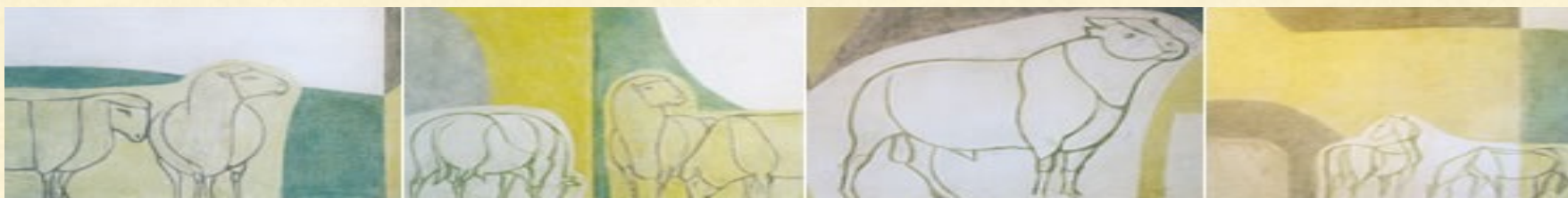

IMMUNOISTOCHIMICA (IHC)

Dr. Cristiano Cocumelli, DMV

Laboratorio di Anatomoistopatologia - IZS Roma

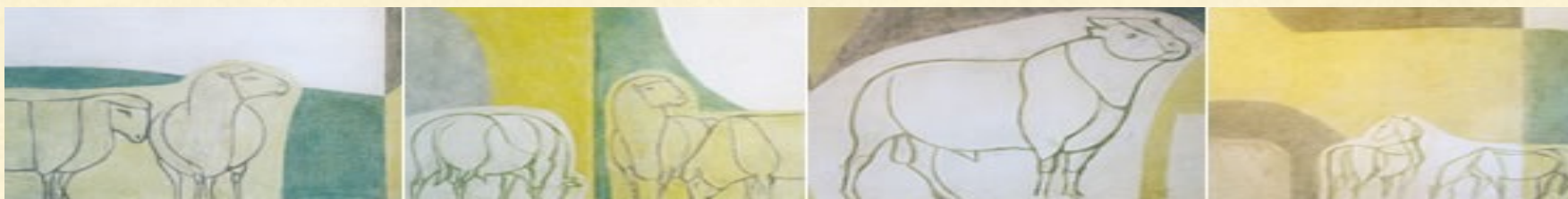
04.12.2014



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COS'È

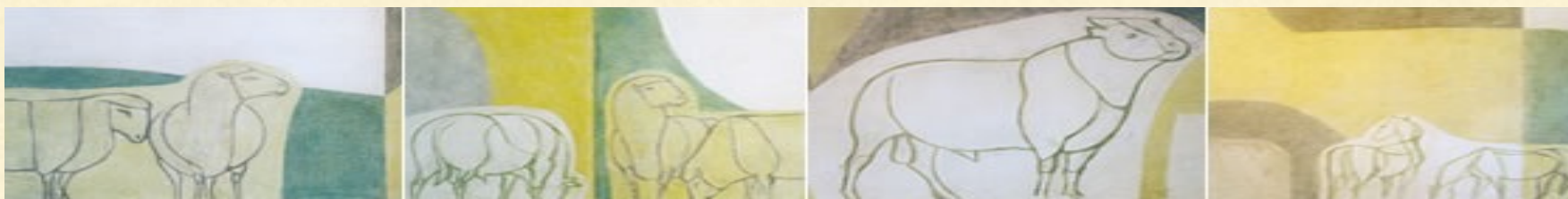
L'immunoistochimica (IHC) è una tecnica che combina l'istologia alle tecniche immunologiche e biochimiche per visualizzare direttamente sul tessuto antigeni specifici, sia delle cellule che di agenti biologici.



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POTENZIALITÀ

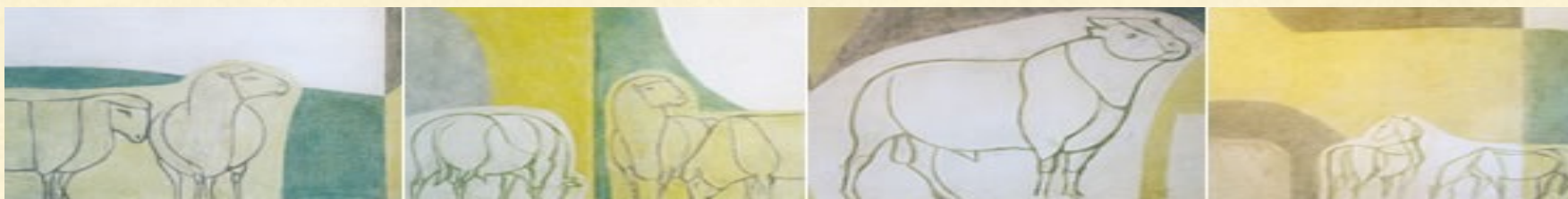
E' una tecnica molto potente, estremamente sensibile e specifica, e può avvalersi di un numero virtualmente infinito di anticorpi



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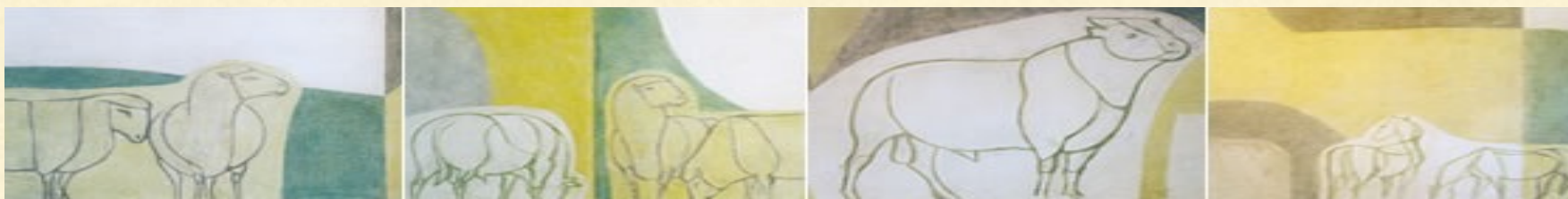
CAMPI DI APPLICAZIONE

IHC è ampiamente utilizzata nella diagnosi di tumori, nella diagnosi di malattie infettive per cui non esistono tecniche affidabili (FIP), nello studio della patogenesi di patologie ad eziologia infettiva ed anche nella ricerca di base, con lo scopo di comprendere la distribuzione e la localizzazione di biomarker nei tessuti normali o patologici.



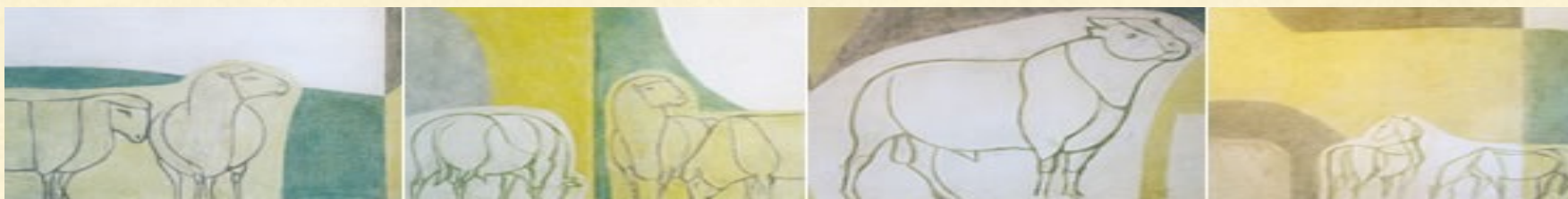
PRINCIPIO

Permette di localizzare gli antigeni in sezioni di tessuto tramite l'uso di anticorpi marcati. La visualizzazione del legame è possibile con l'uso di marcatori di diverso tipo, a seconda del sistema di lettura (fluorocromi (fluoresceina, rodamina), enzimi (perossidasi, fosfatasi alcalina), e composti usati in microscopia elettronica (ferritina, oro colloidale).



APPLICAZIONE

In istologia, e nel nostro laboratorio, si usa prevalentemente il sistema di rilevazione enzimatico che permette di localizzare in maniera molto specifica (nucleo, membrana, citoplasma) la presenza dell'antigene ricercato.

