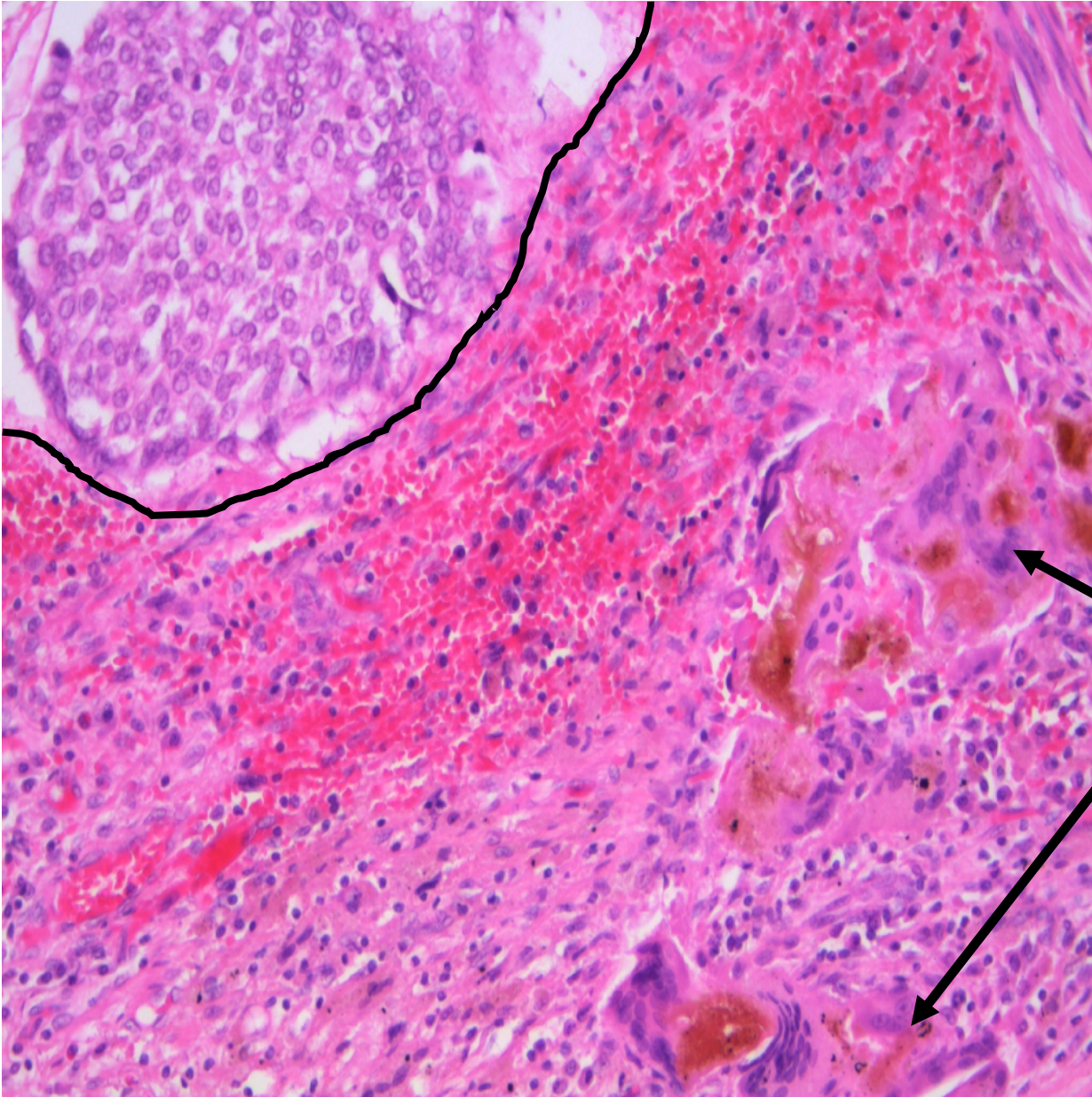
Exclude TILs in tumor zones with necrosis



Exclude TILs in areas with coagulation artefacts



Exclude TILs in previous biopsy sites



- Patients with UC often have a history of repetitive TURBT procedures
- In this case the areas with giant cell reaction after TURBT should be excluded from assessment of TILs