



# Small, Blue, and Somewhat Painful

Thoughts on approaching and making sense of  
lymphoid infiltrates in the GI tract

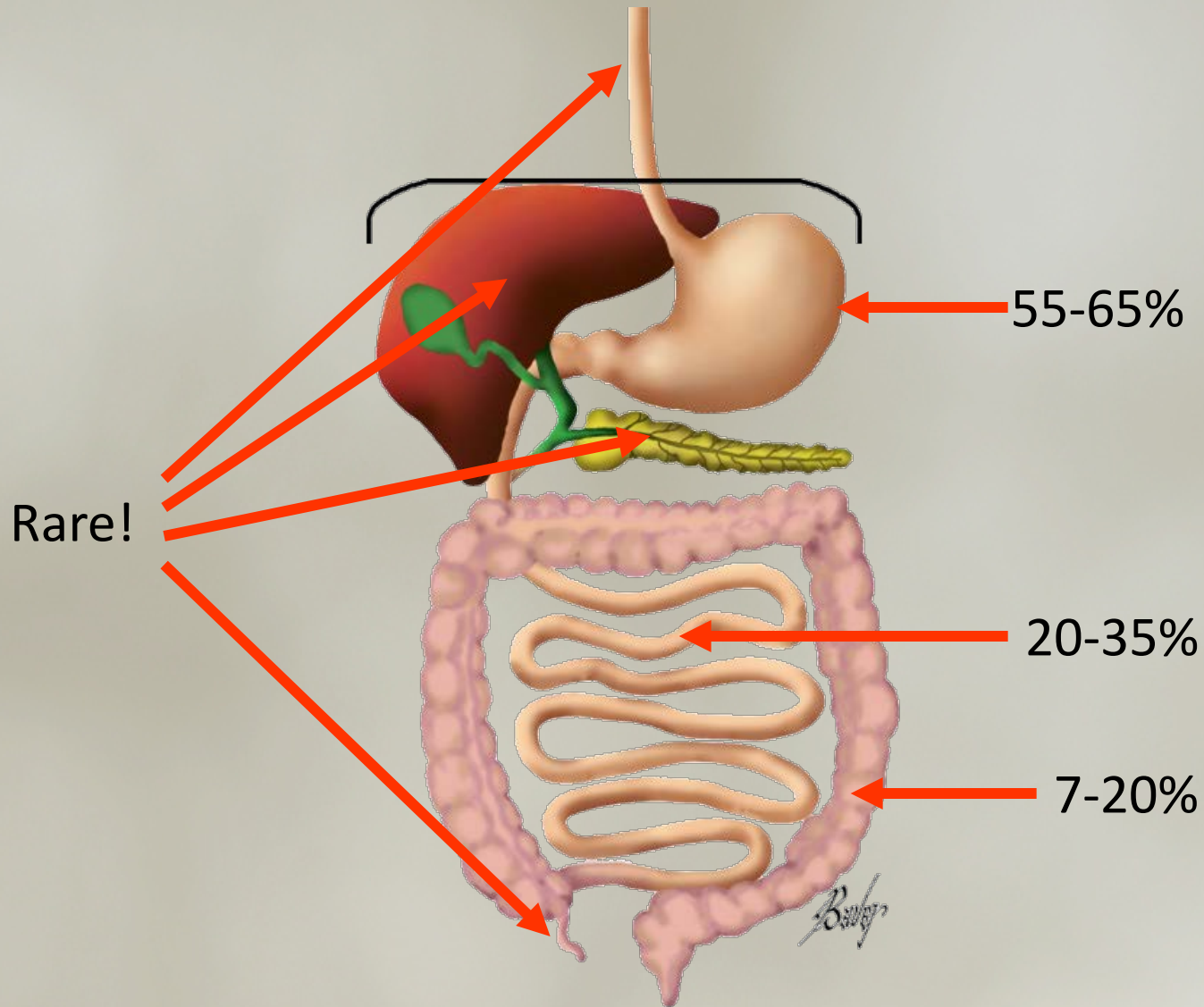
Scott R. Owens, MD

# What's the problem?

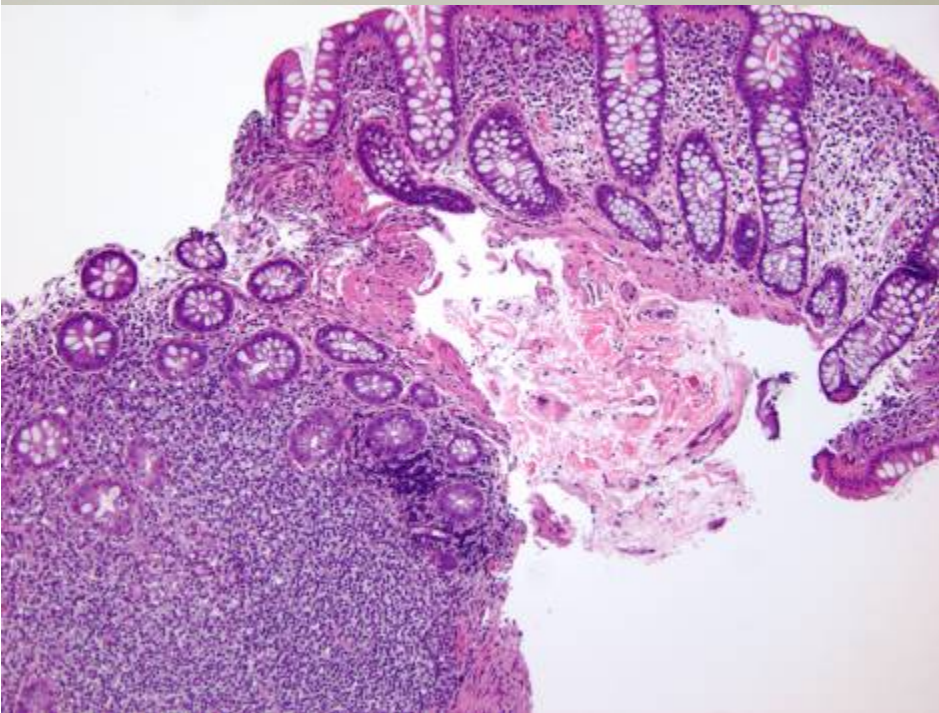
## Unique issues in GI

- “Gross”  $\approx$  endoscopic description
- Small pieces of tissue
- Inflammatory conditions can result in lymphoproliferative disorders... *and* confound diagnosis
  - “Acquired MALT”
- Normal lymphoid tissue can give rise to lymphoproliferative disorders...and confound diagnosis!
  - “Native MALT”

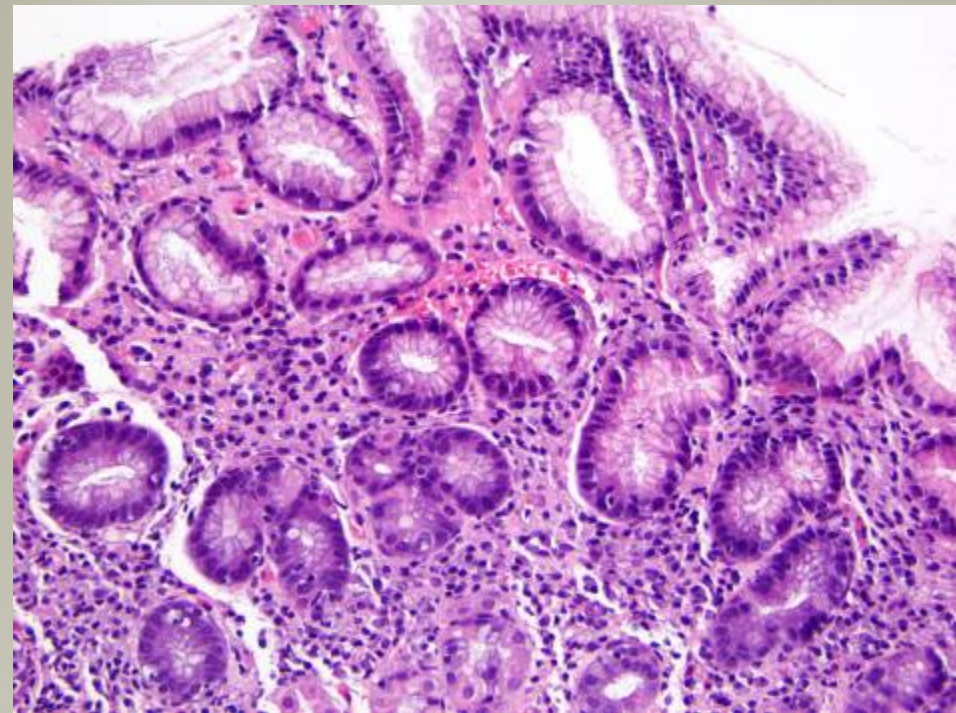
# Distribution of GI Lymphoma



# About that MALT...



Peyer's patch (native)



*H. pylori* gastritis (acquired)

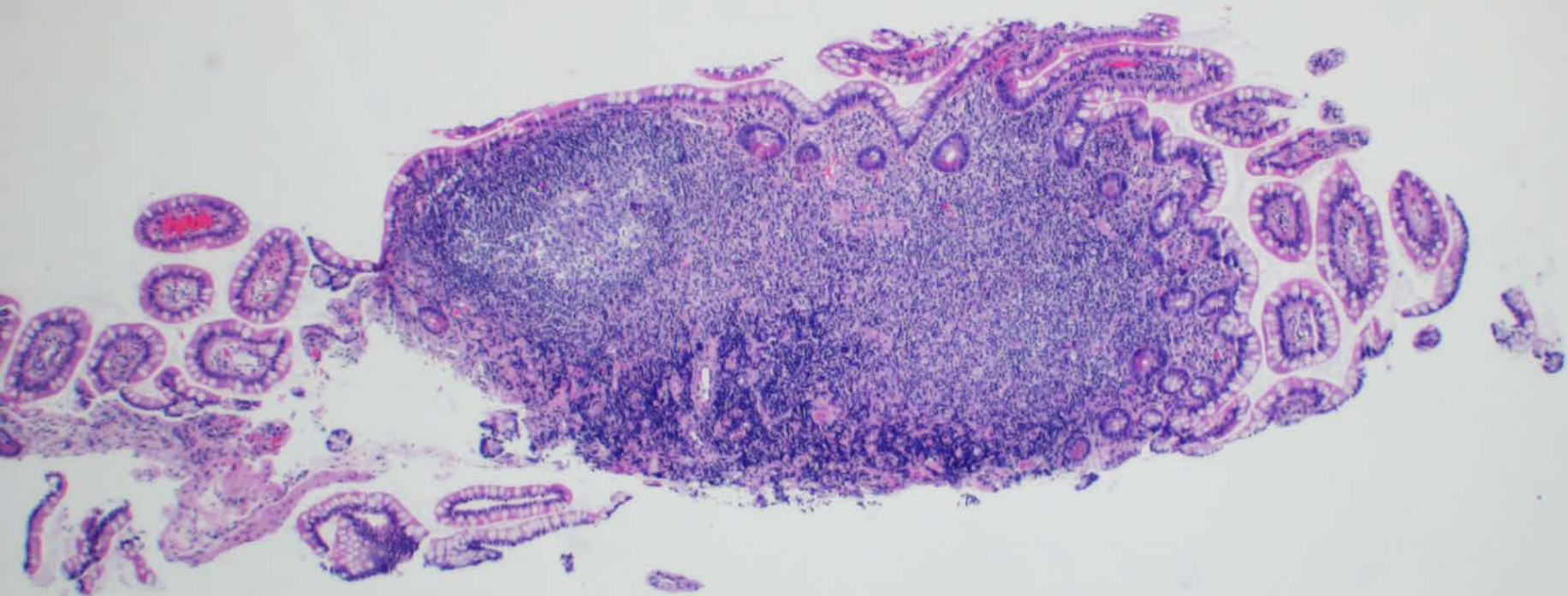


# What's my approach?

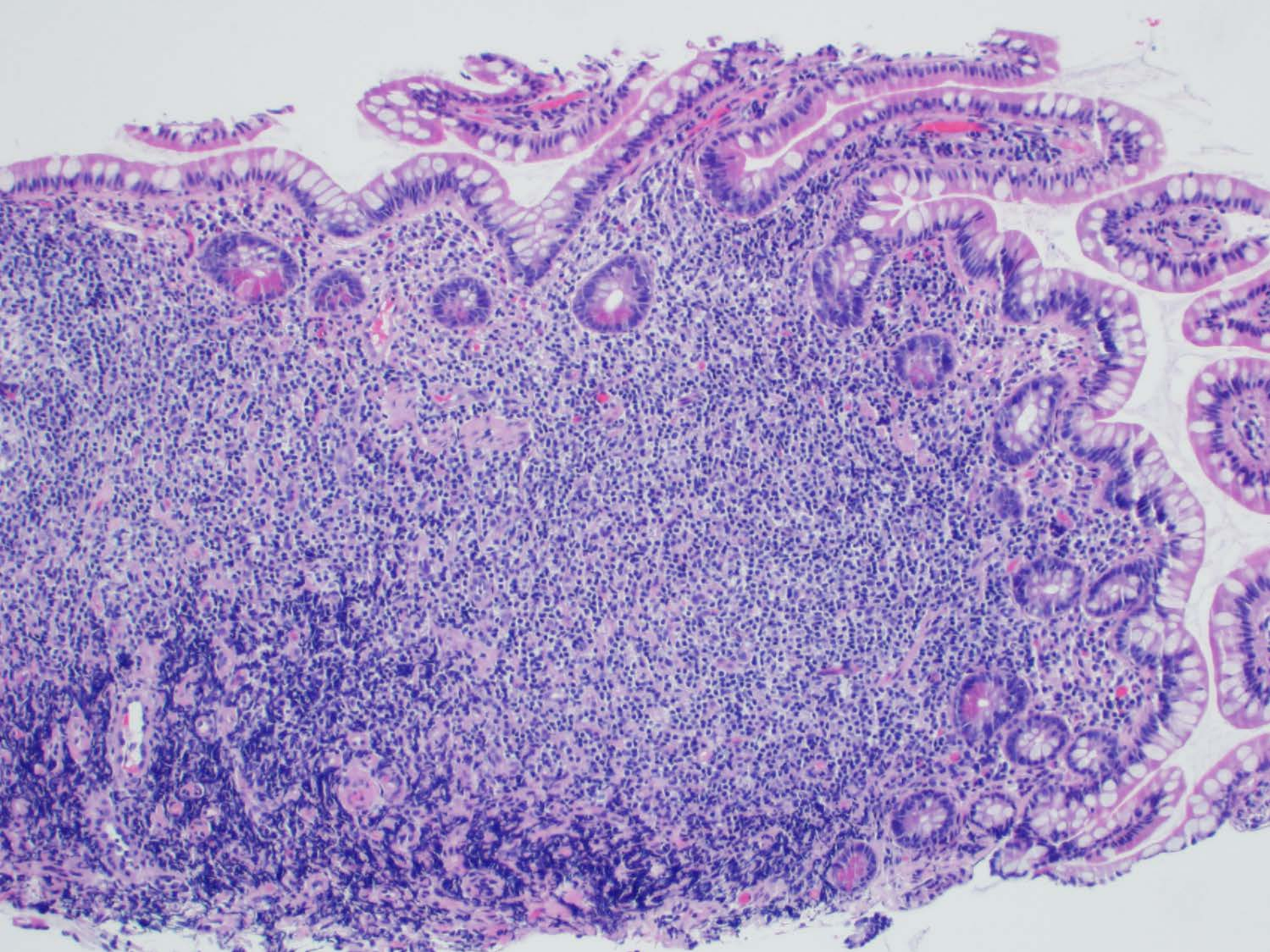
- When wondering about a lymphoid infiltrate, I've found it's best to play "DUMB"
  - *D*estructive?
  - *U*nusual location and/or morphology?
  - *M*onotonous?
  - *B*ig?



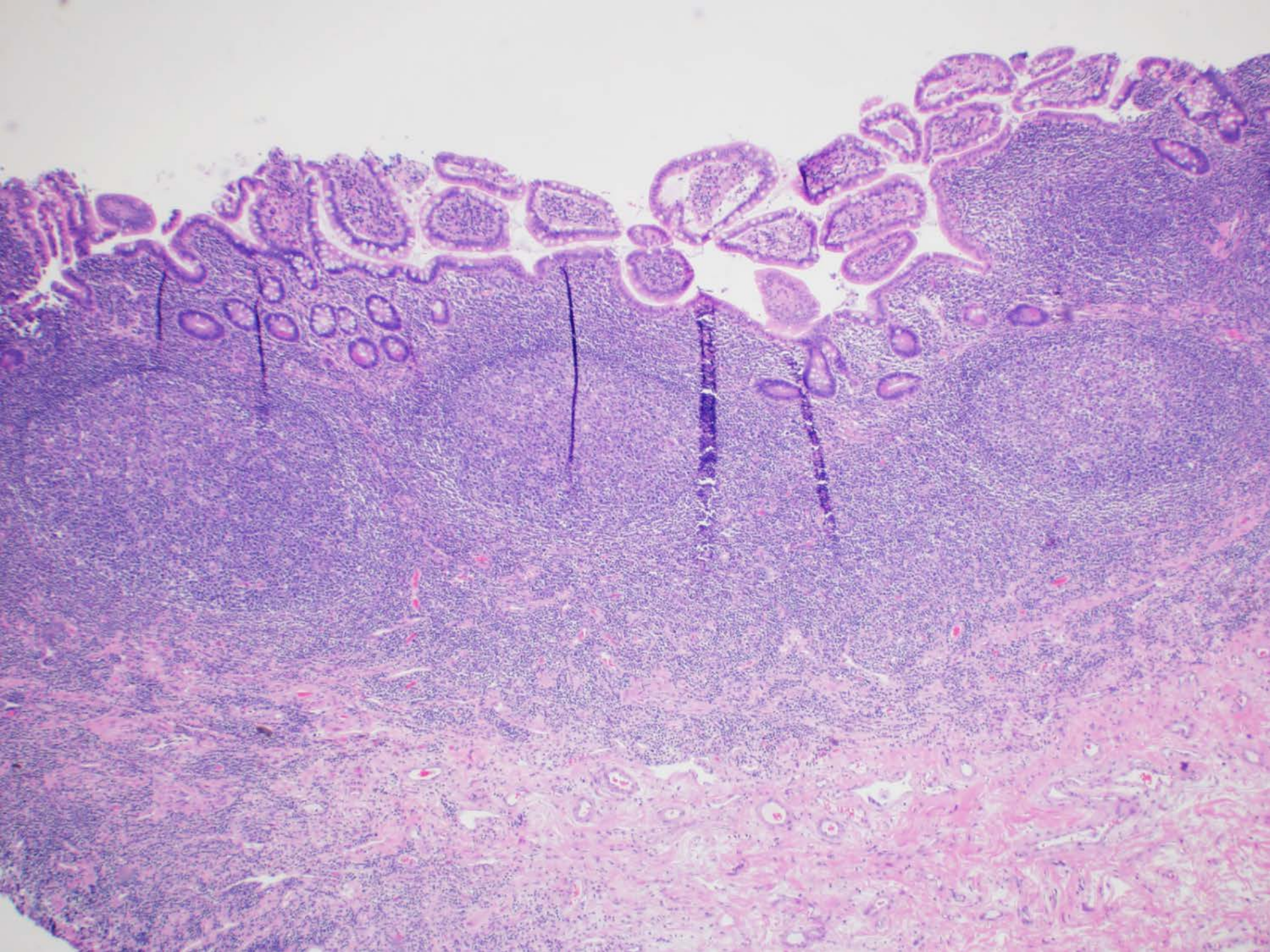
What does normal look like?