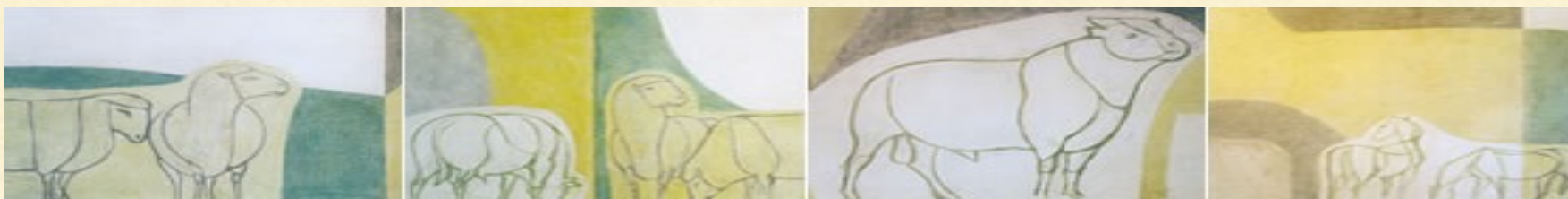


REAGENTI

Possono essere usati due tipi di anticorpi

Anticorpi policlonali: Anticorpi indirizzati verso grossi antigeni che esprimono epitopi multipli

Anticorpi monoclonali: Anticorpi specifici per un singolo epitopo e prodotti da un clone specifico.



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TIPI

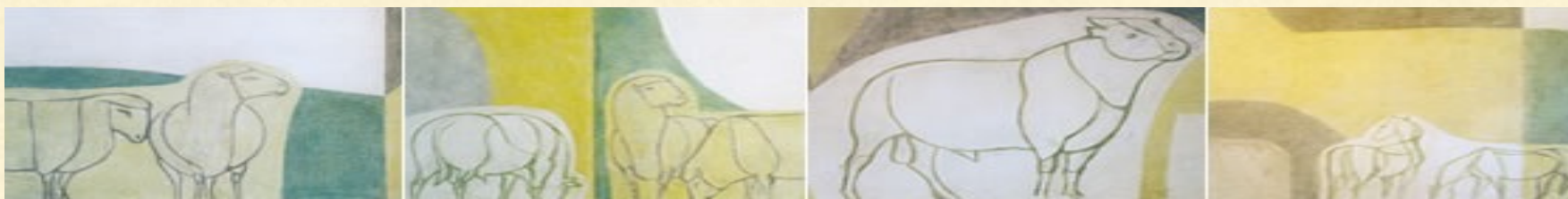
IHC Diretta

IHC Indiretta

Avidin-Biotin Immunohistochemistry (ABC)

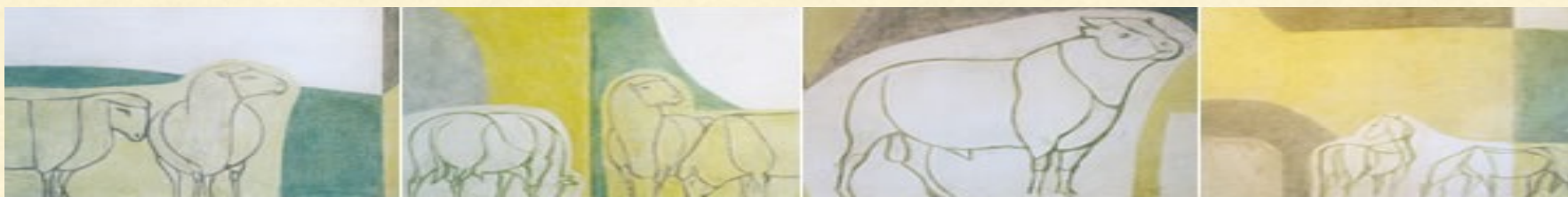
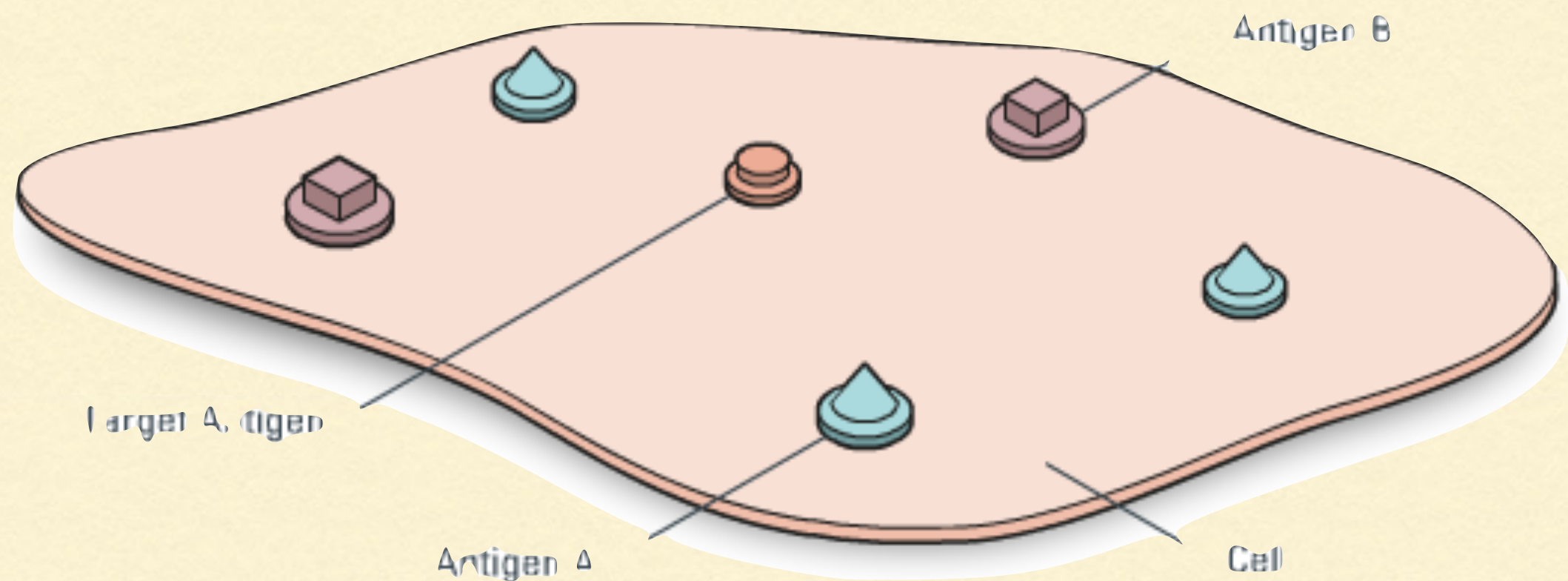
Labeled streptavidin-biotin (LSAB)

EnVision FLEX+

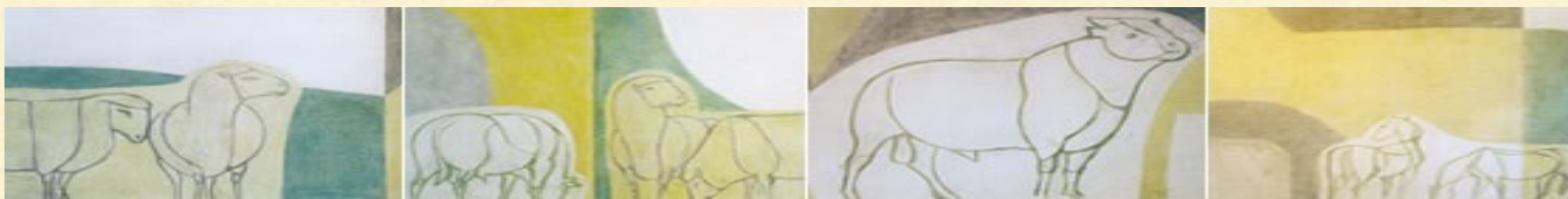
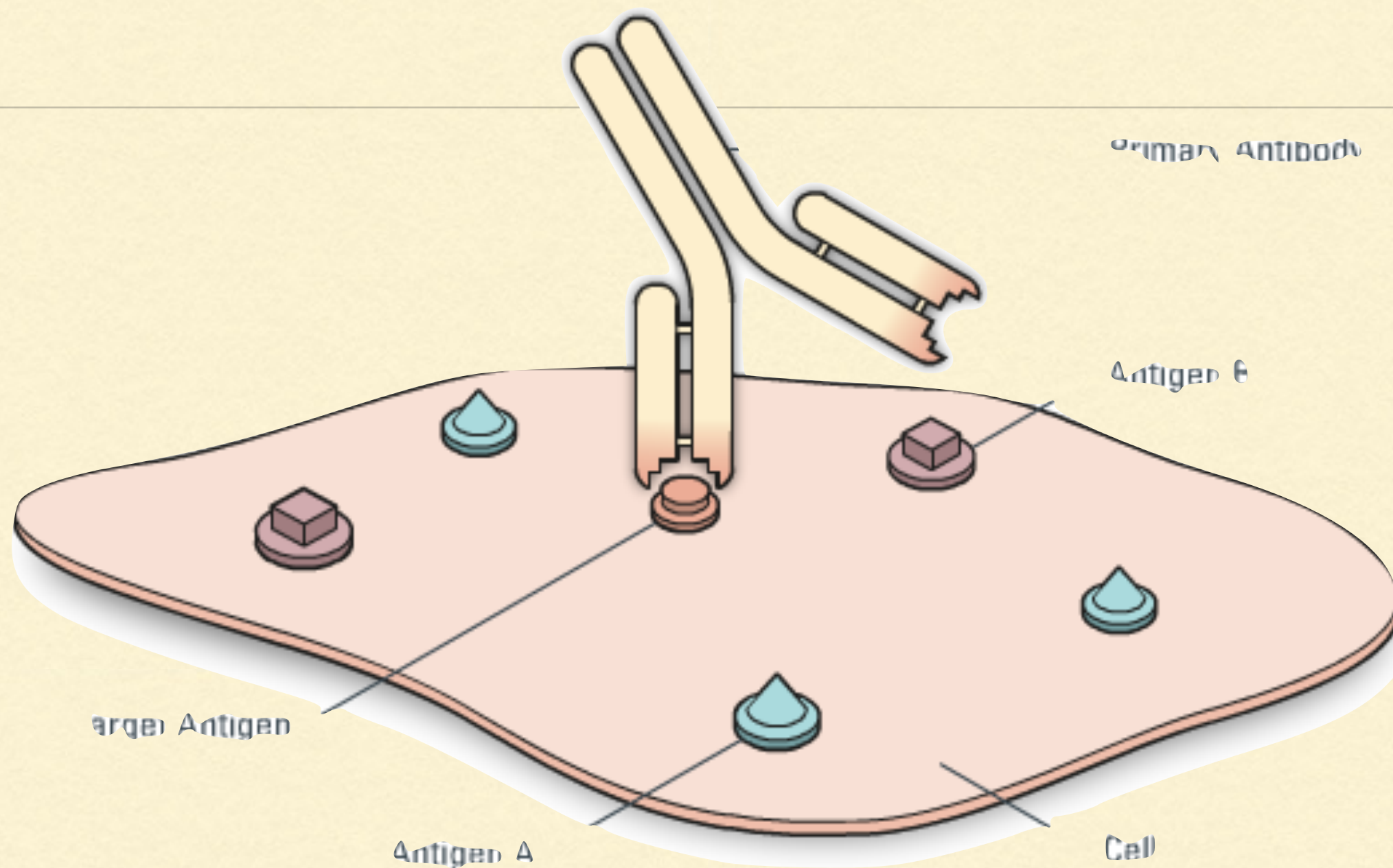


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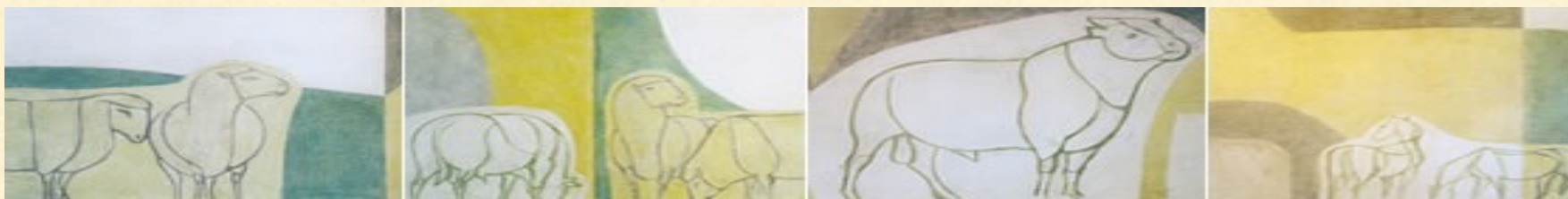
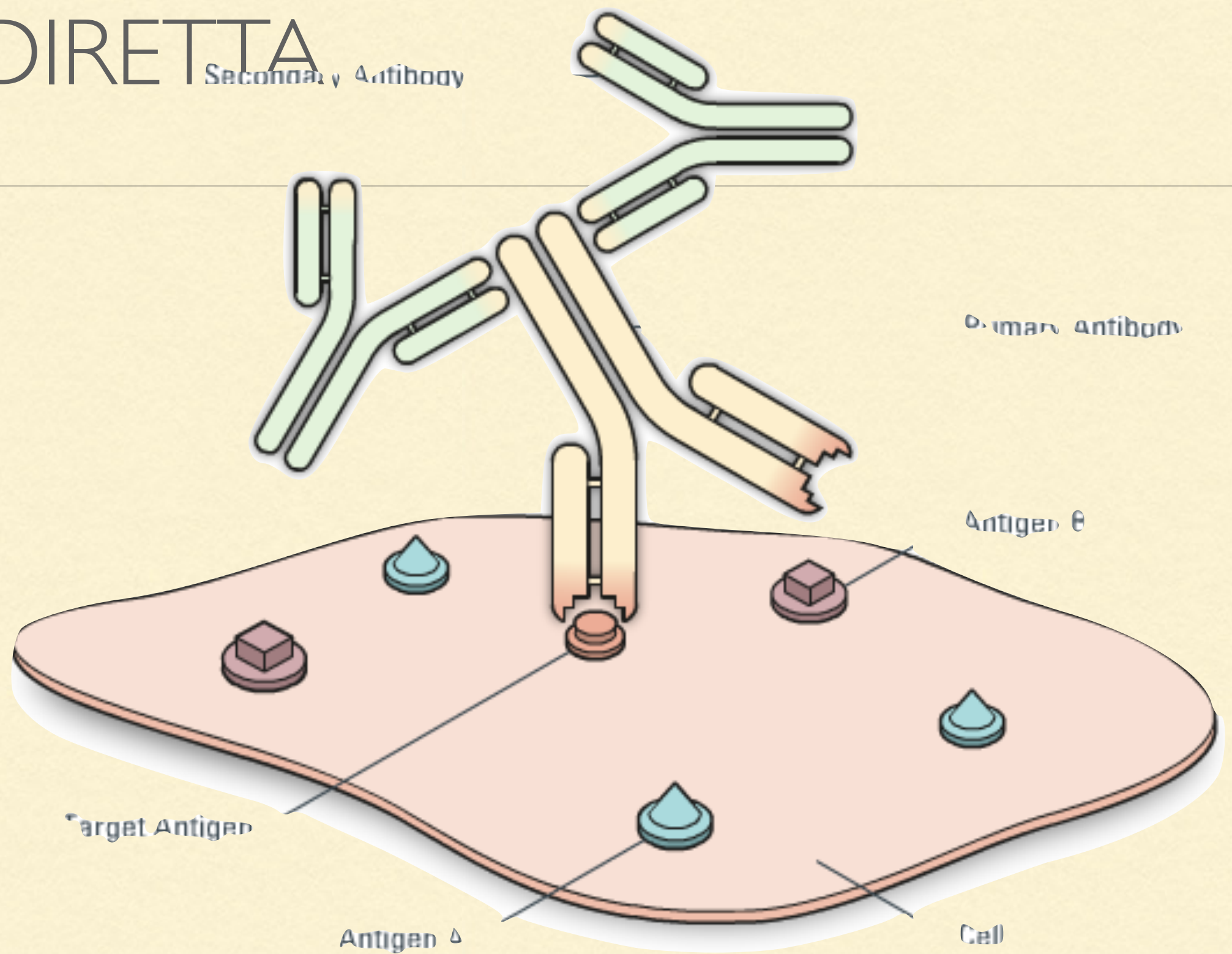
IHC INDIRETTA