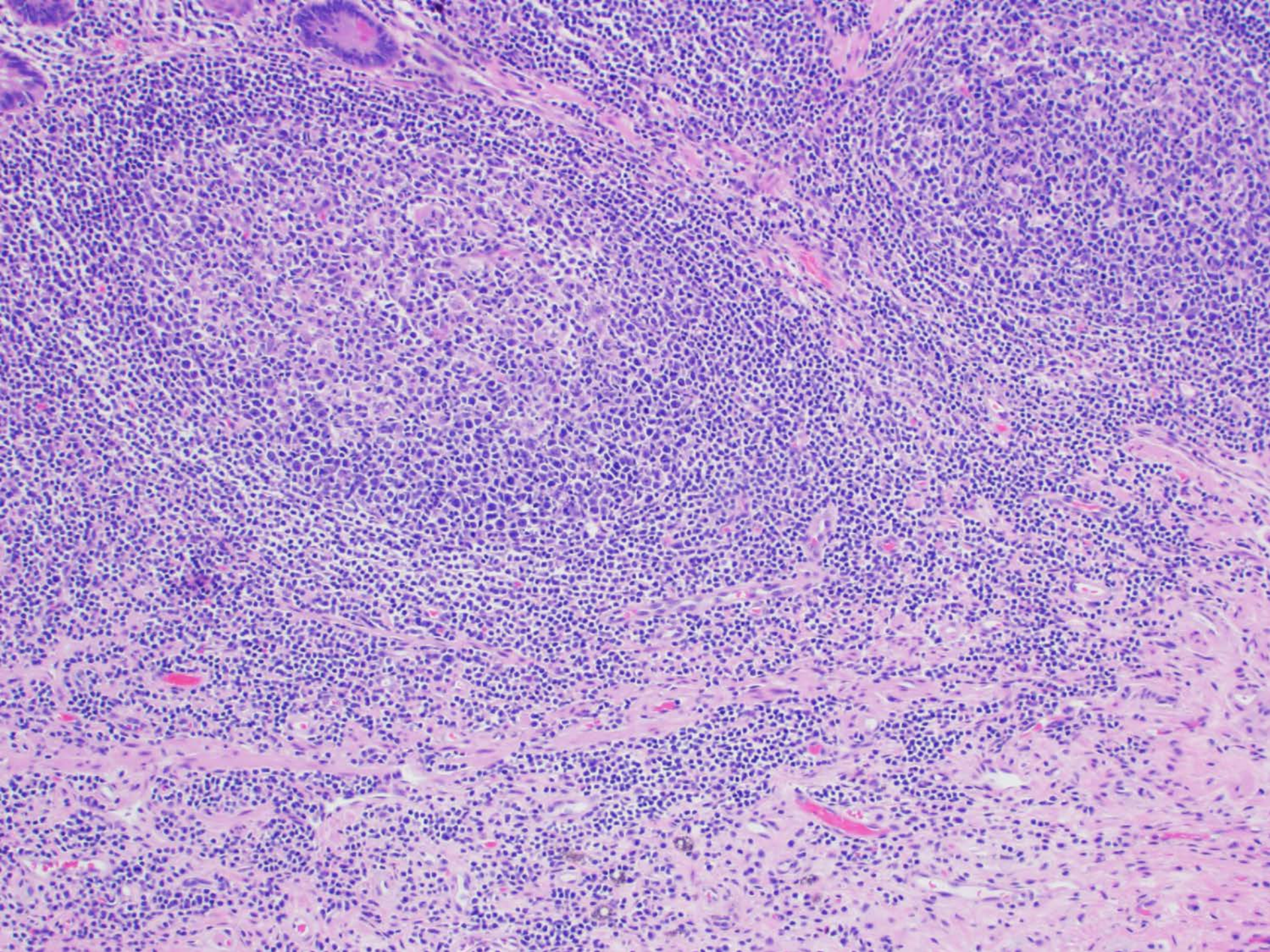




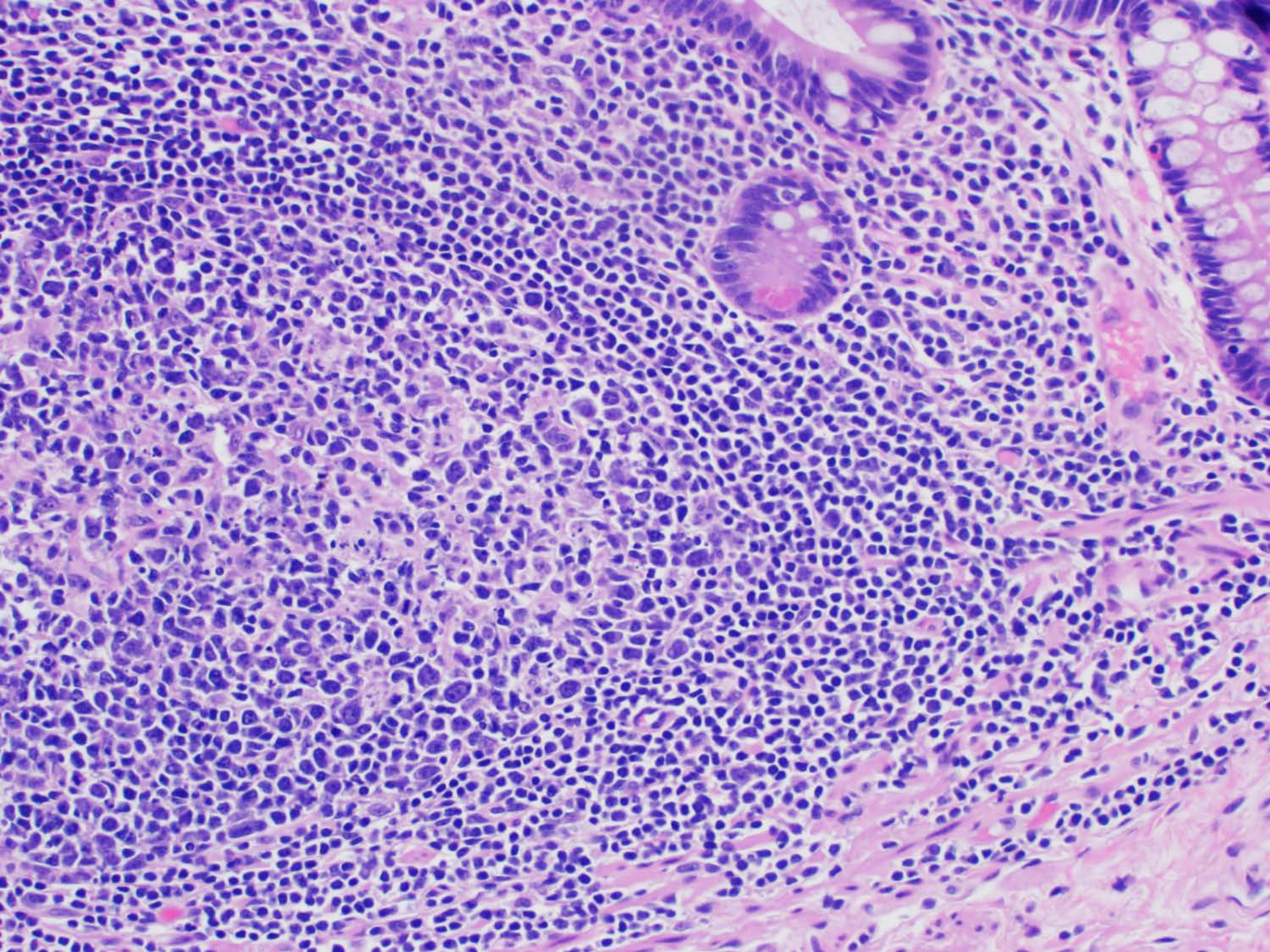




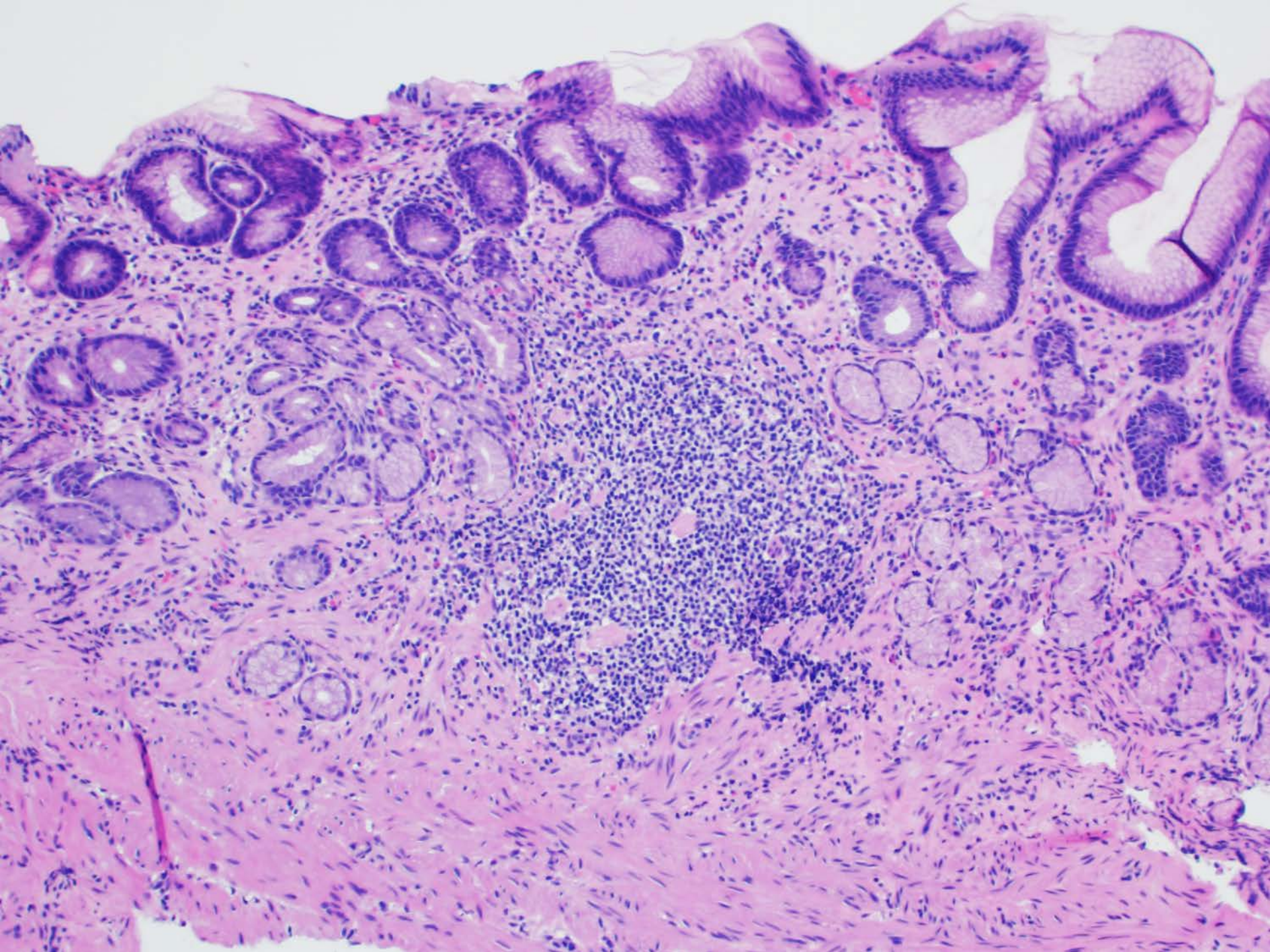














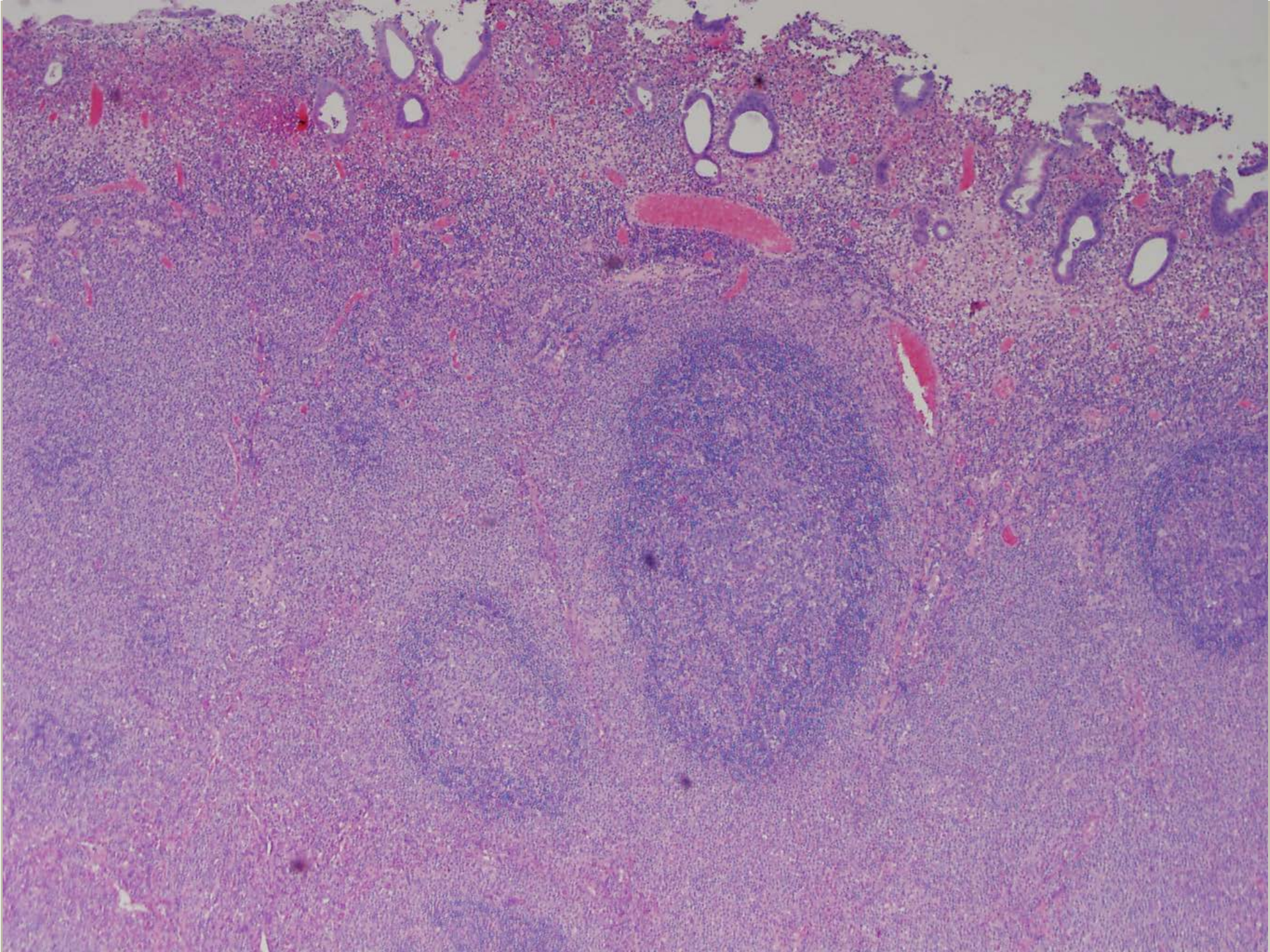


How about this?