IHC INDIRETTA

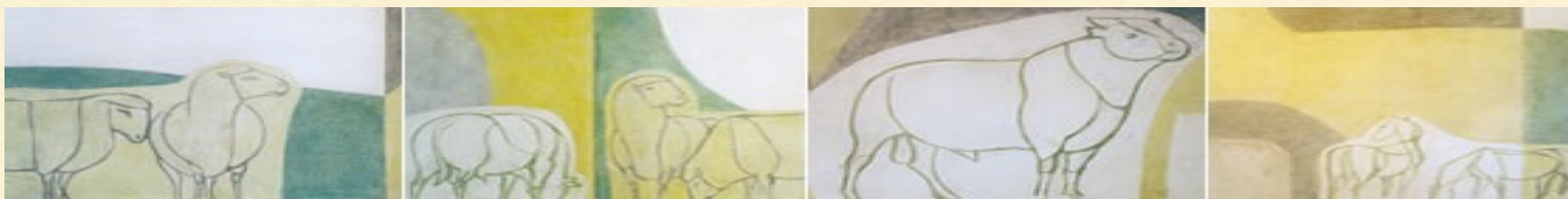
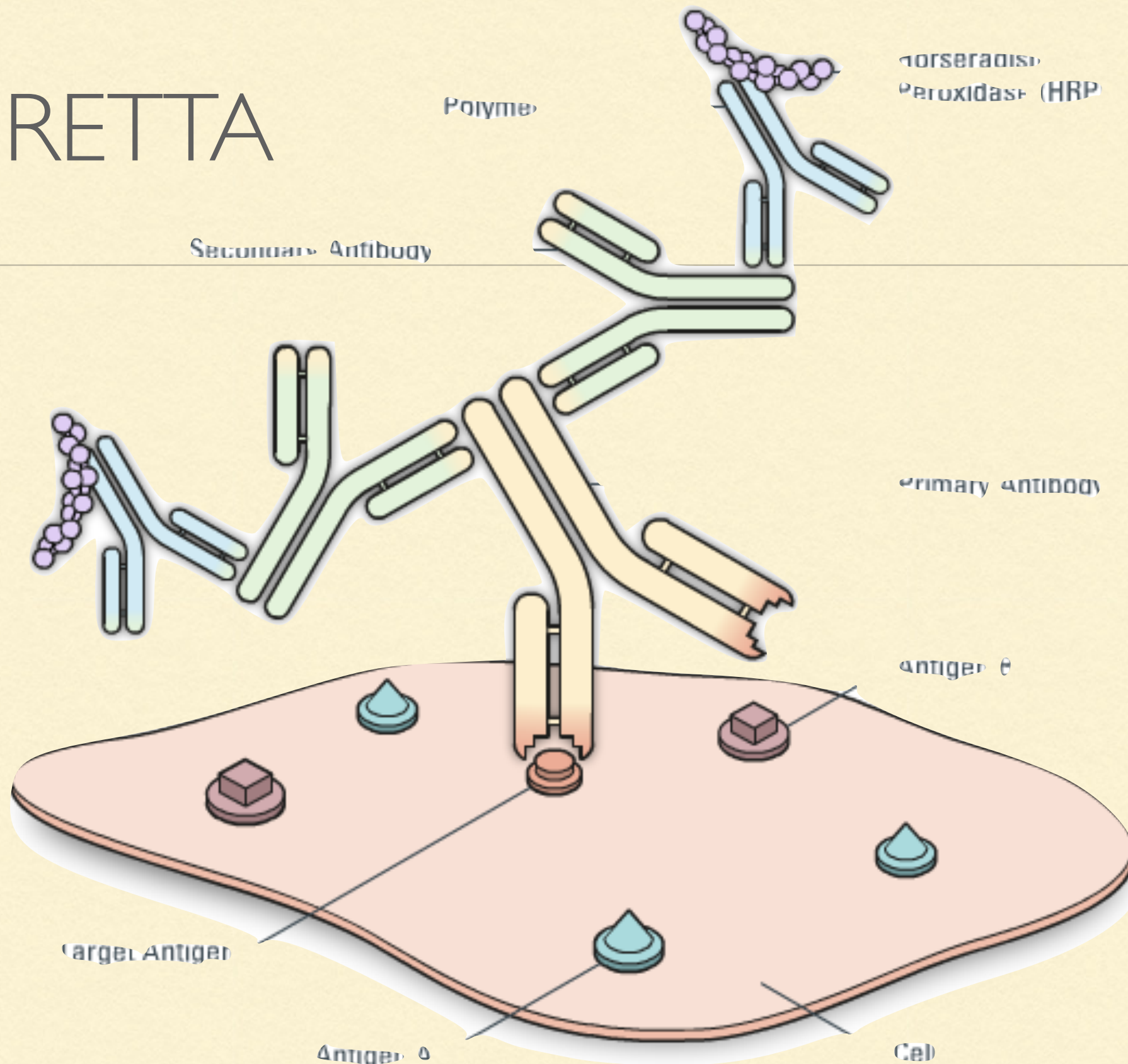


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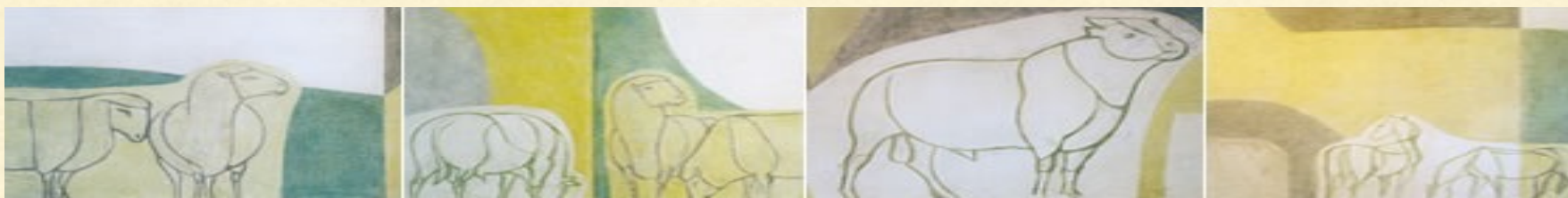
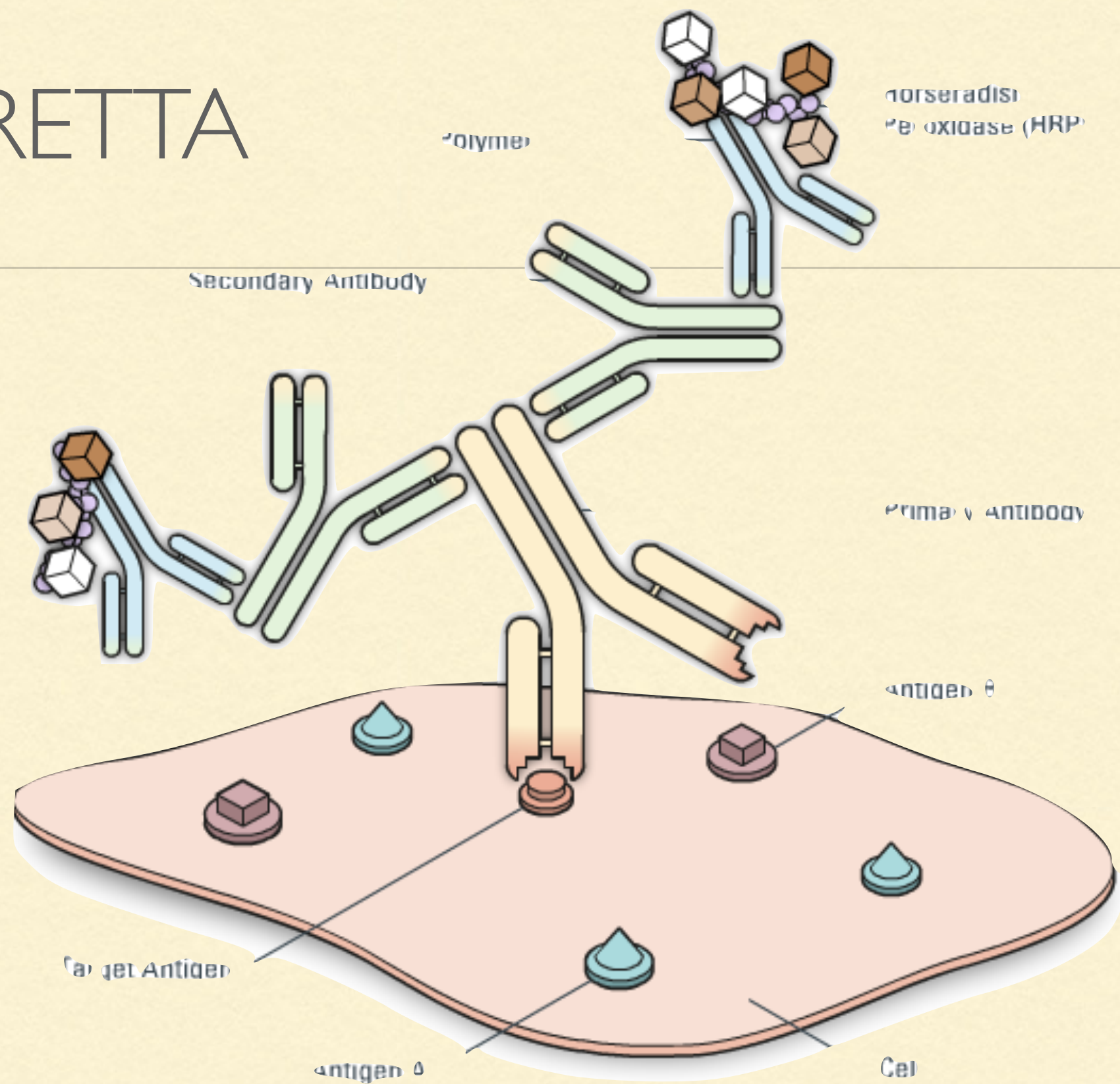


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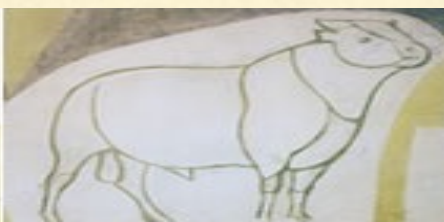
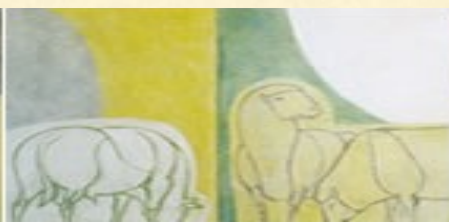
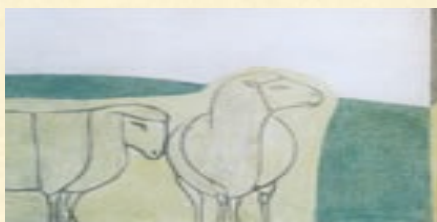
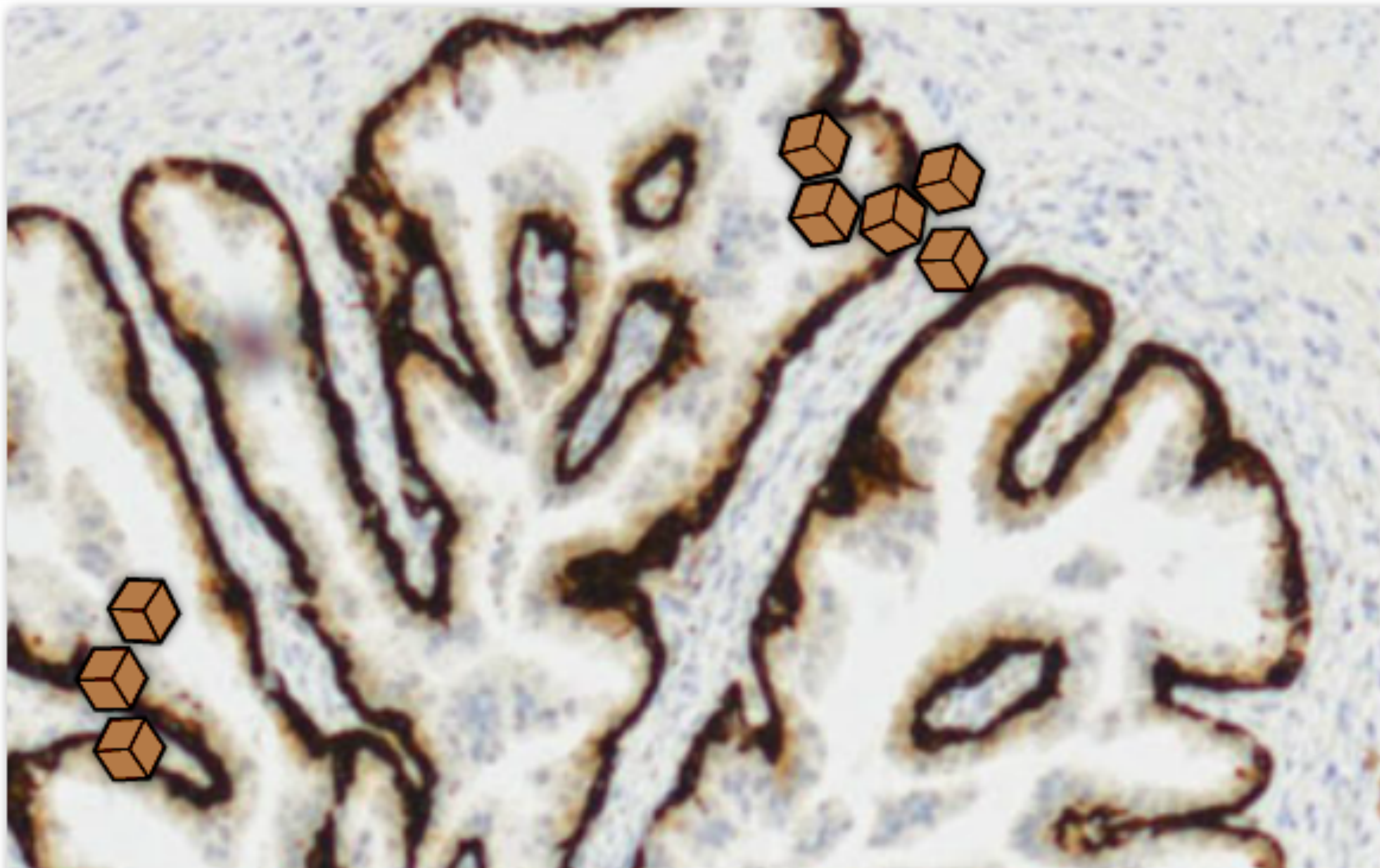
IHC INDIRECTA



IHC INDIRECTA

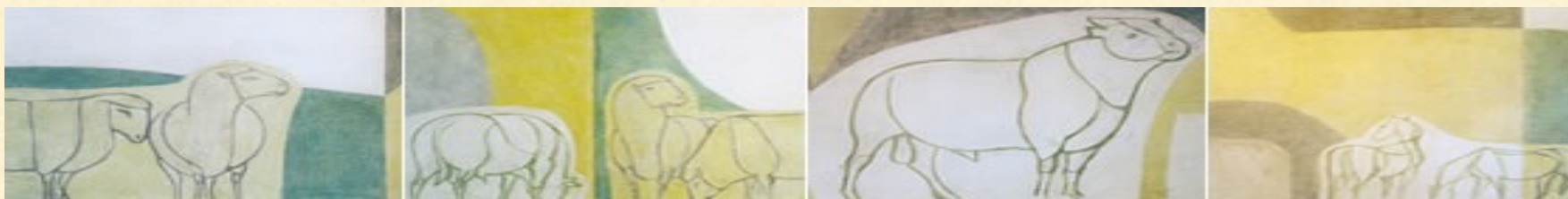
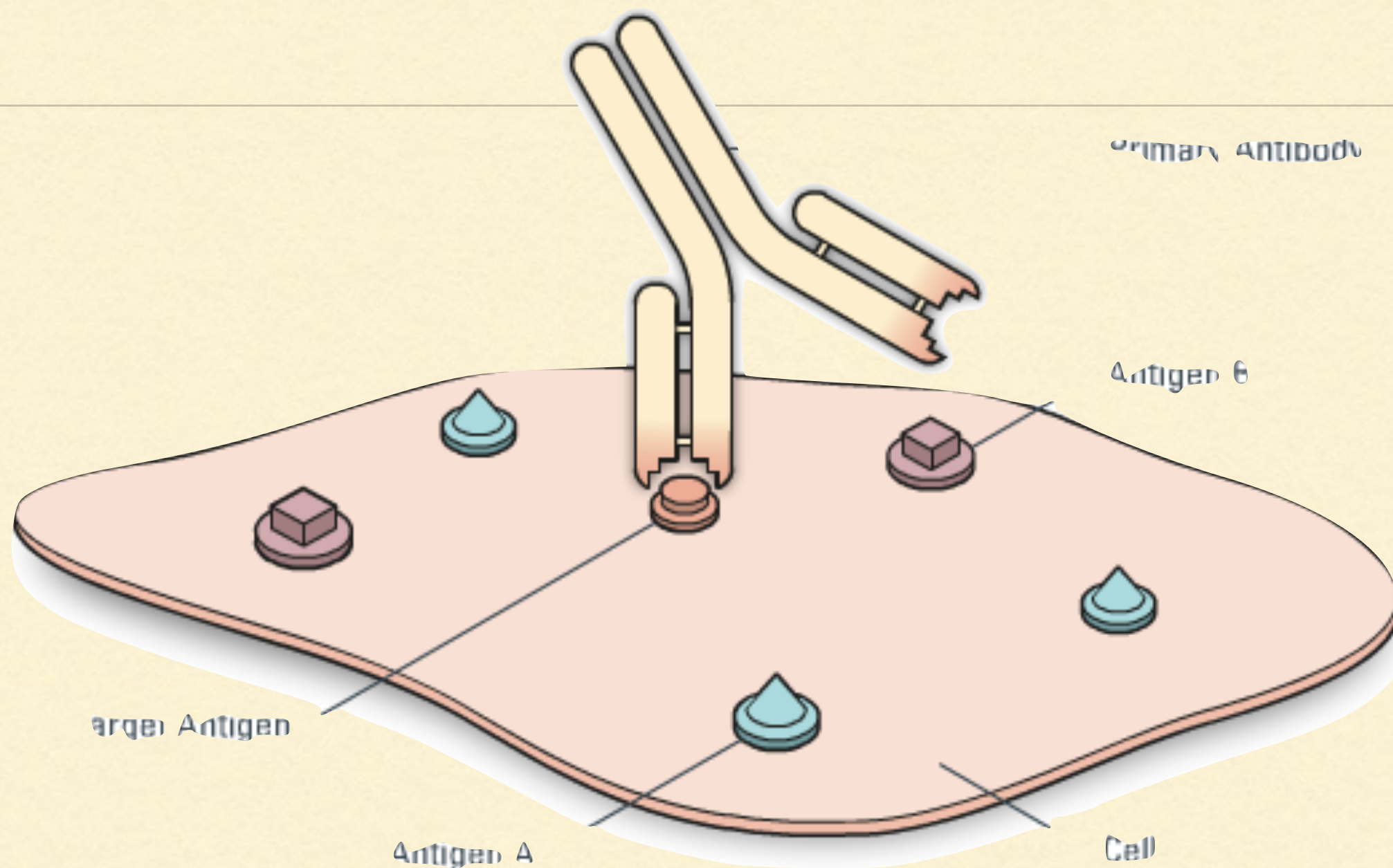