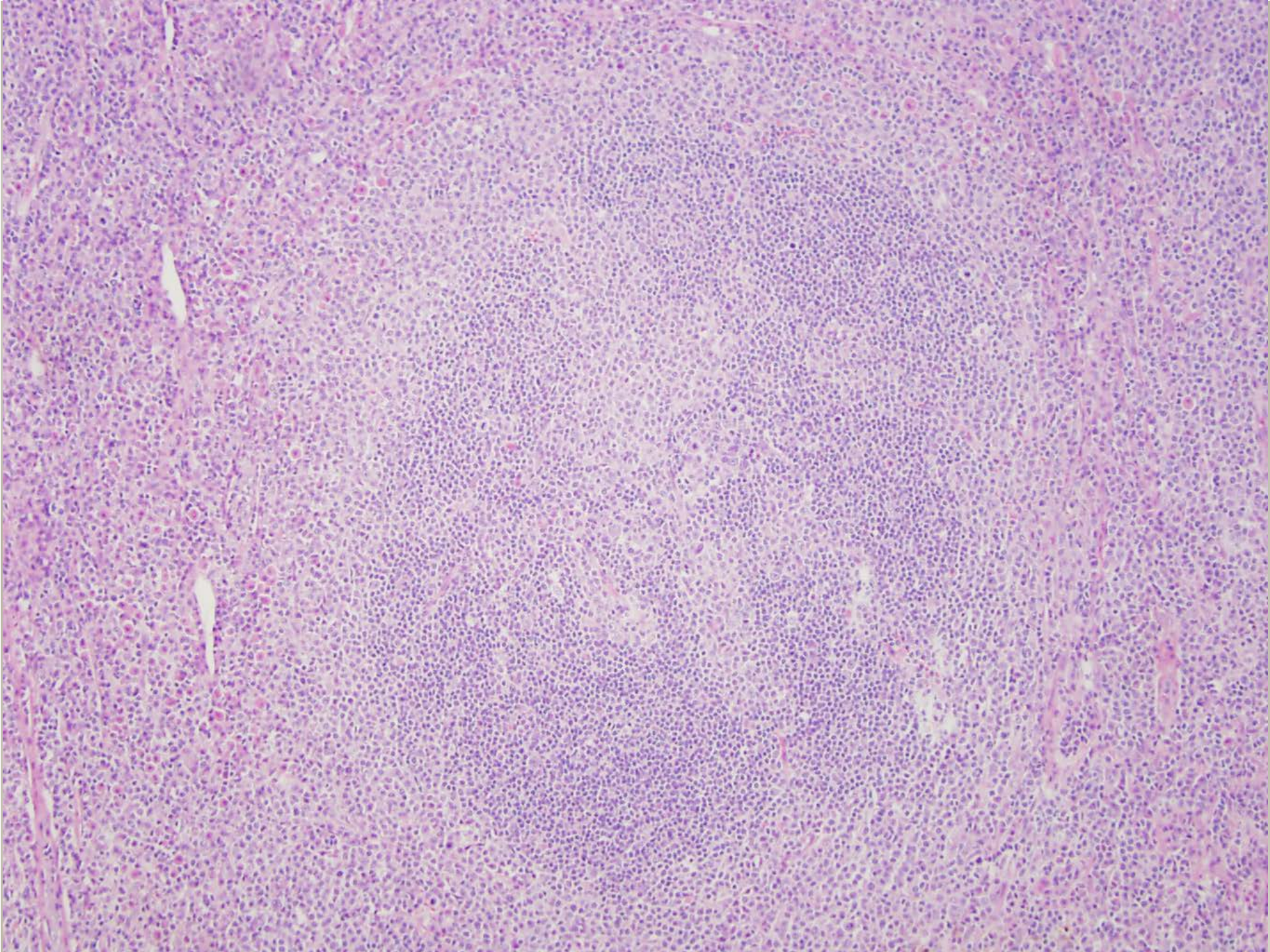


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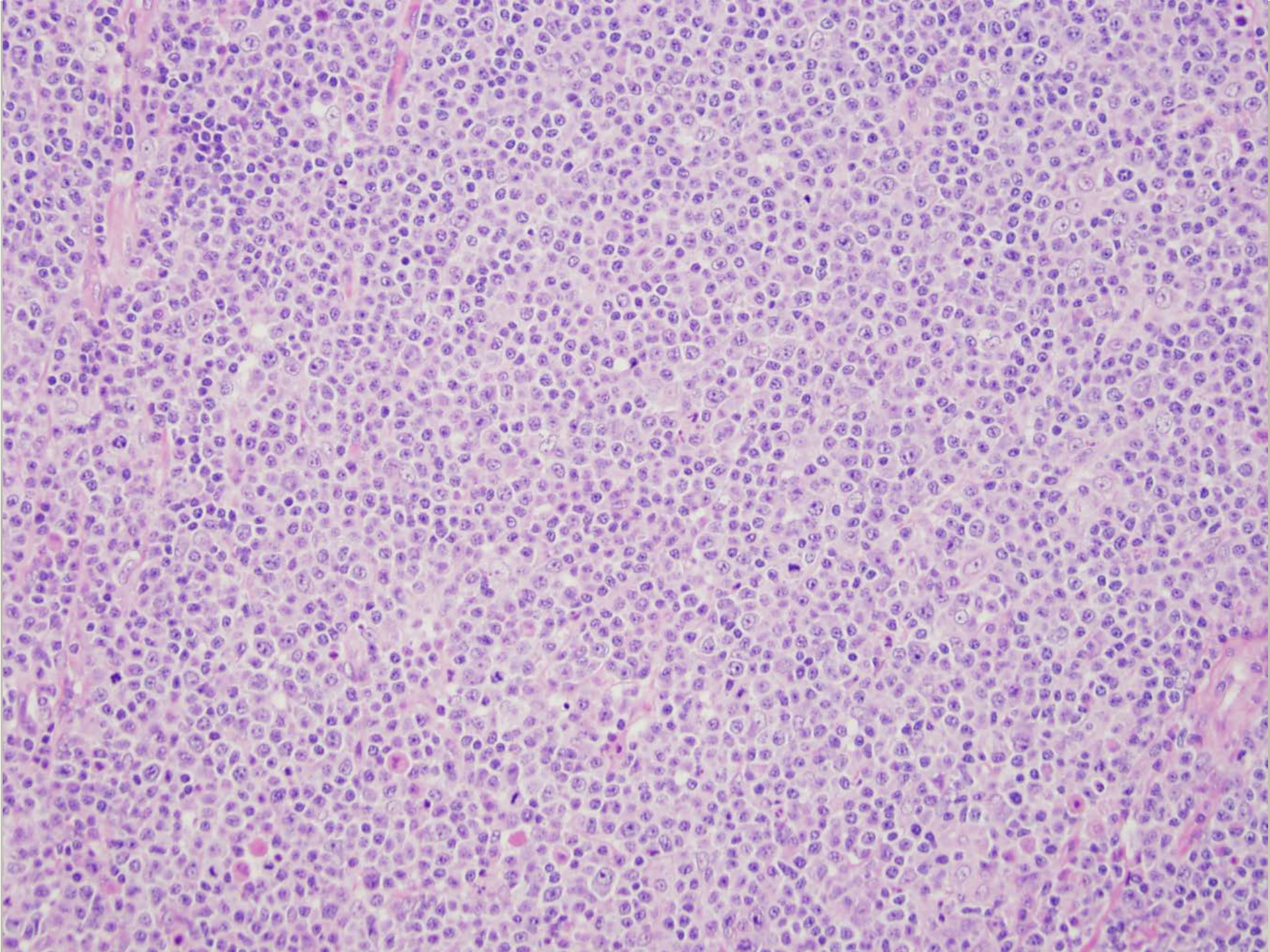












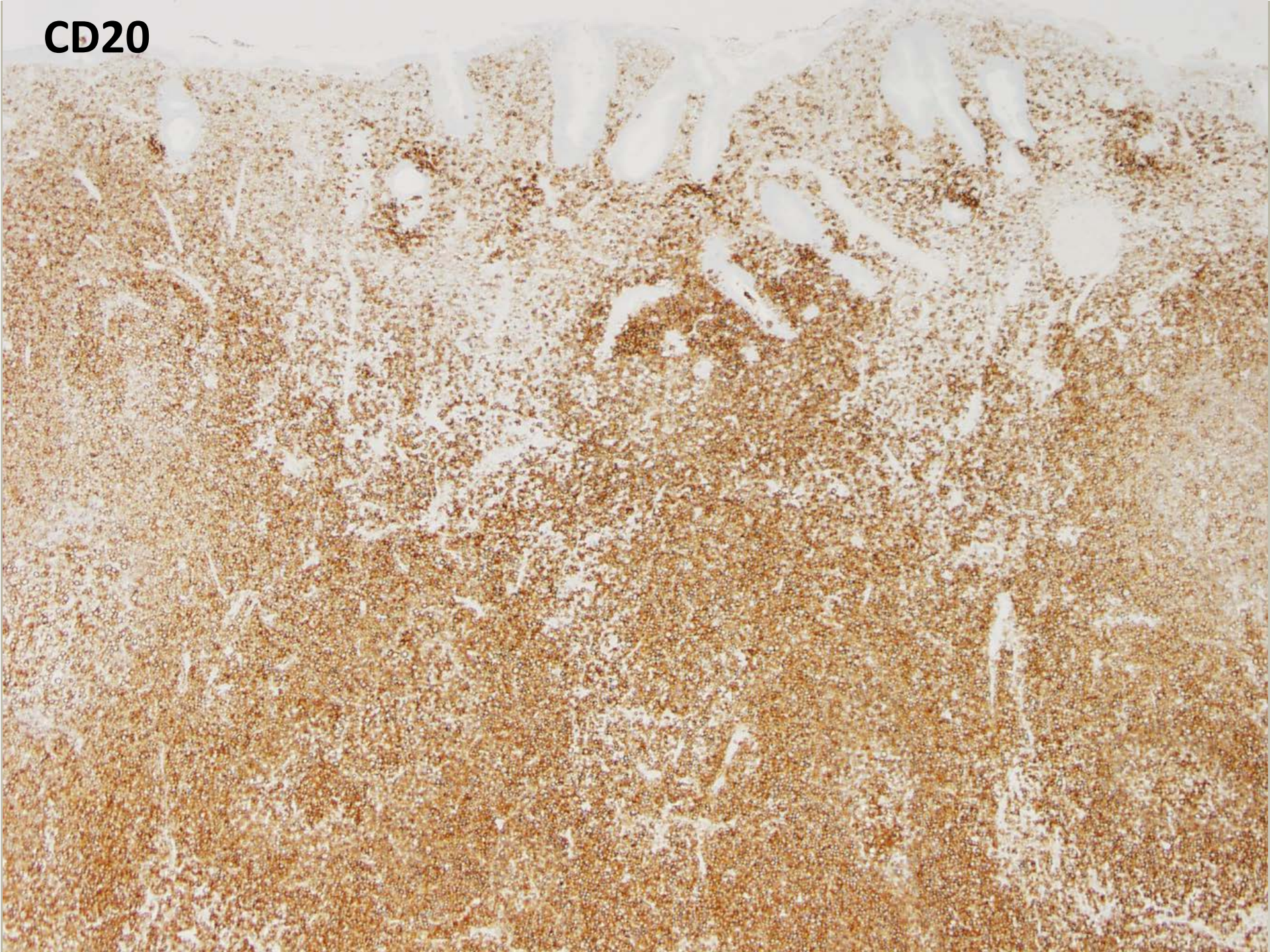


# DUMB?

- *D*estructive?
- *U*nusual location and/or morphology?
- *M*onotonous?
- *B*ig?



**CD20**





**BCL-2**





# MALT lymphoma

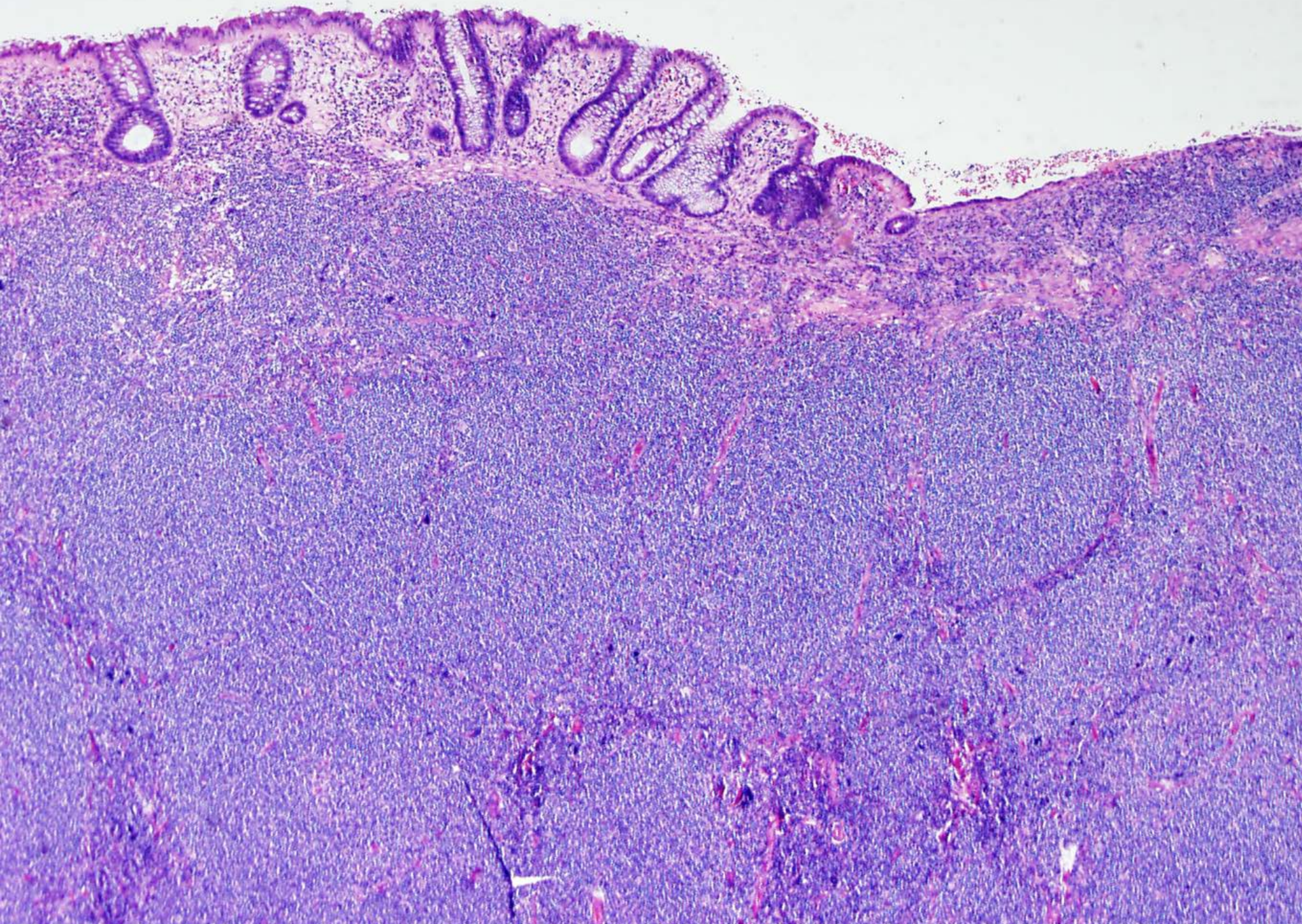


Here's another

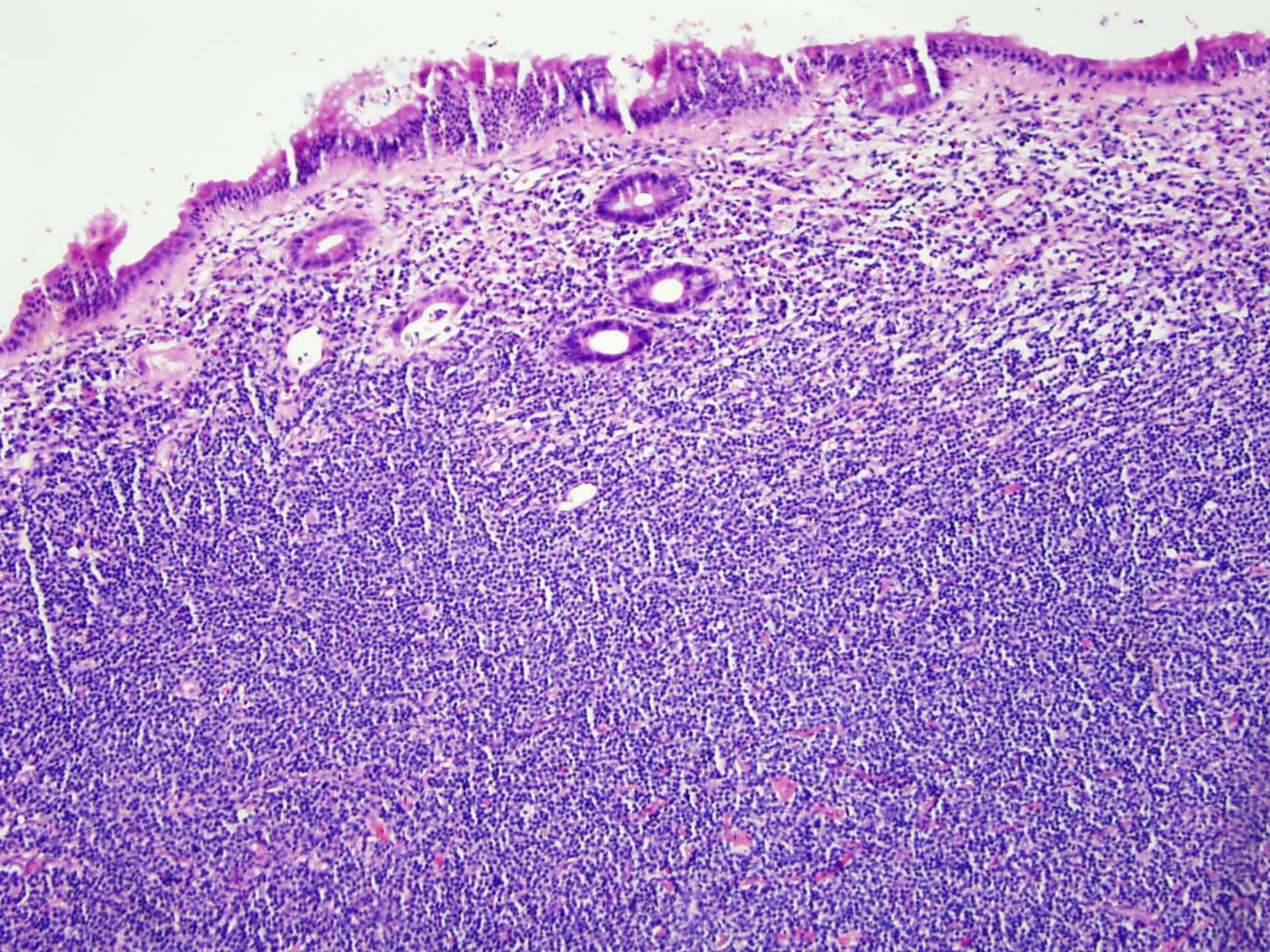


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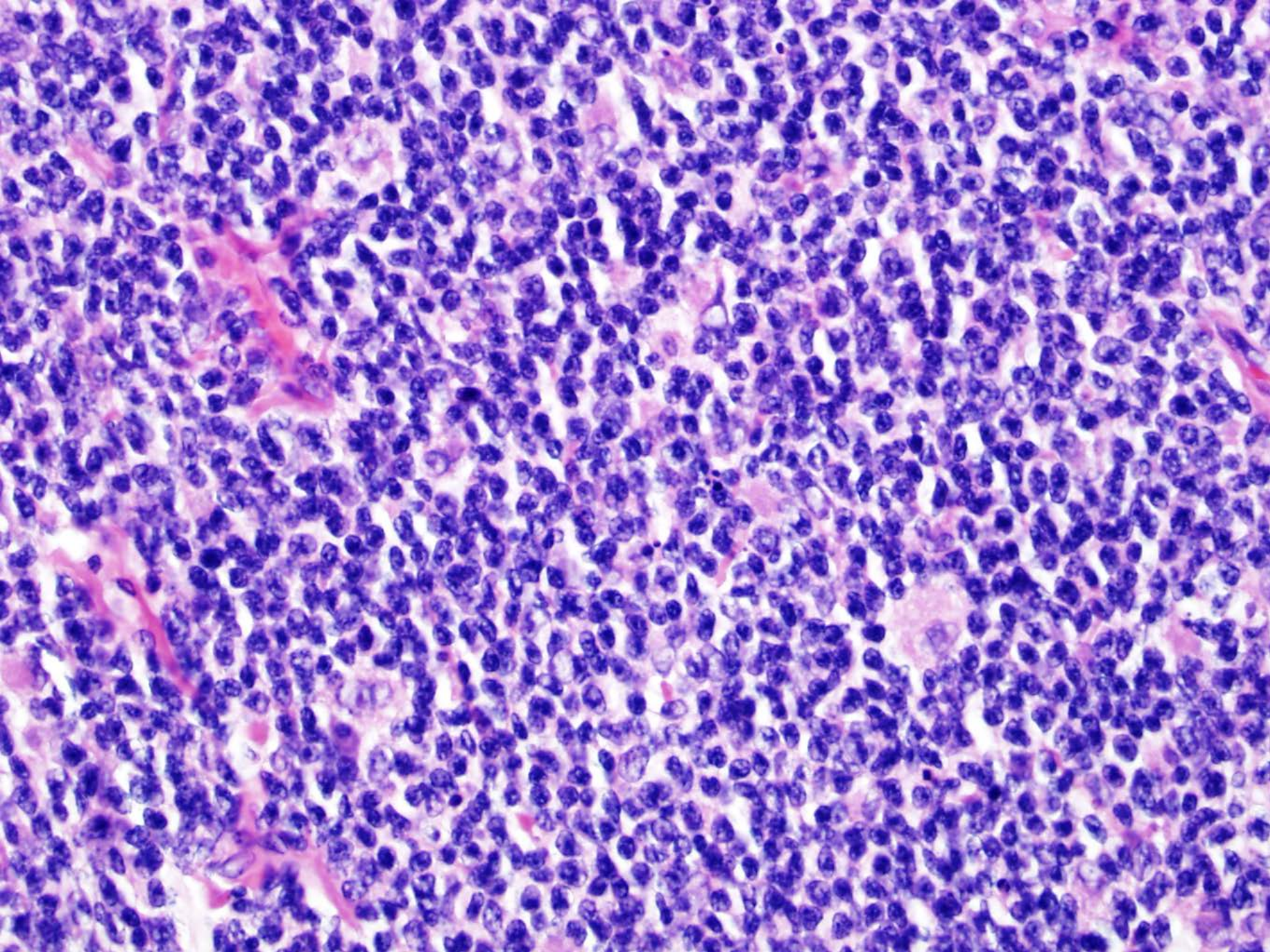




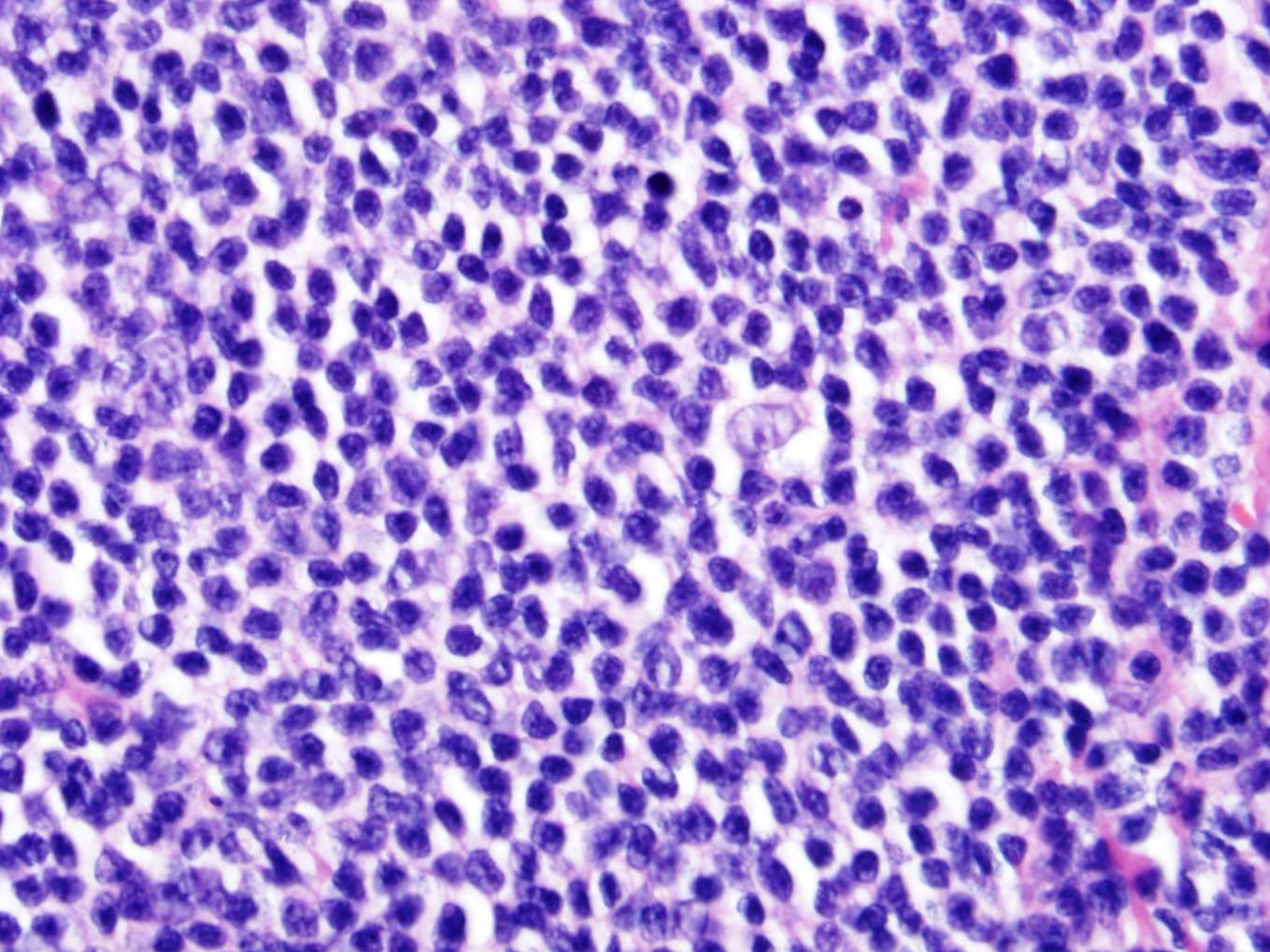












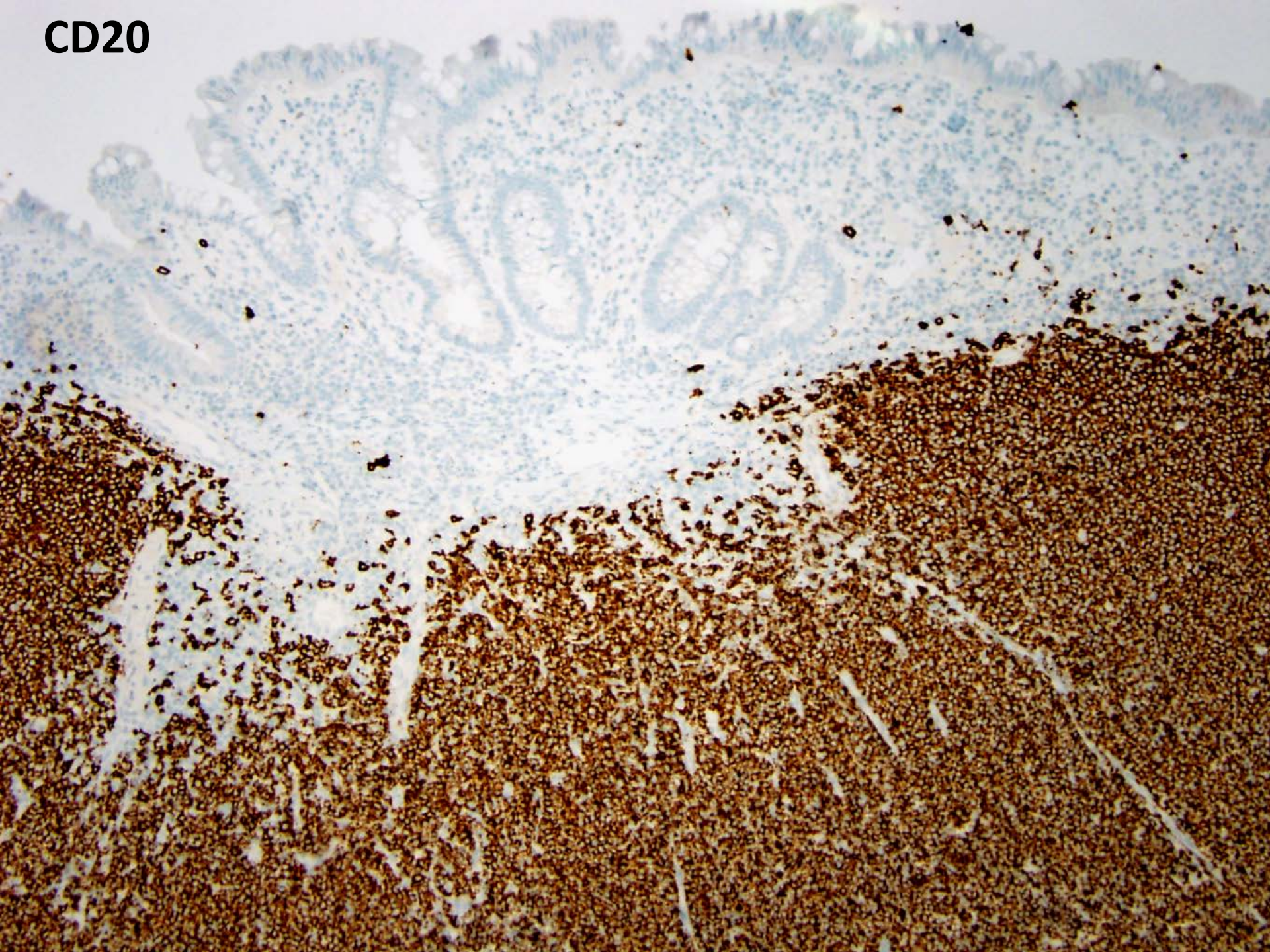


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CD20



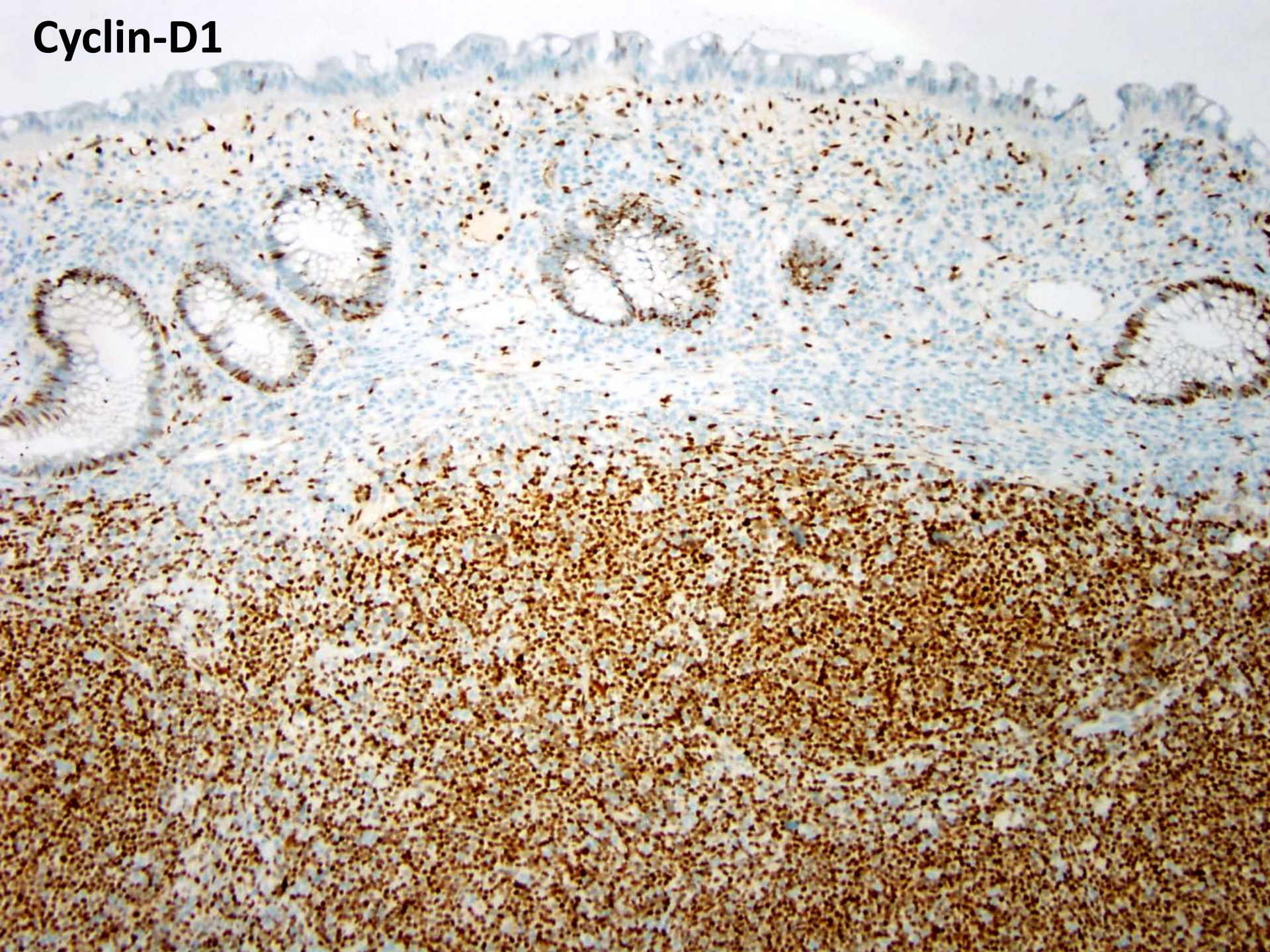


**CD5**





# Cyclin-D1





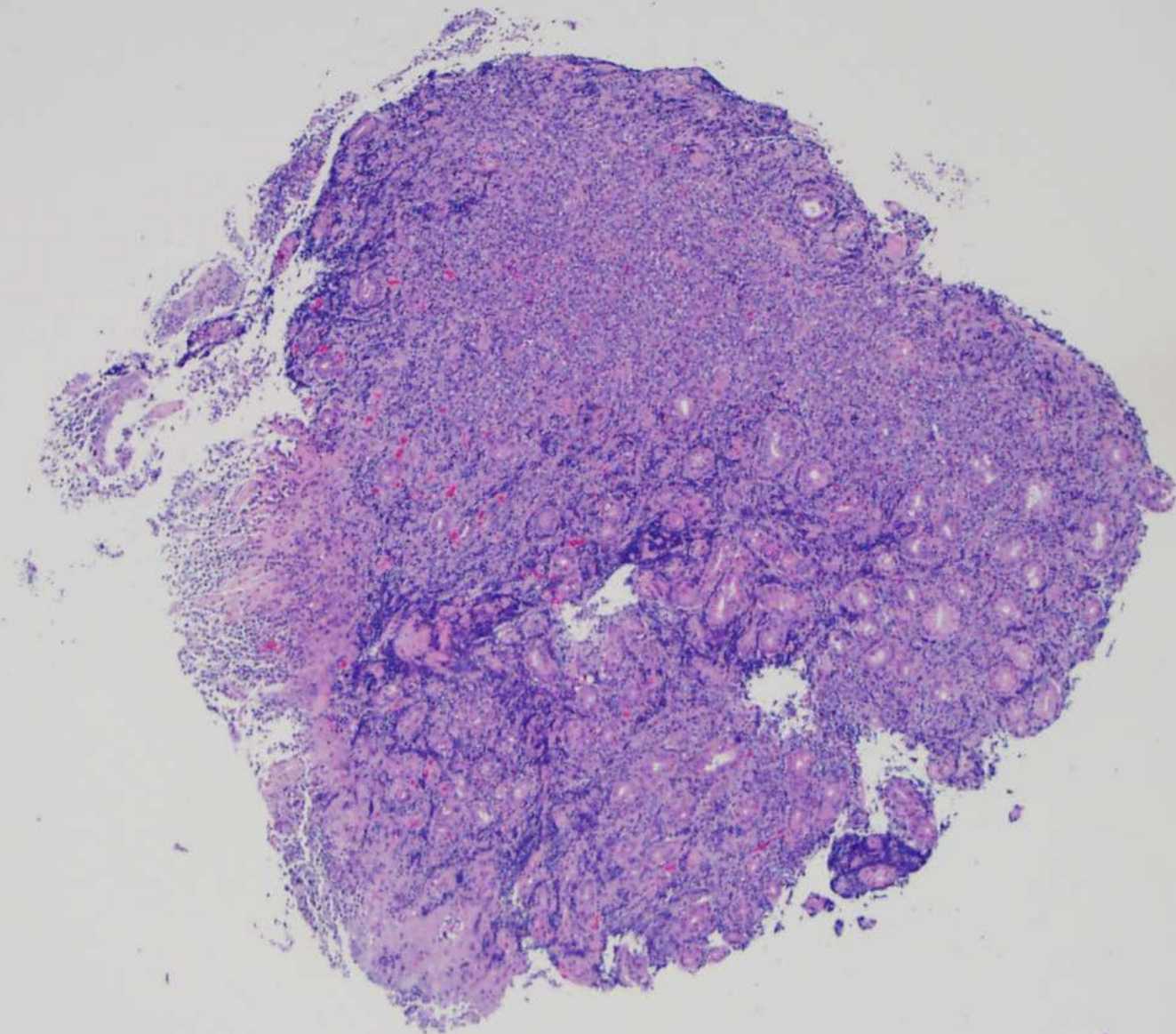
# Mantle cell lymphoma



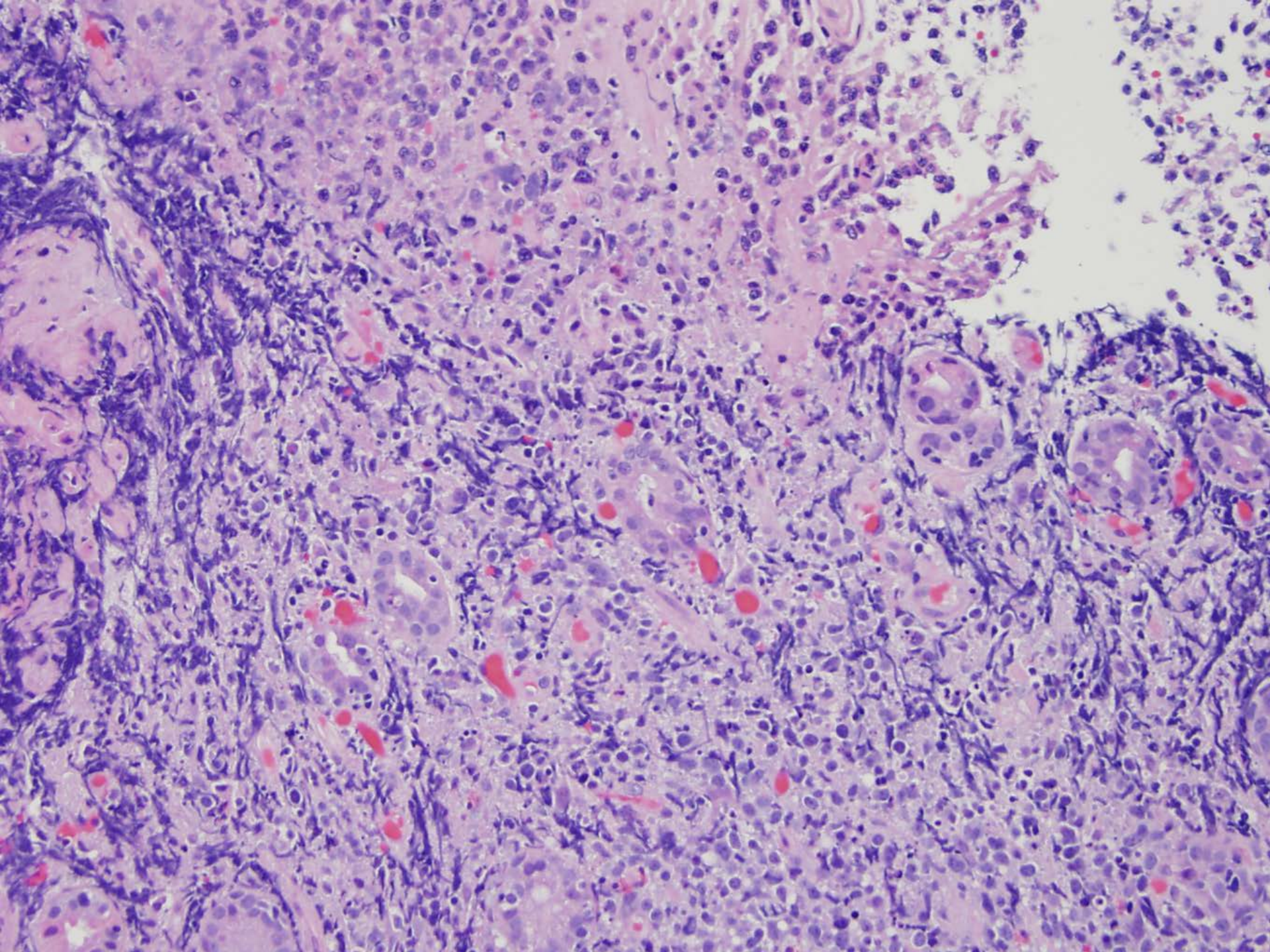
Next!