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IHC DIRETTA



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PROCEDURA IN SINTESI

Sezione di tessuto da blocchetto
in paraffina

Blocco delle perossidi endogene

+/- Smascheramento
dell'antigene

Antisiero

Anticorpo primario

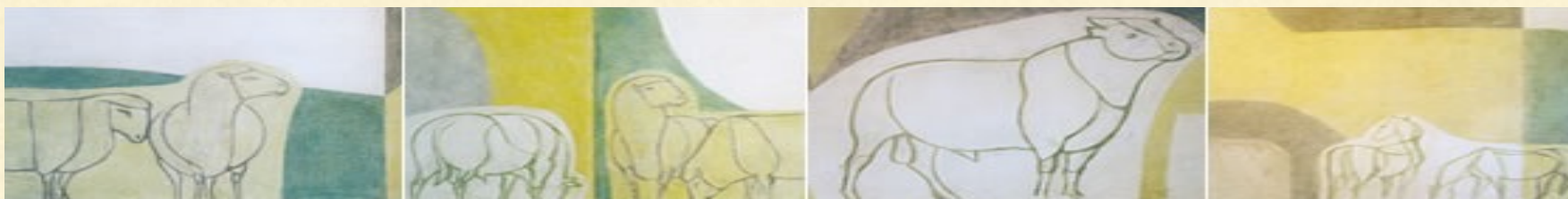
Antisiero

Anticorpo secondario

Sistema di rilevazione

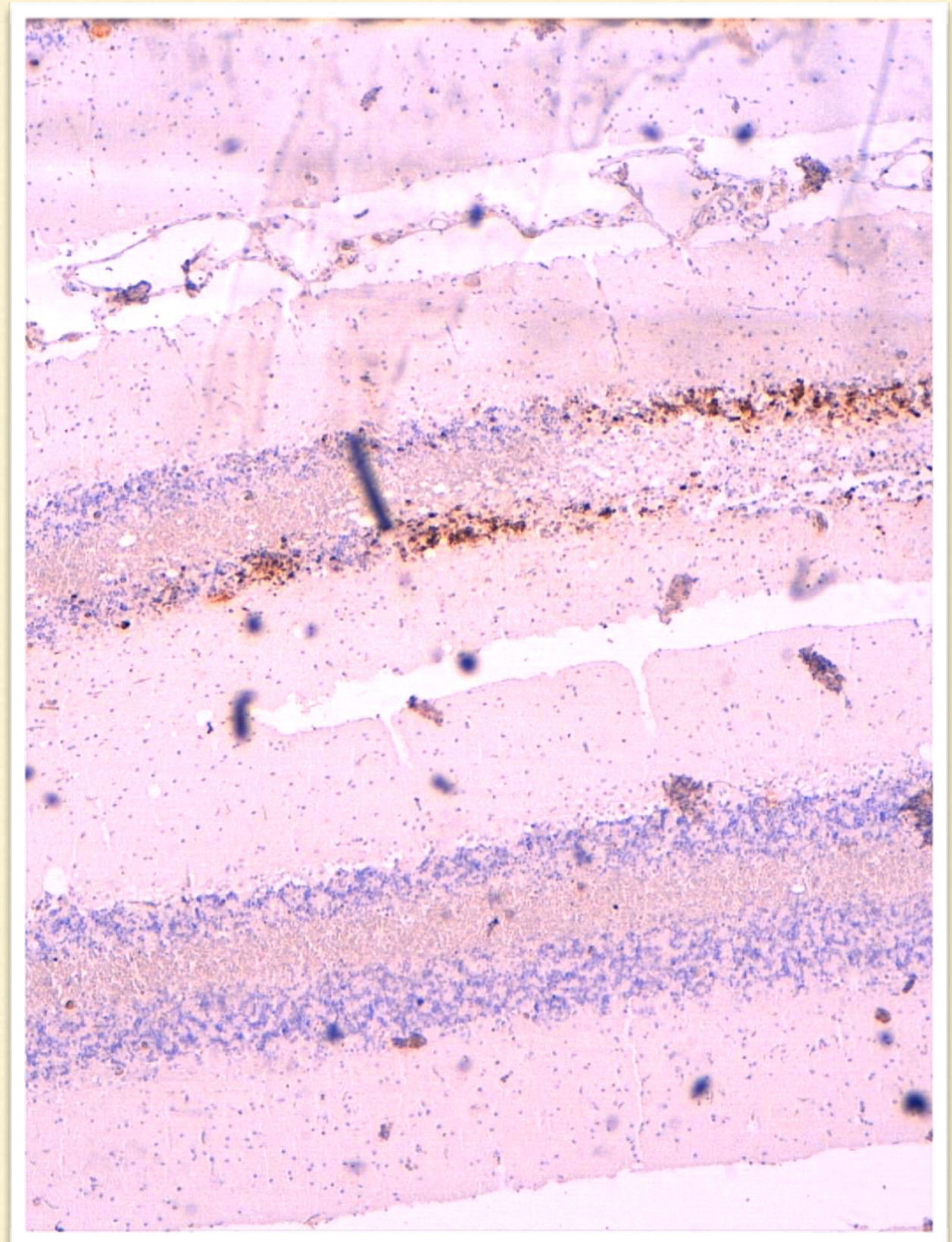
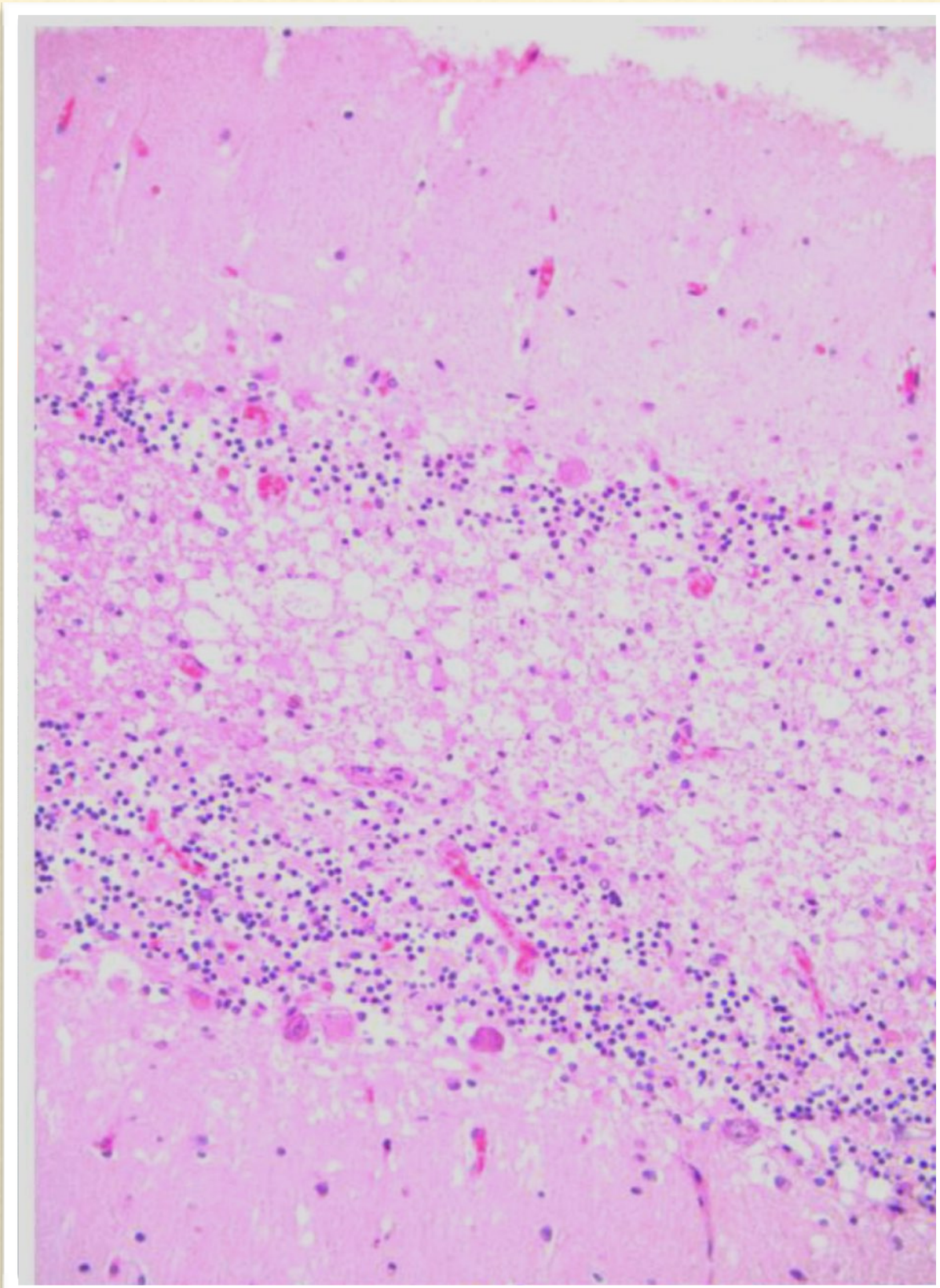
Cromogeno