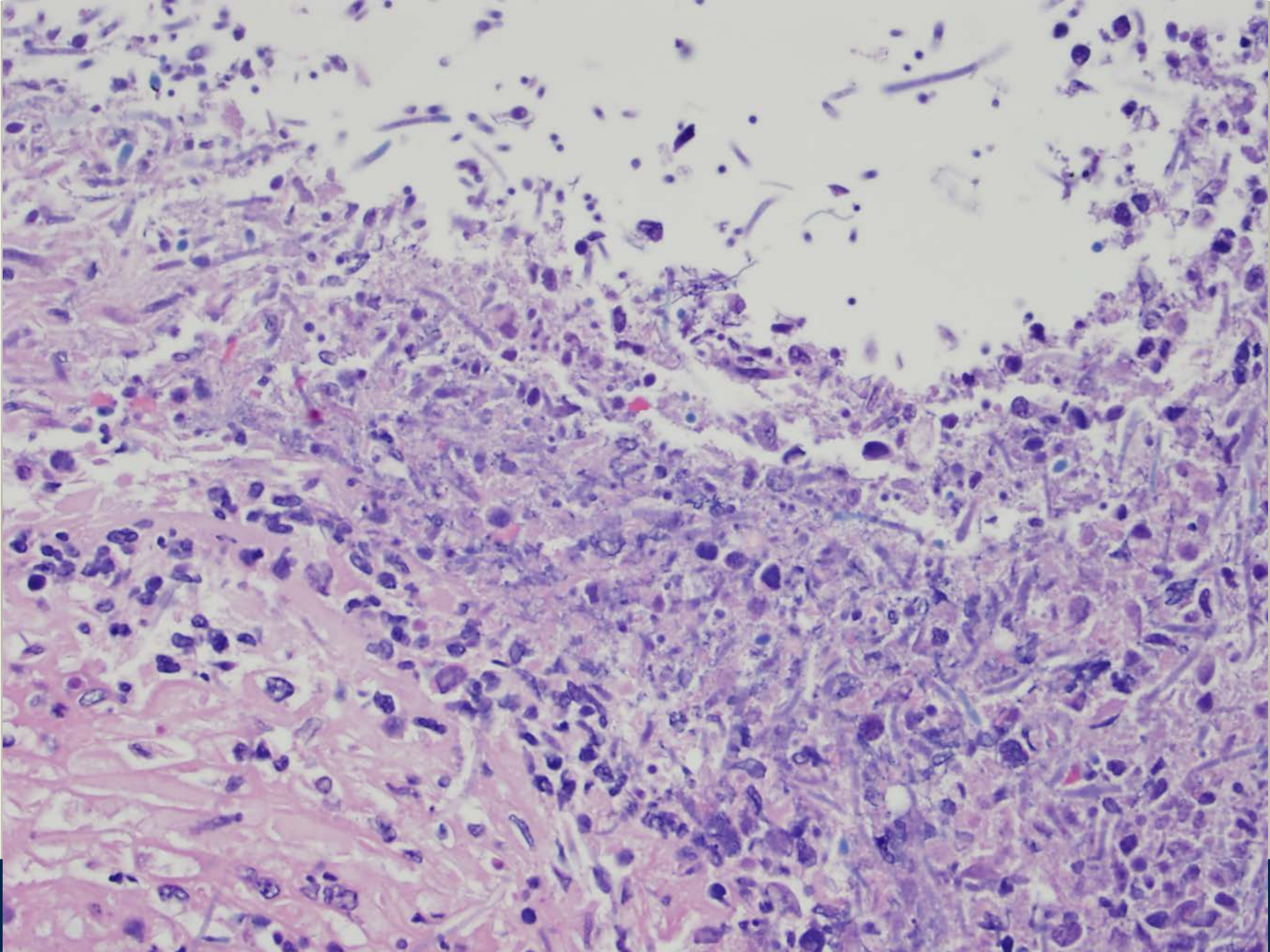




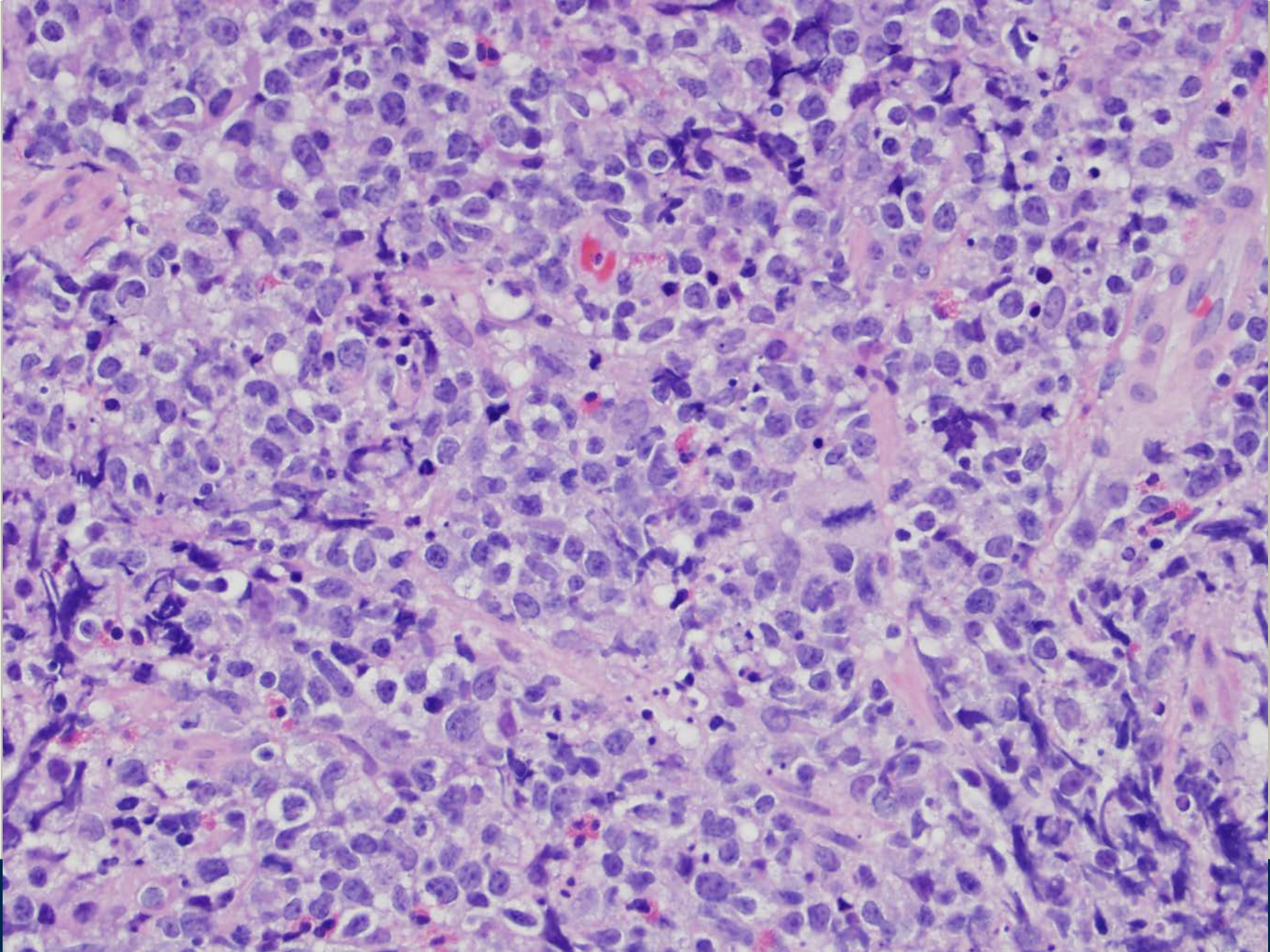












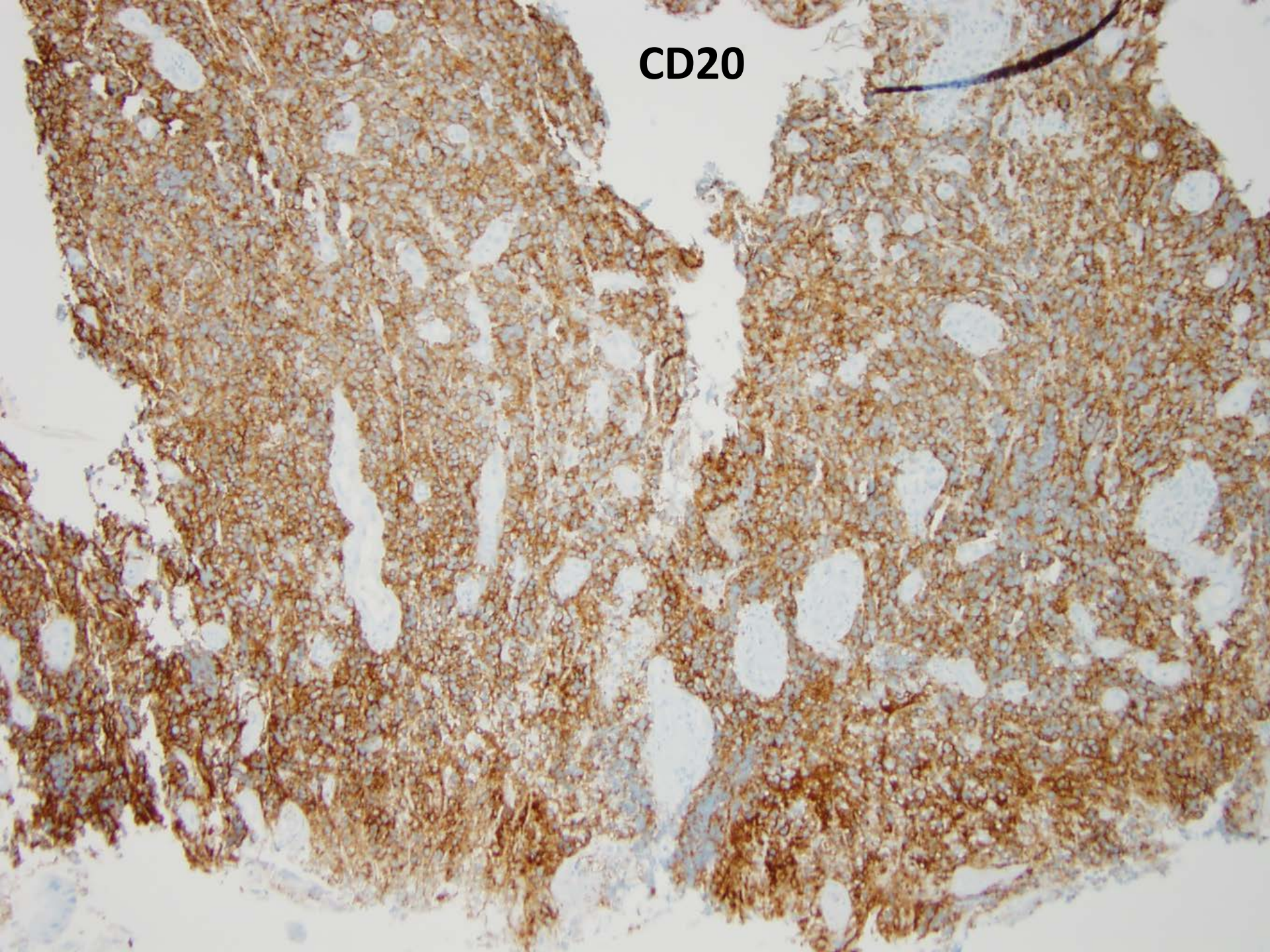


# DUMB?

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**CD20**





# Diffuse large B cell lymphoma



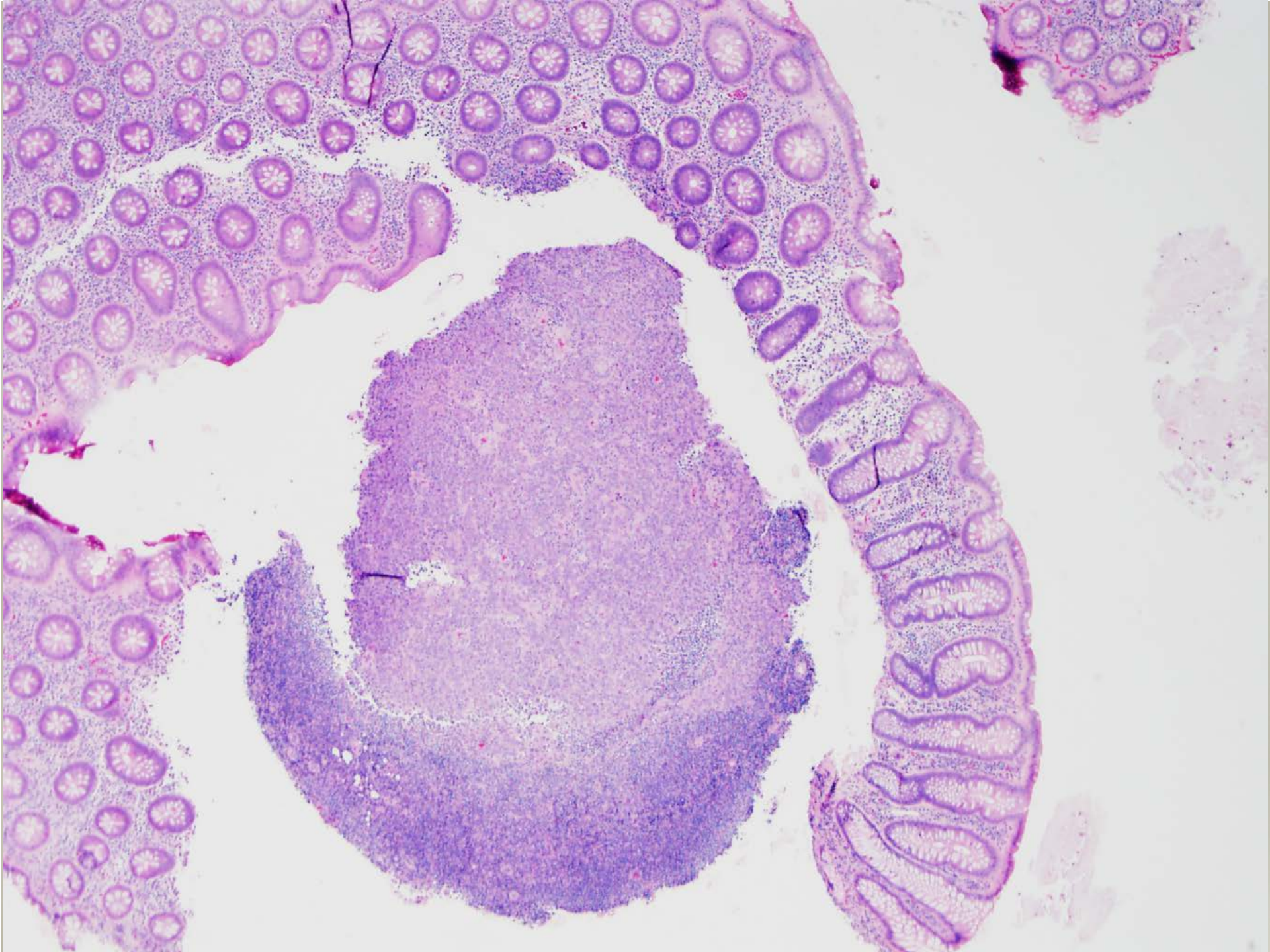


Tired yet?

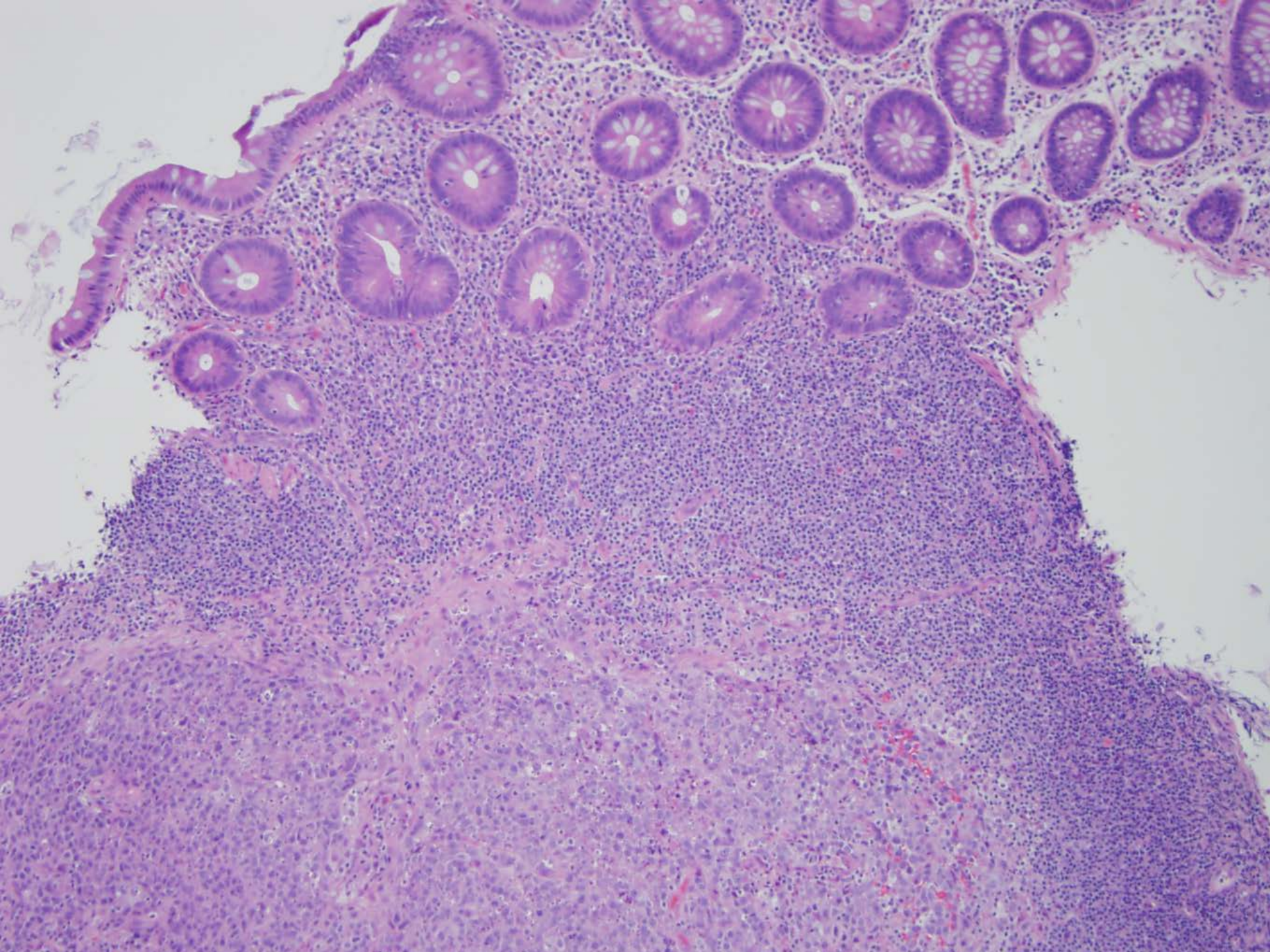


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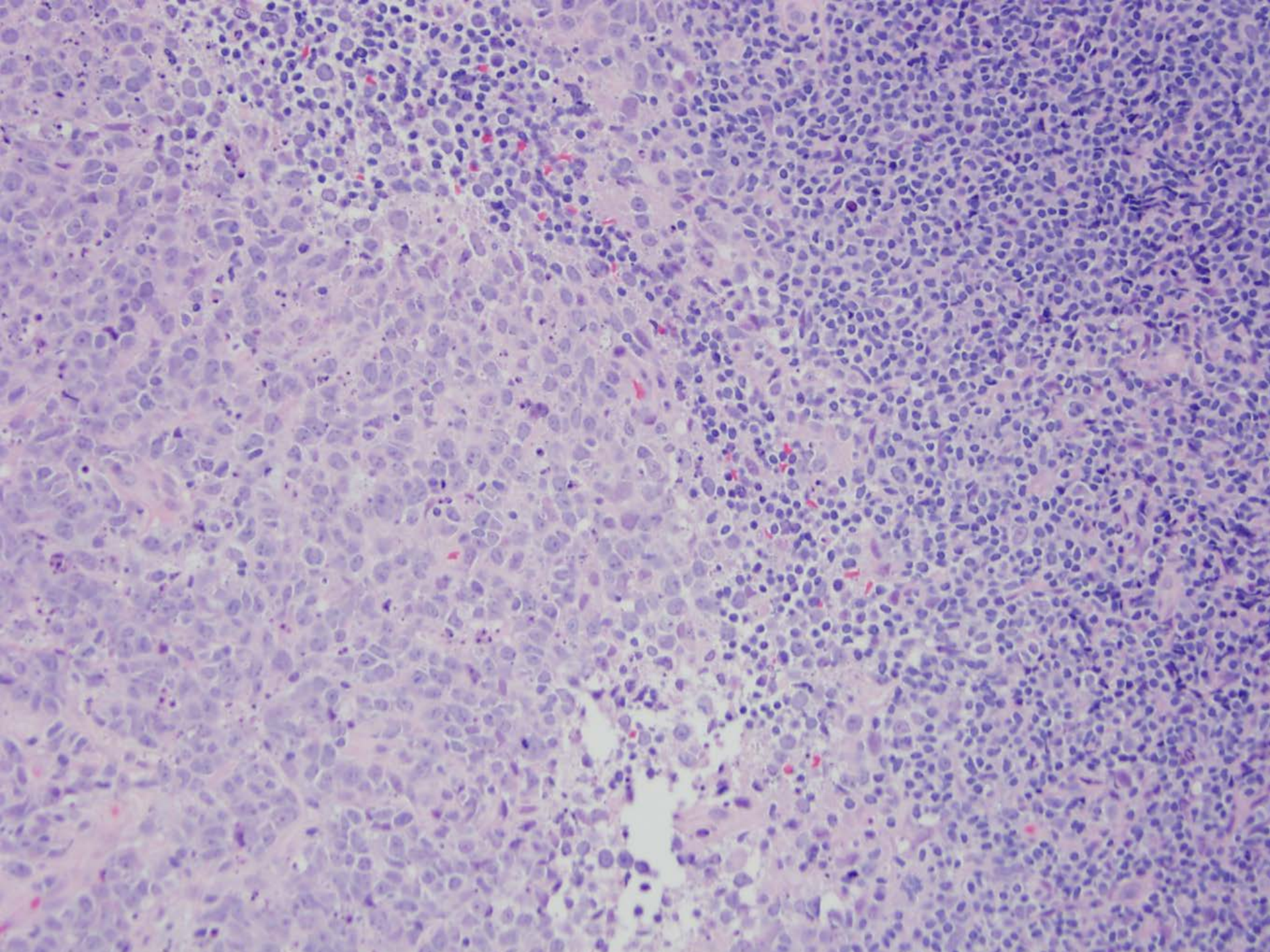




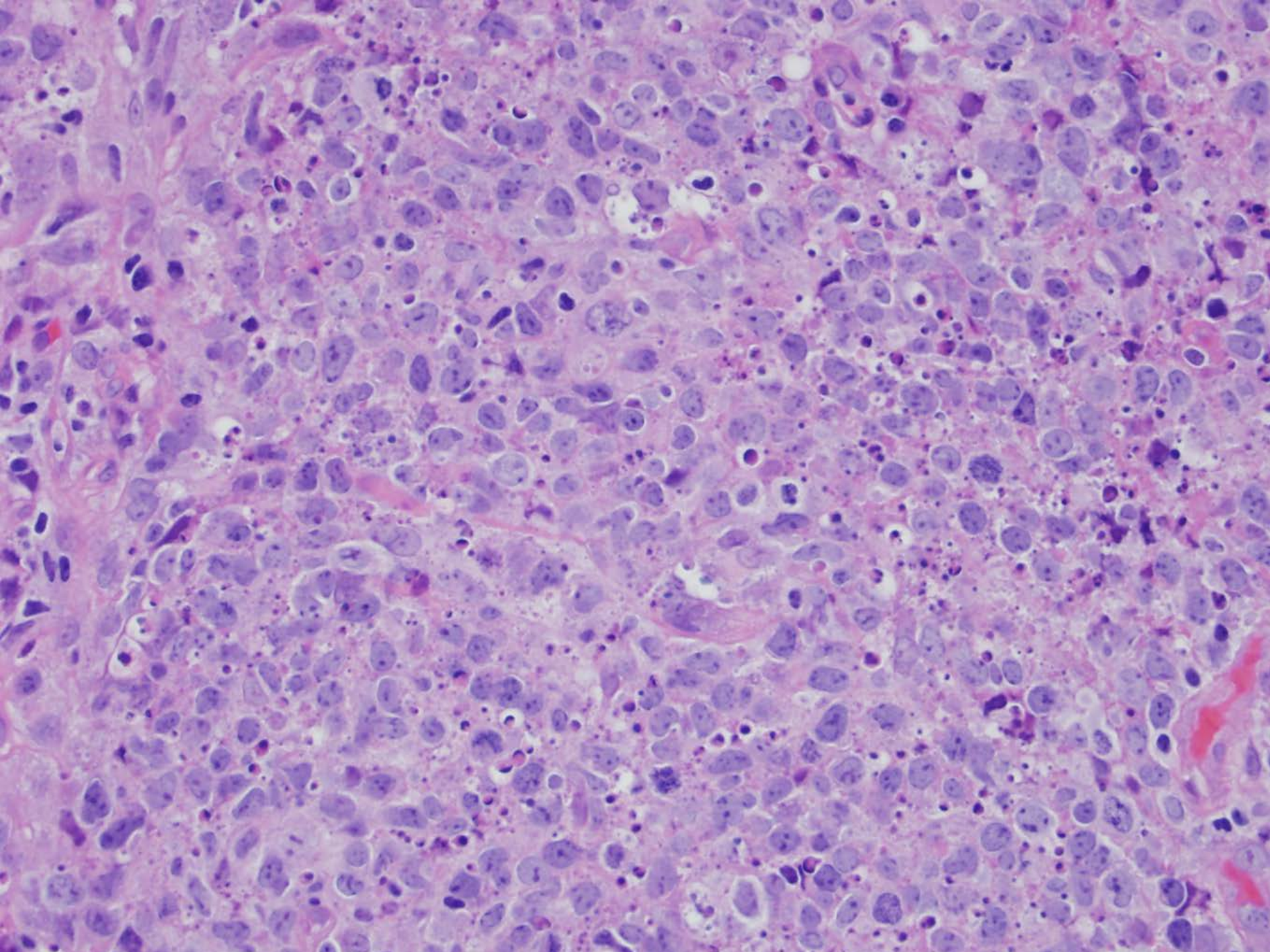












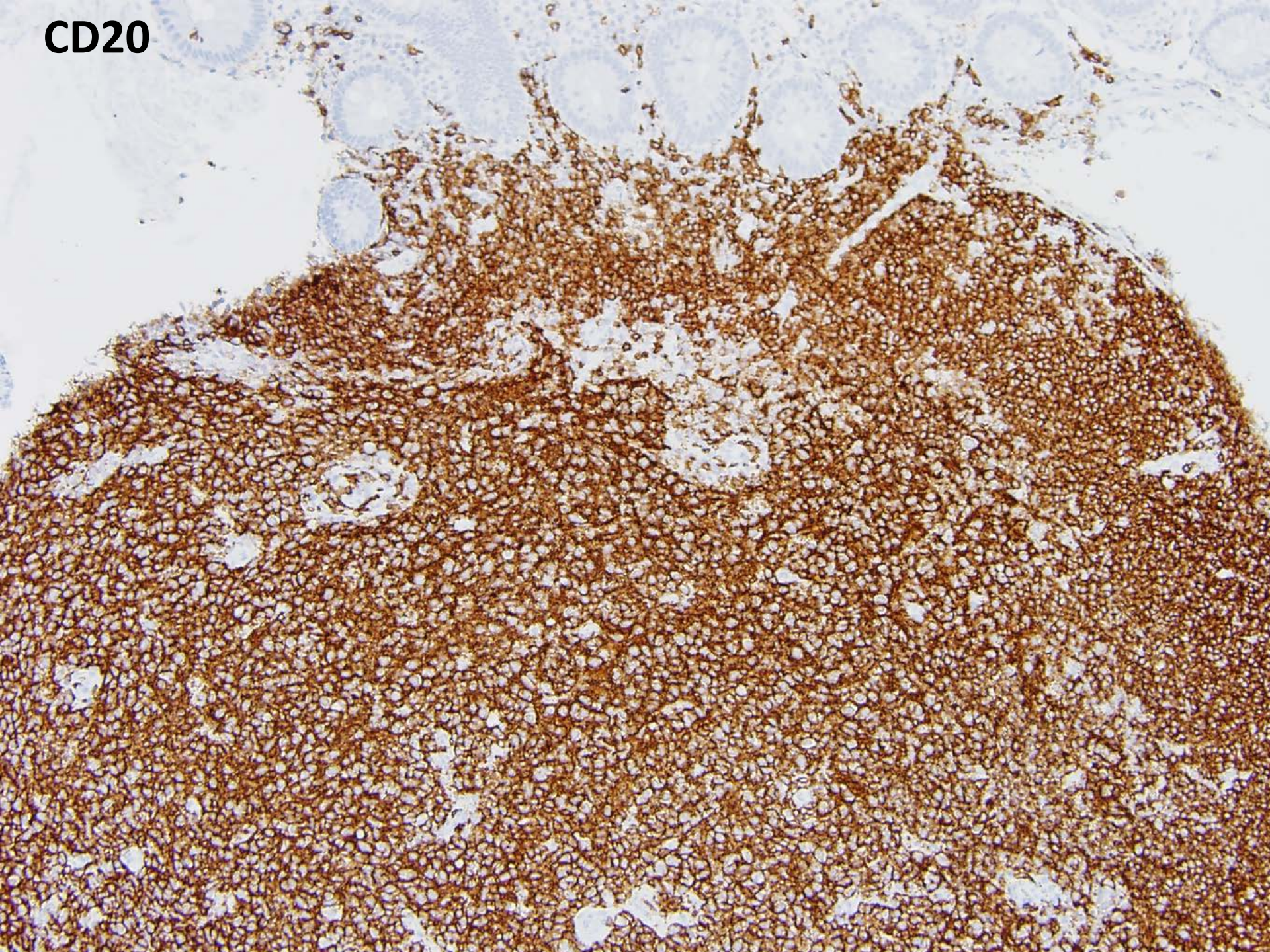


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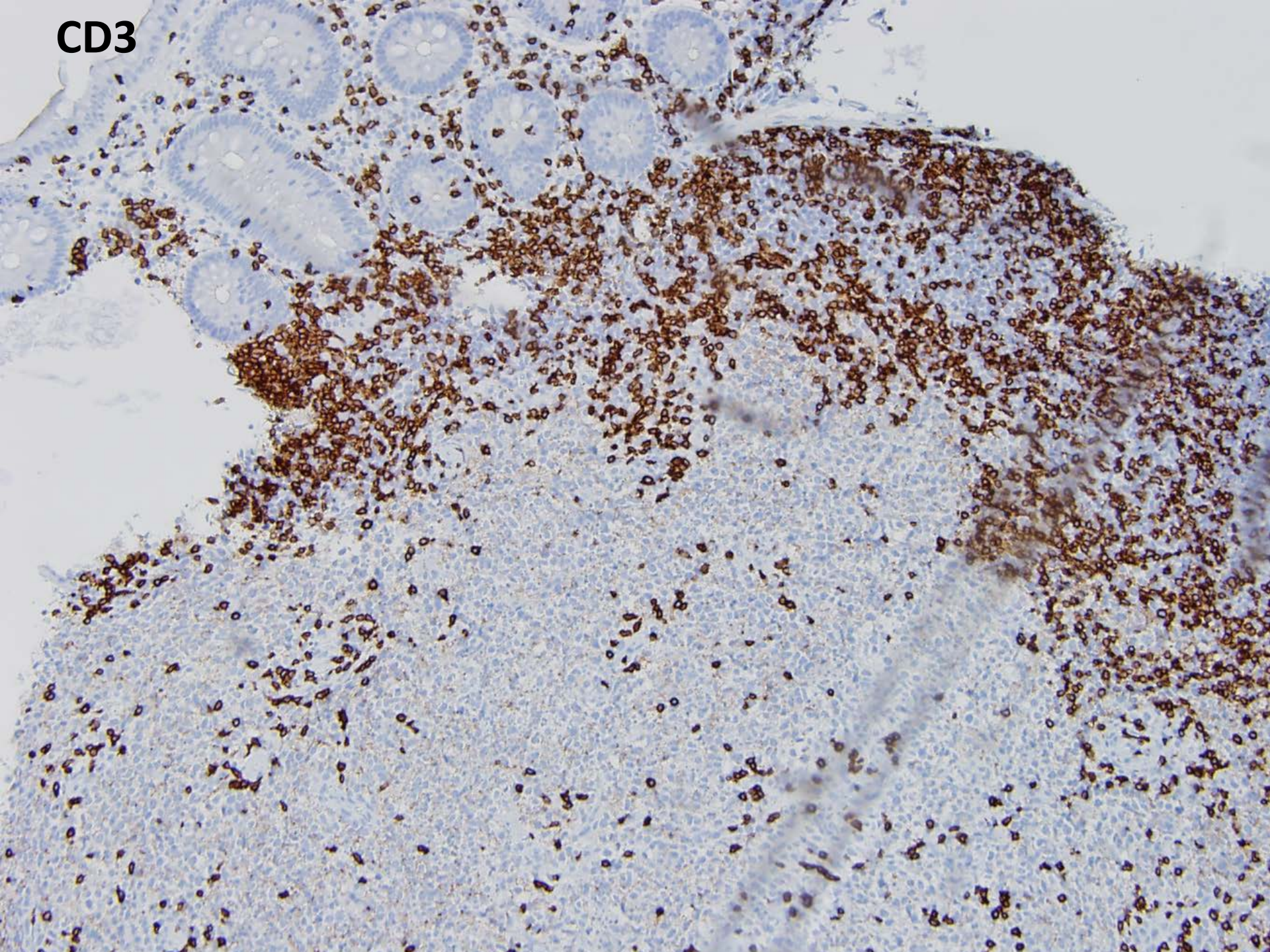