Controcolorazione con
ematossilina

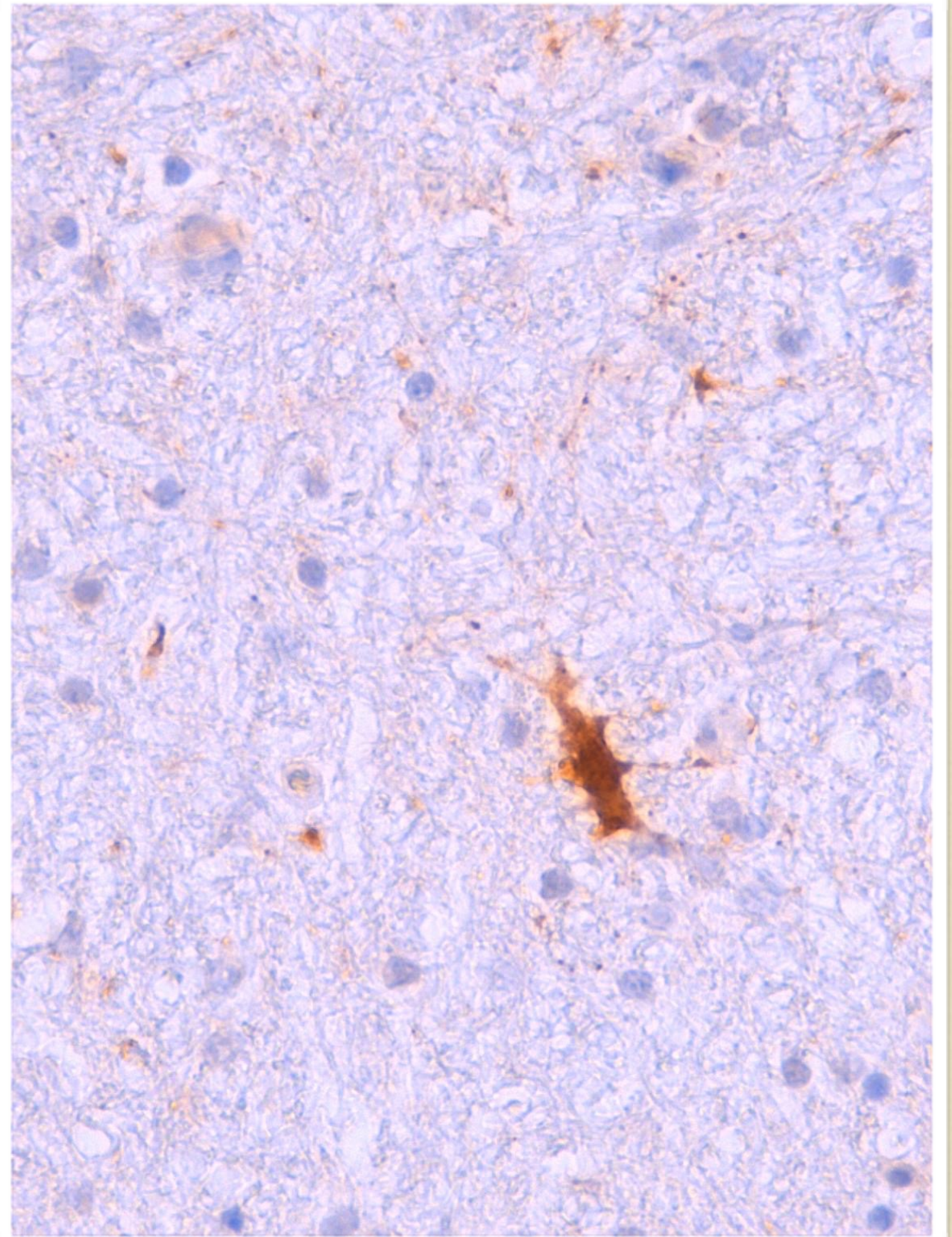
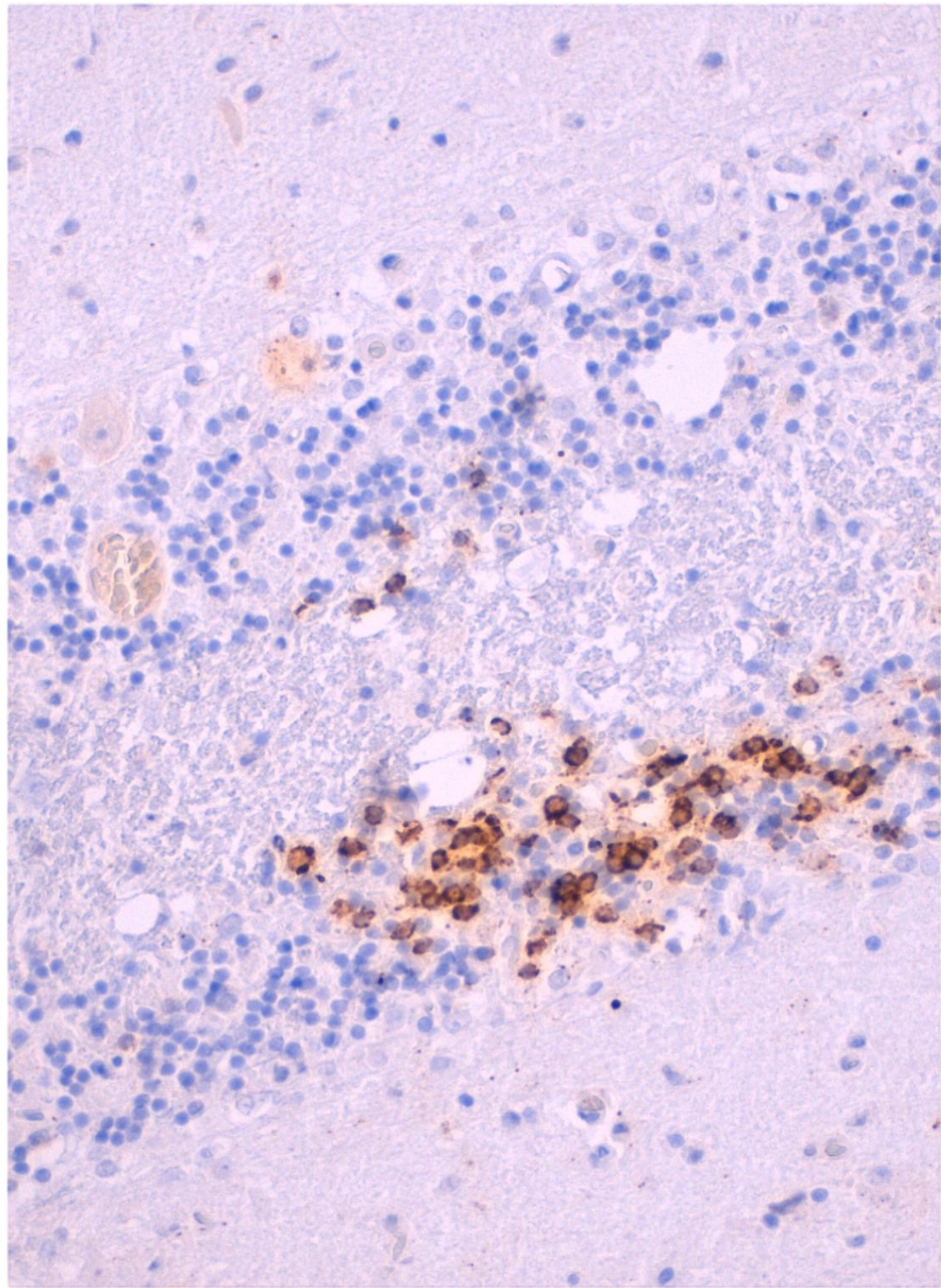