**CD20**



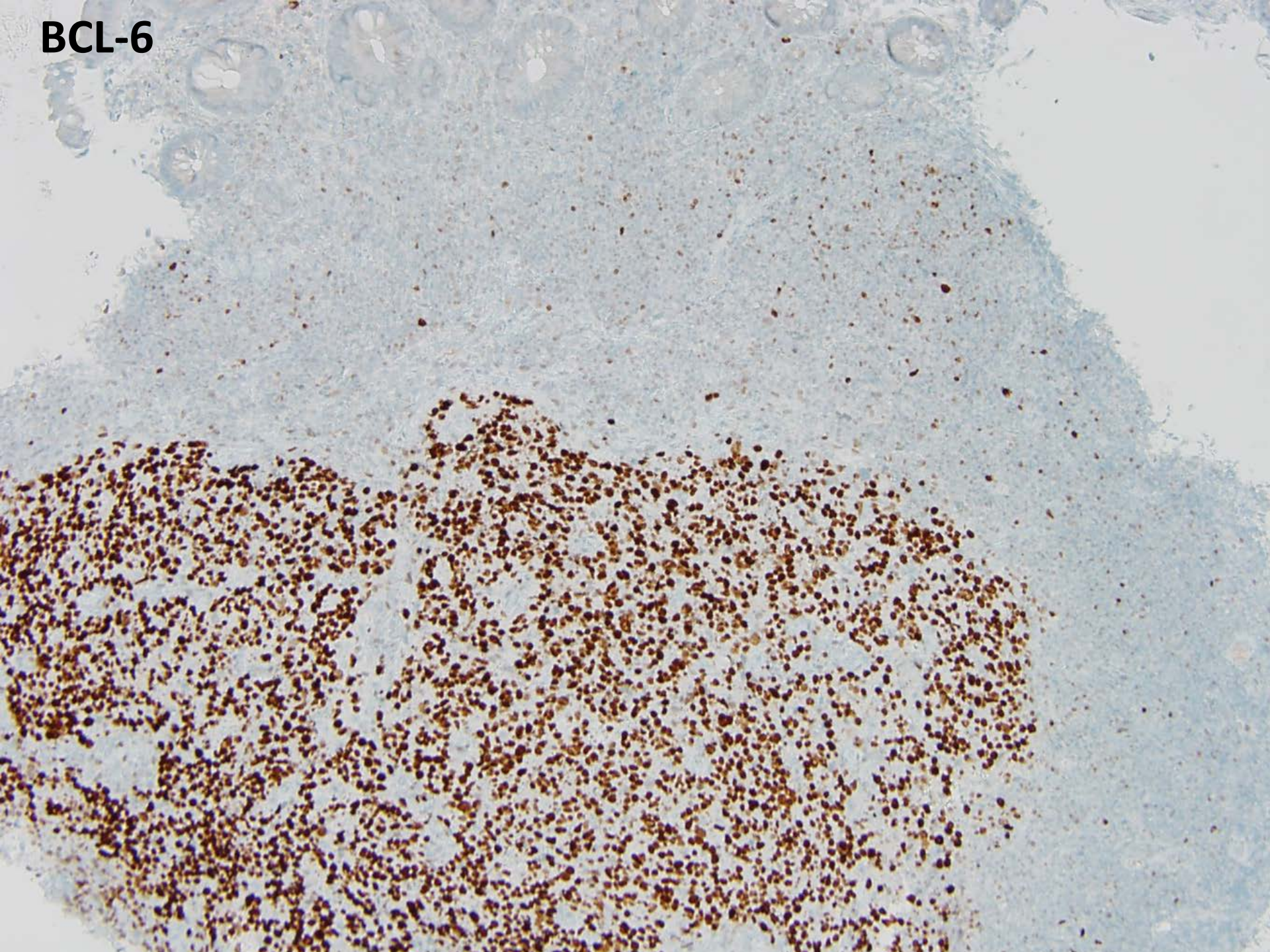


CD3



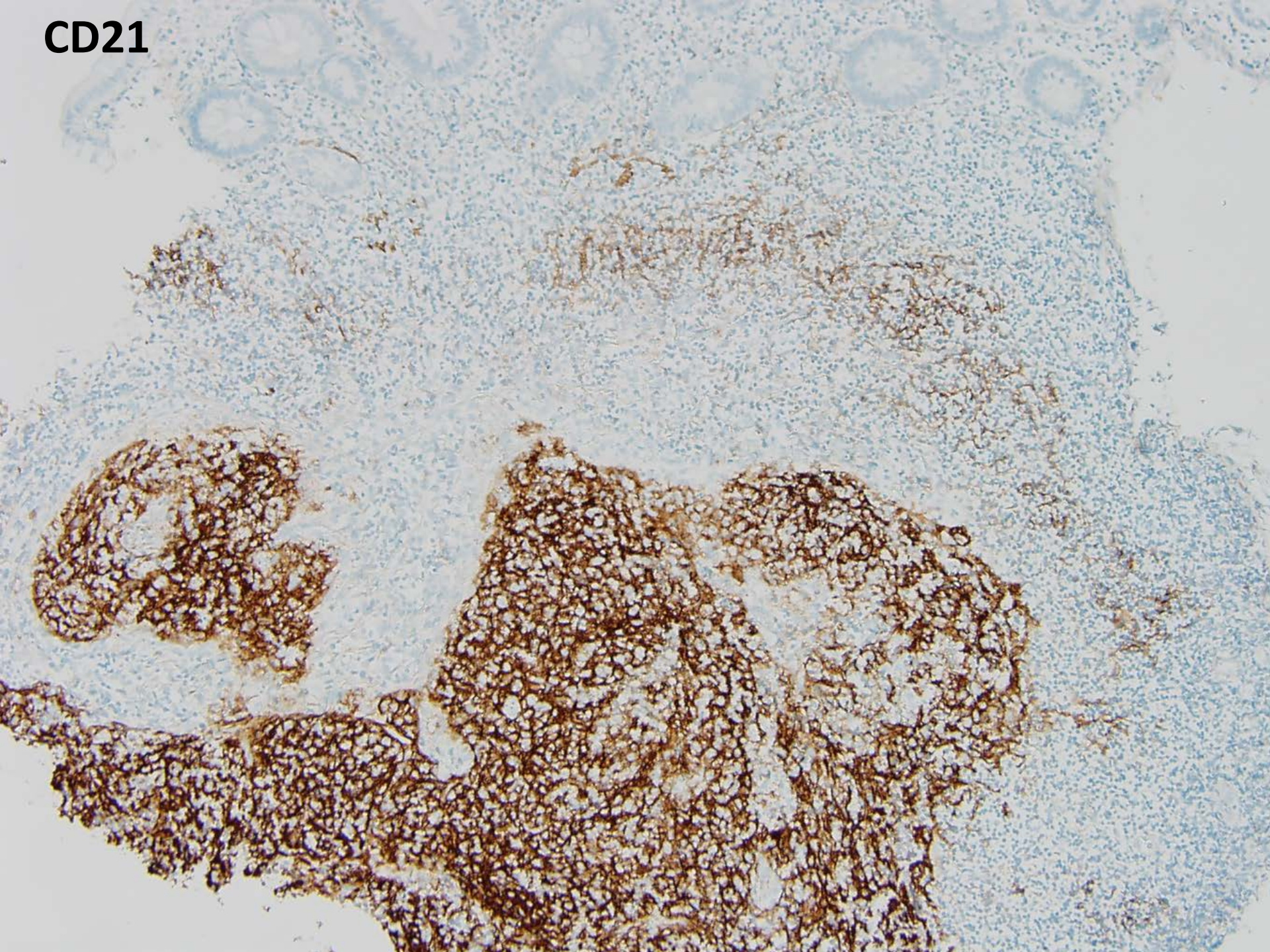


**BCL-6**



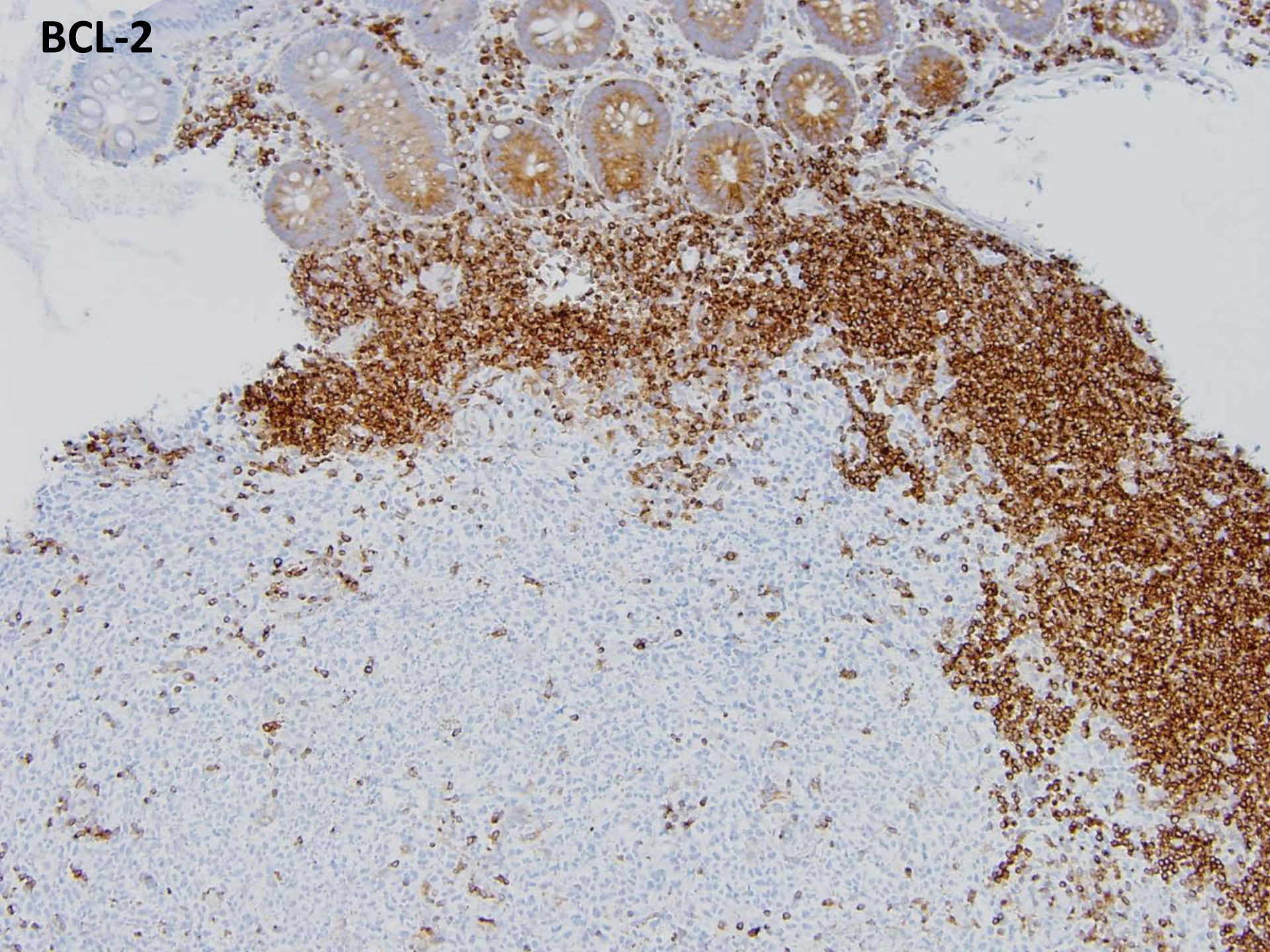


**CD21**



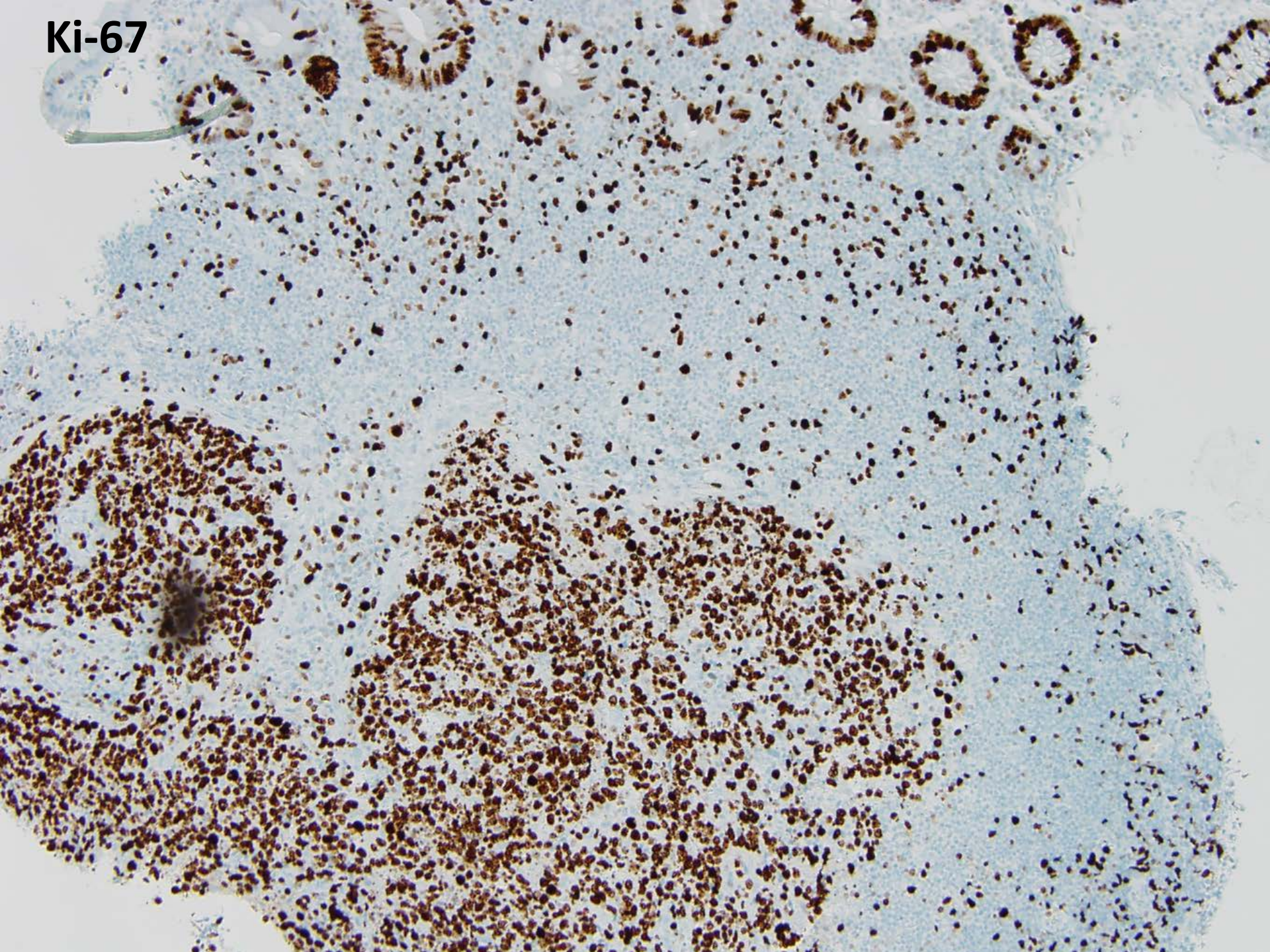


**BCL-2**





Ki-67

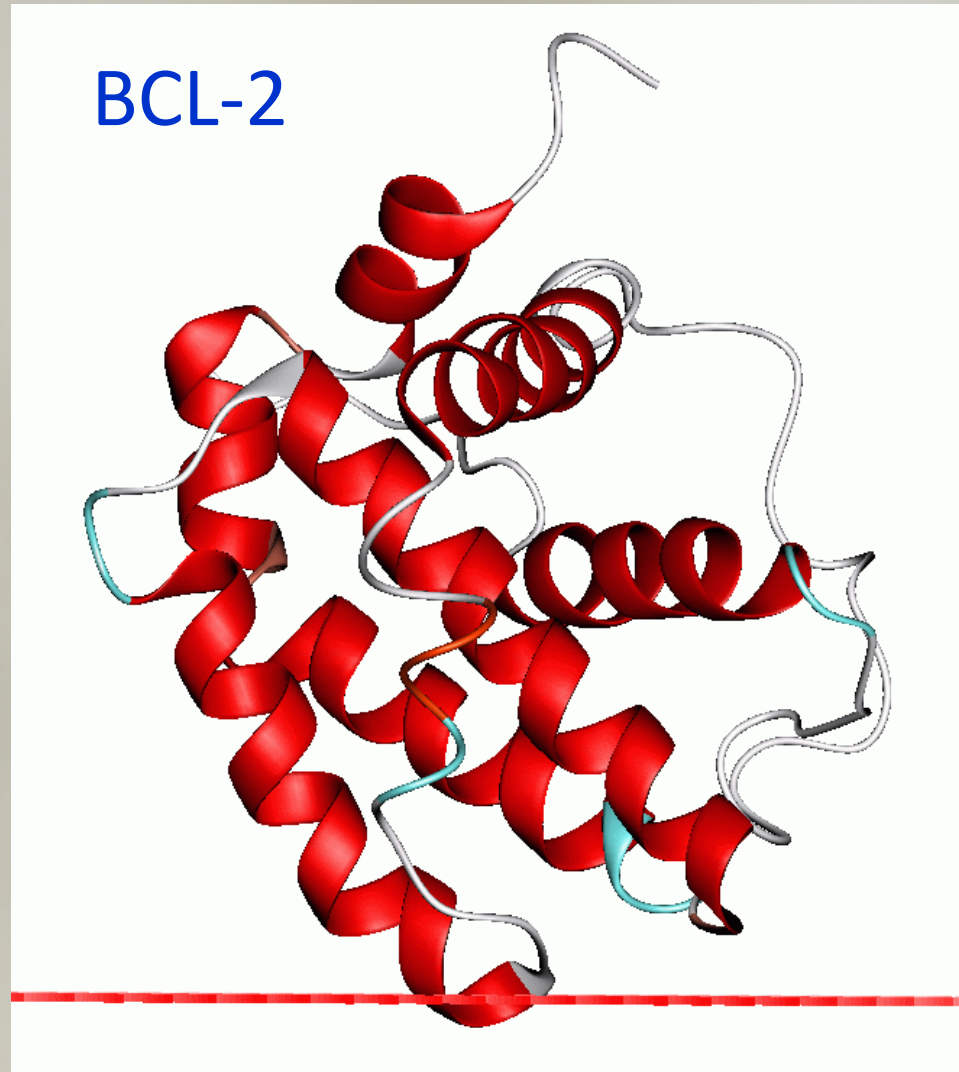




(Large) benign germinal center



# Be careful with BCL-2



<http://opm.phar.umich.edu/images/proteins/1g5m.gif>



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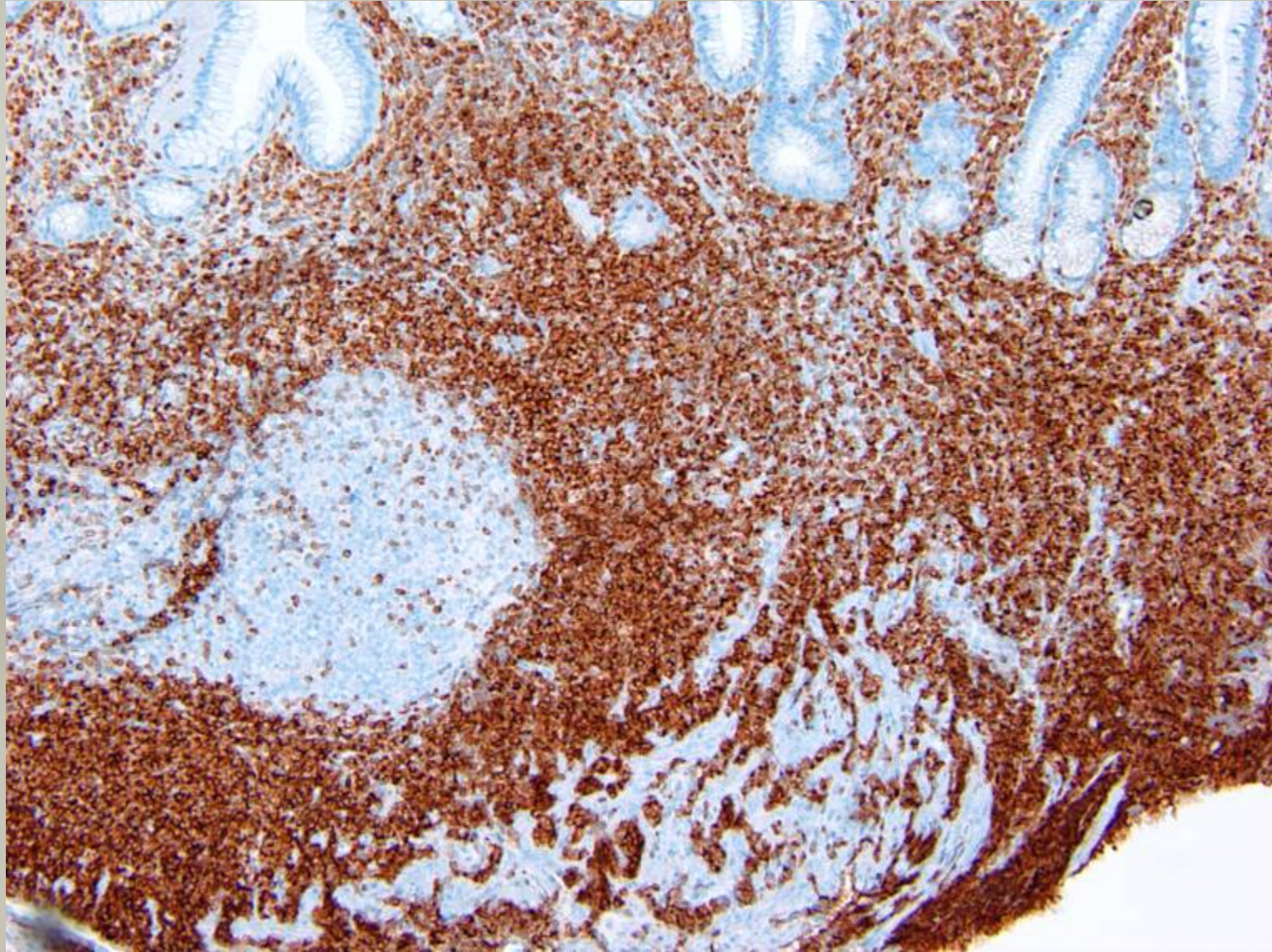


# What expresses BCL-2?

- T-cells
- Plasma cells
- Normal mantle cells
- Primary follicles
- Lots of different lymphomas
  - Including (but *not* limited to) follicular lymphoma



# What should be BCL-2 negative?





# My Approach

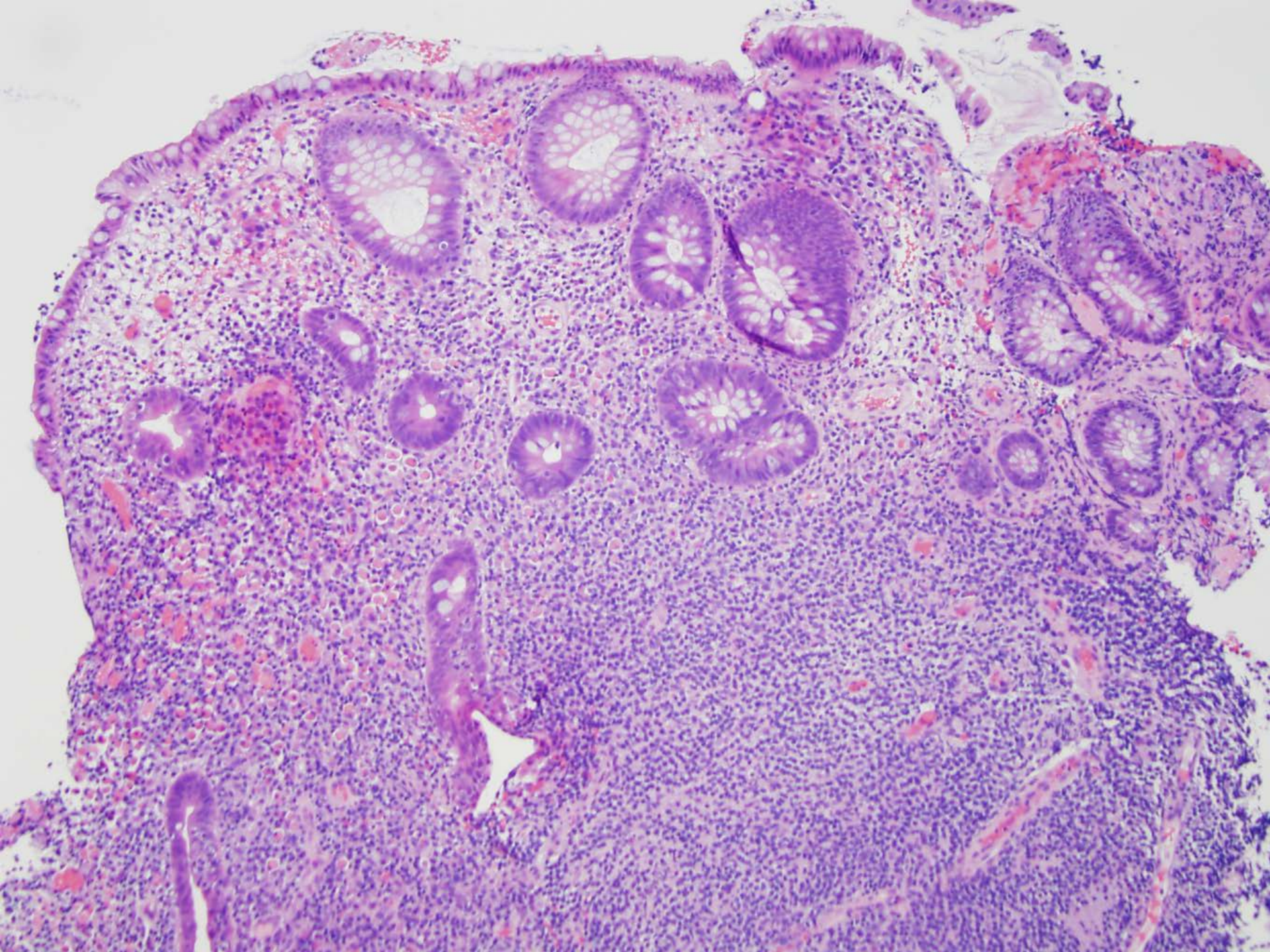
- Use BCL-2 for cases where differential is reactive follicles vs. follicular lymphoma
  - Otherwise, must match up staining with T-cells, mantle cells, etc., etc.



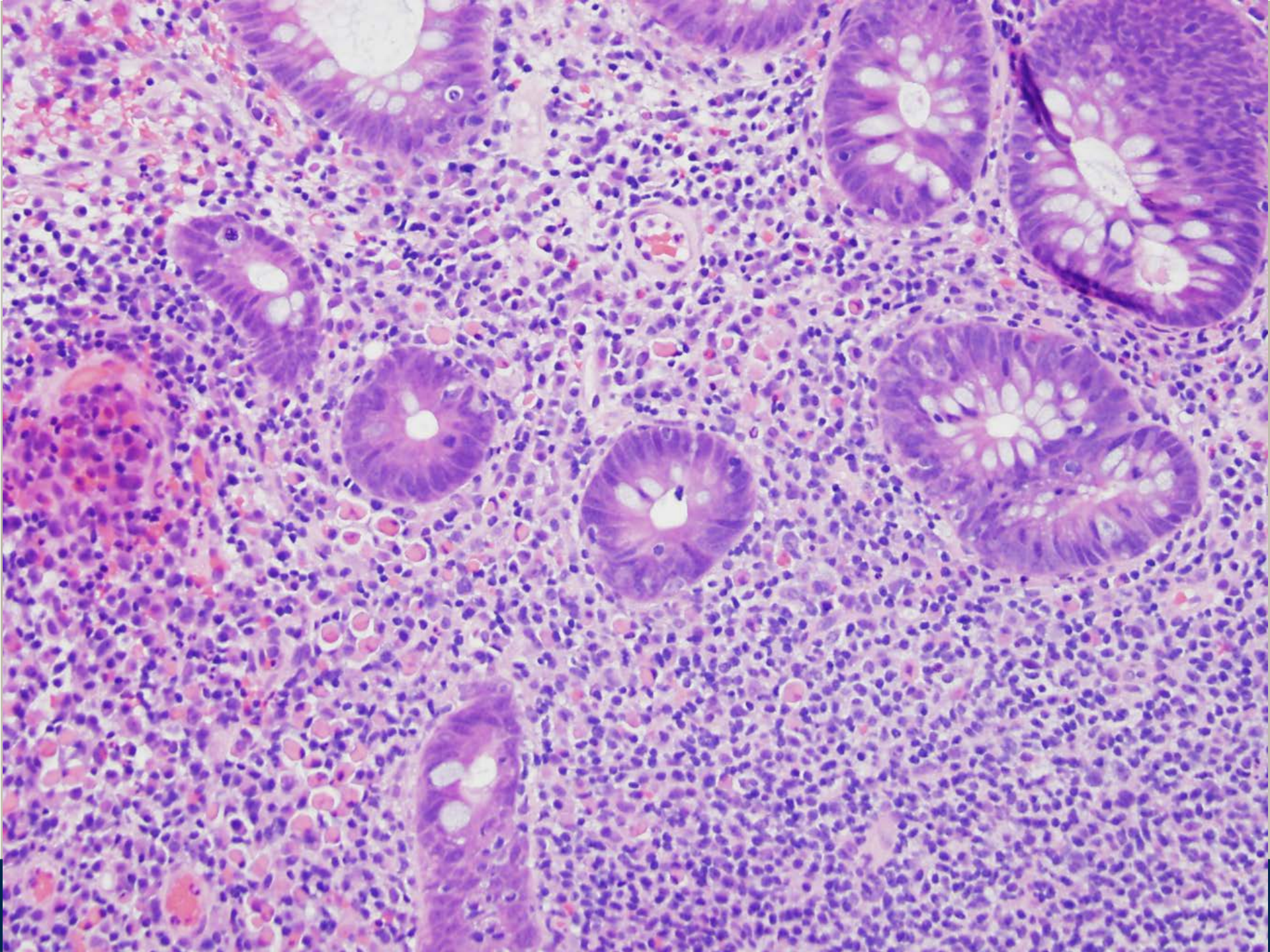
Enough, already!



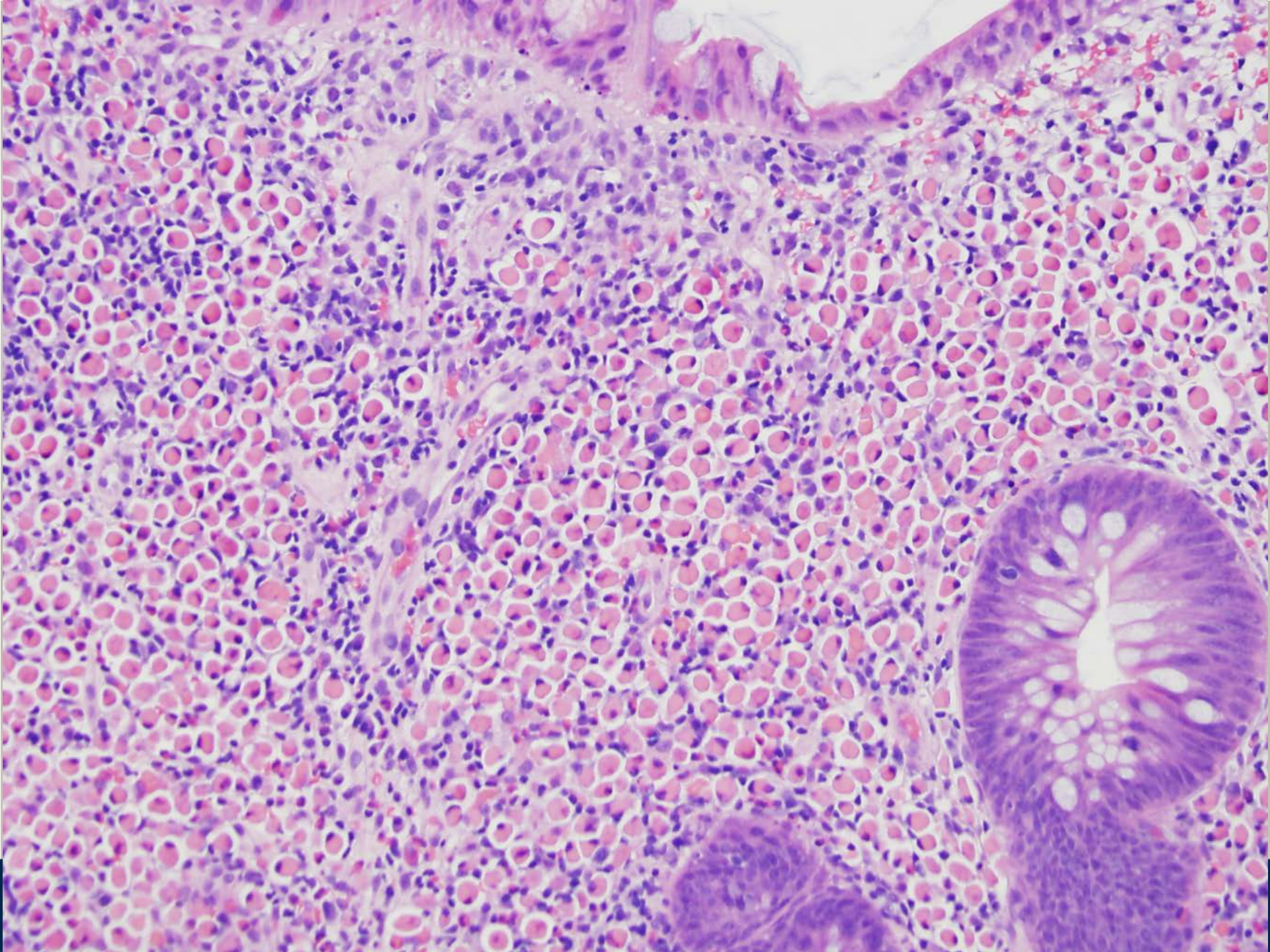












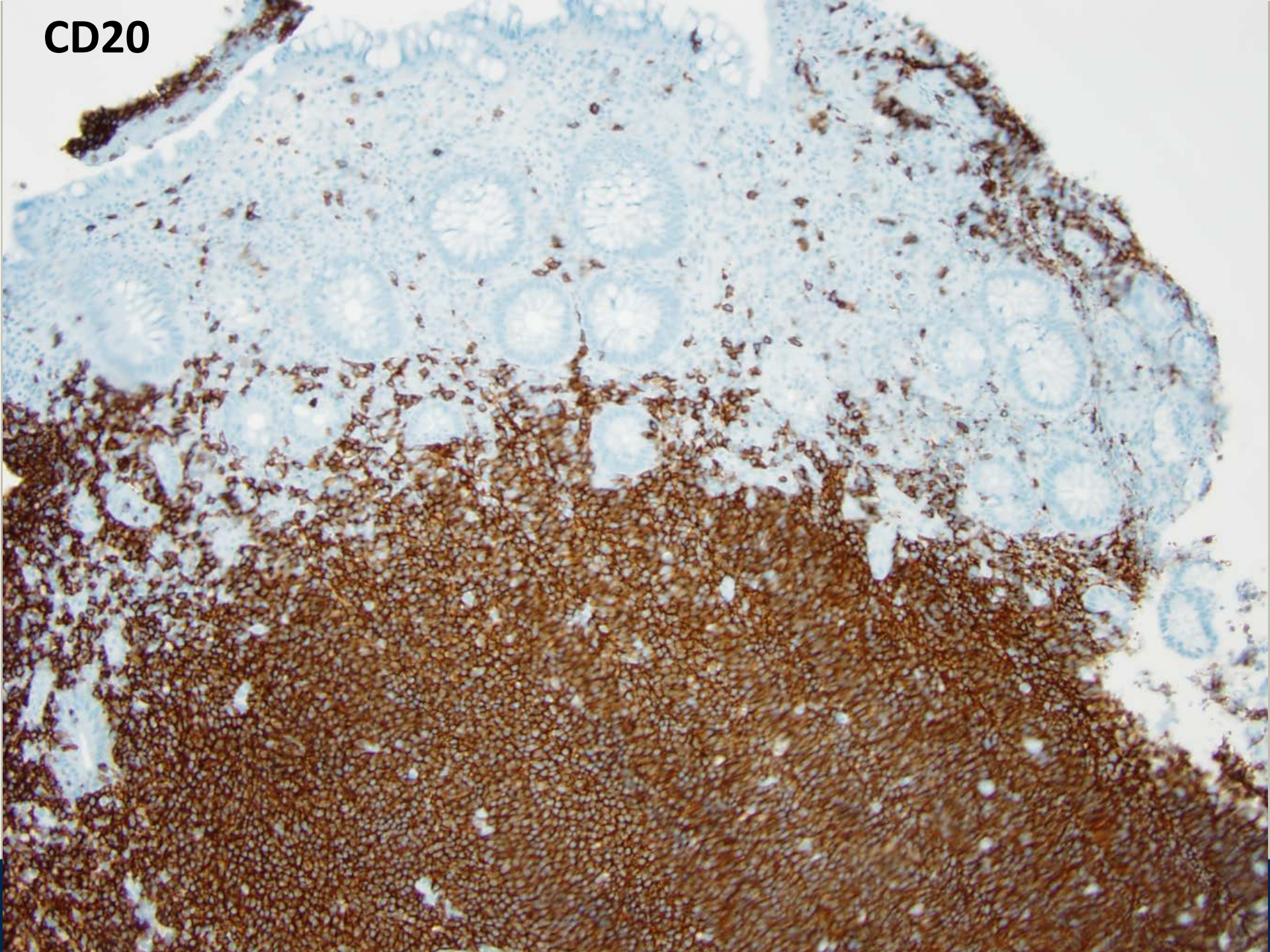


# DUMB?

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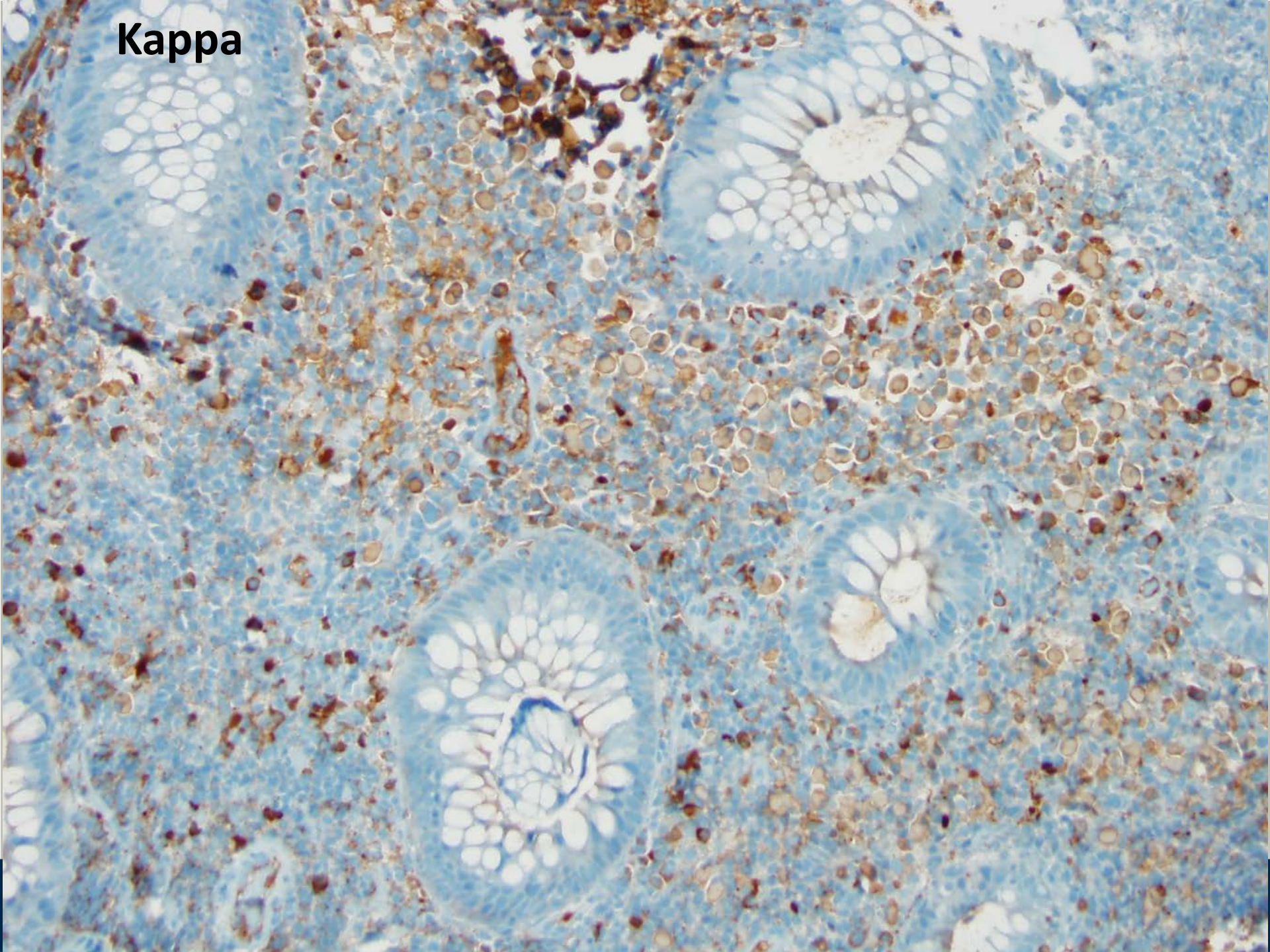


**CD20**





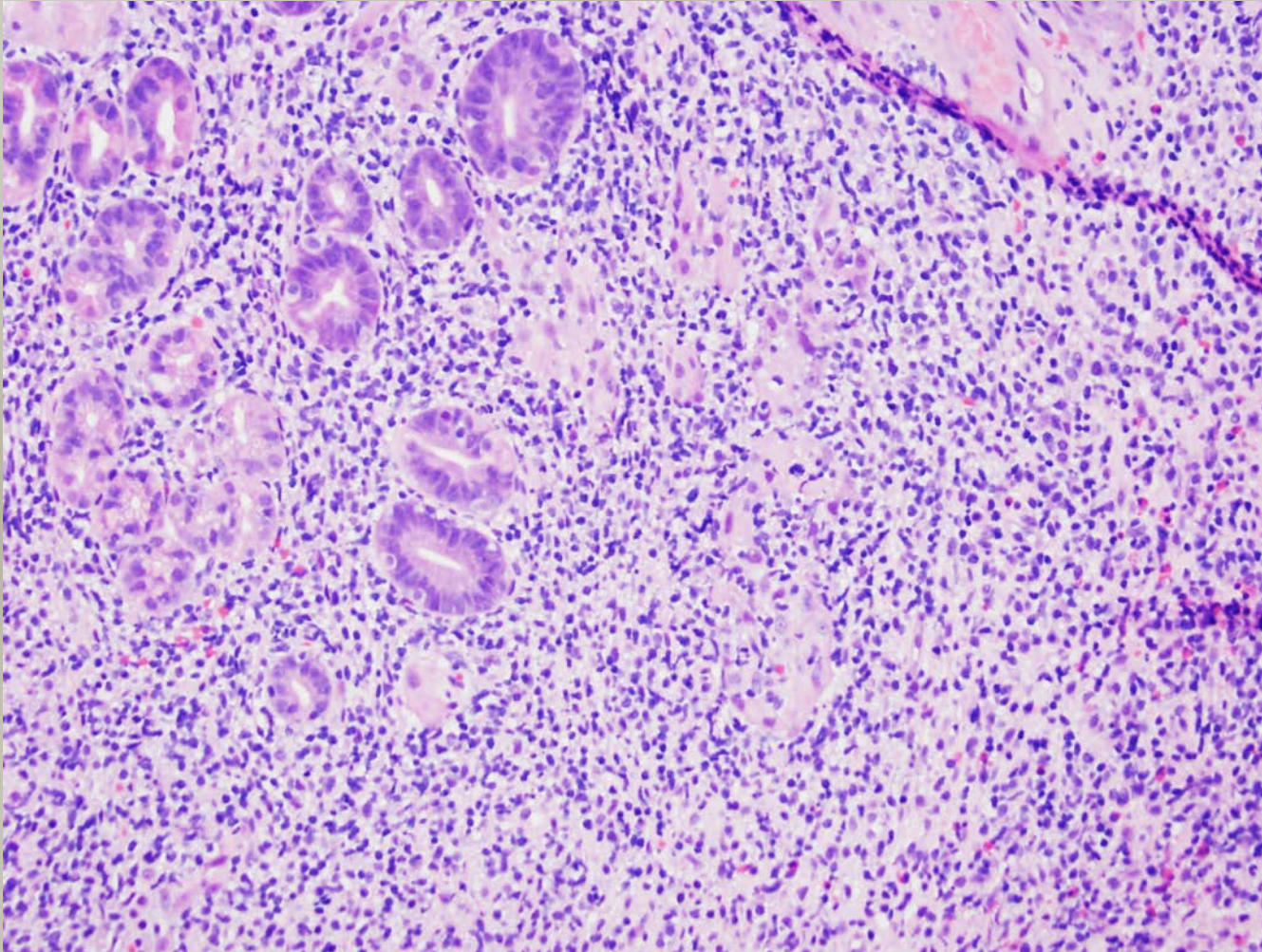
**Kappa**





# MALT lymphoma

(patient also had it in stomach)





# Staining rationale

- Small cells: CD3, CD5, CD20, (often) CD43
  - Follicular structures? → BCL-6/CD10, BCL-2
  - CD5+, angulated cells, polyps? → cyclin-D1
  - Possible plasma cell component? → kappa/lambda
  - T cells? → (many) more T cell markers
- Big cells: CD3, CD20, CD43
  - DLBCL? → germinal center vs. activated B cell
    - Potentially molecular assays for “double hit” lymphoma





# DUMB!

- ***D***estructive?
- ***U***nusual location and/or morphology?
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Thank you!