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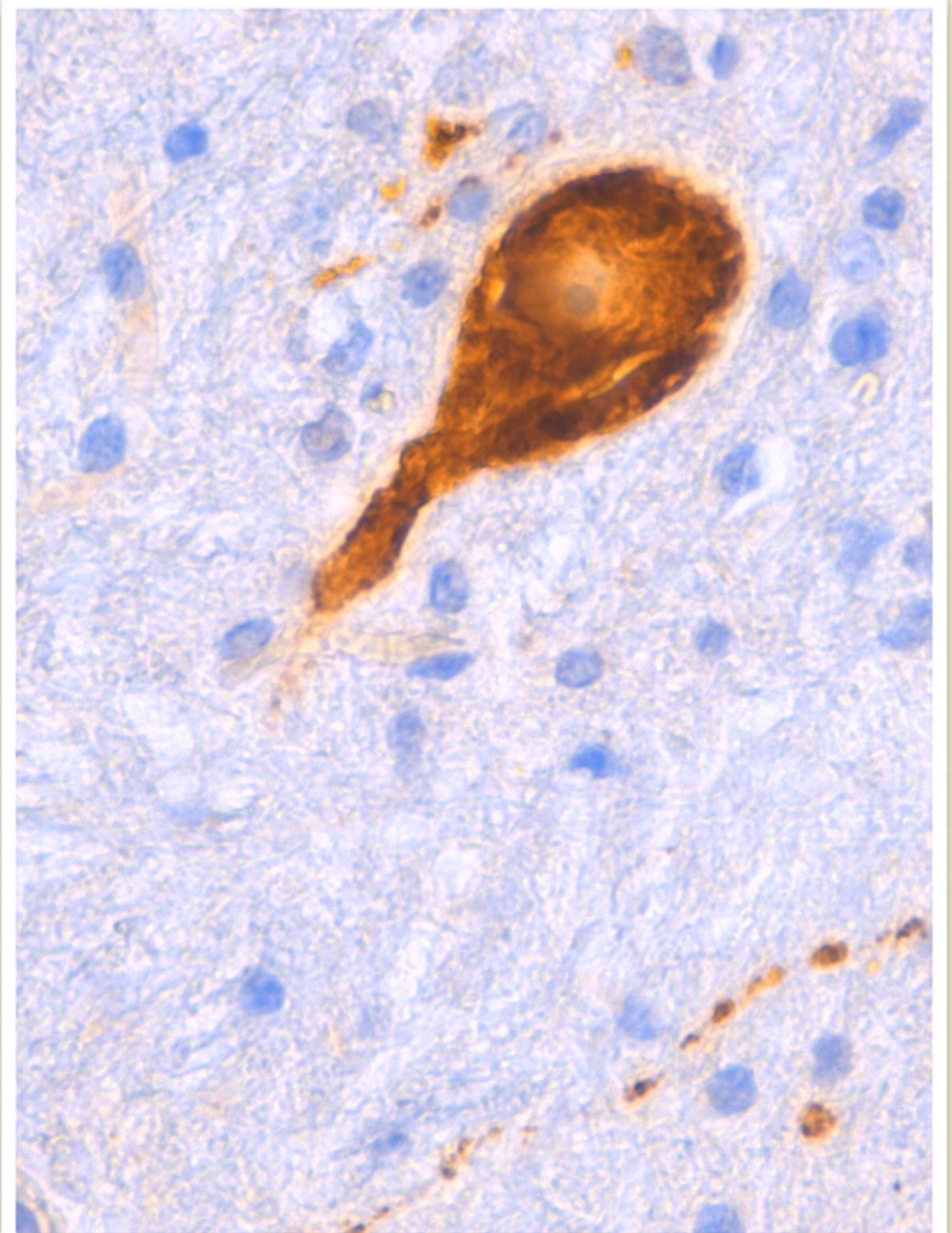
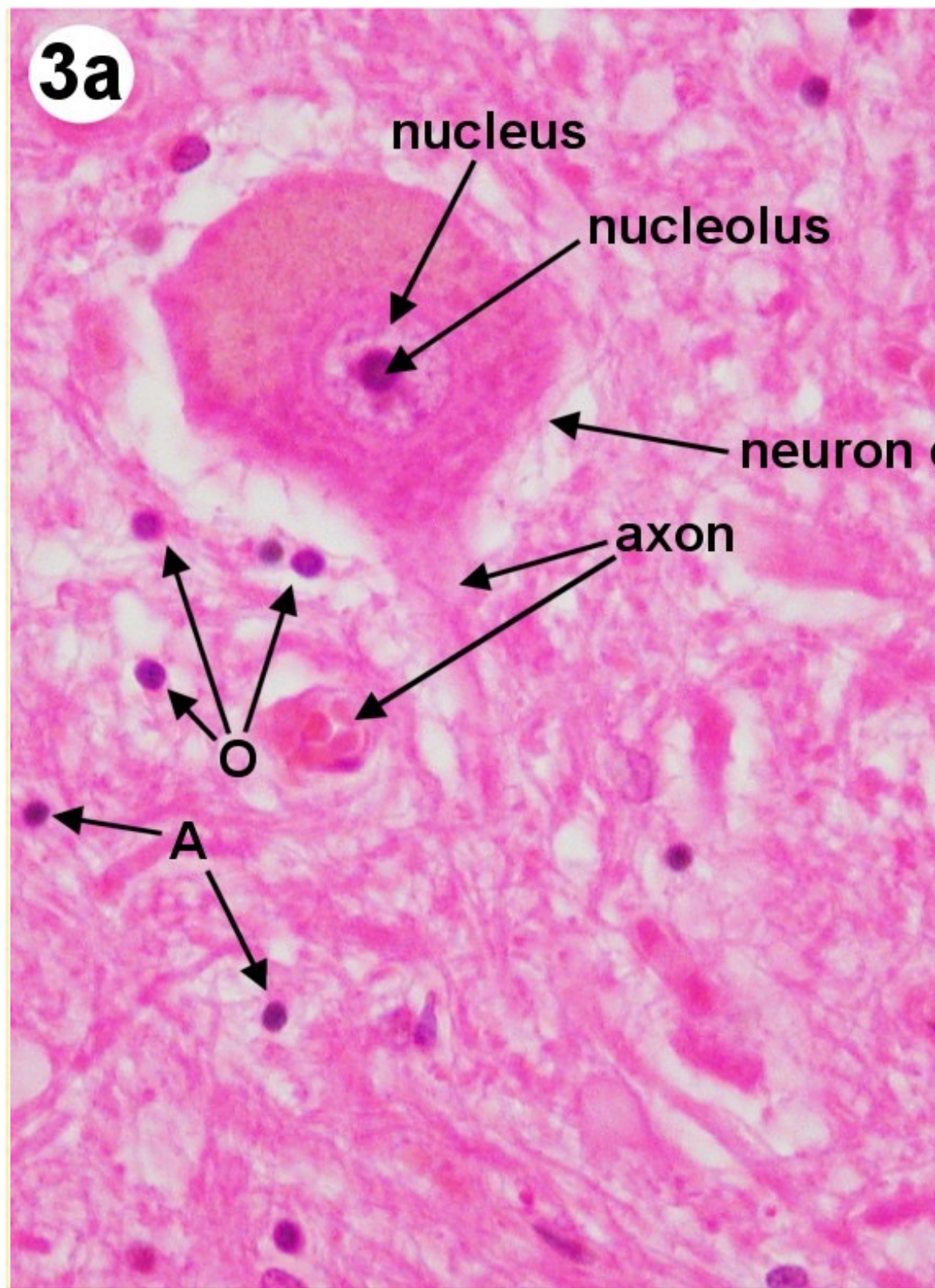
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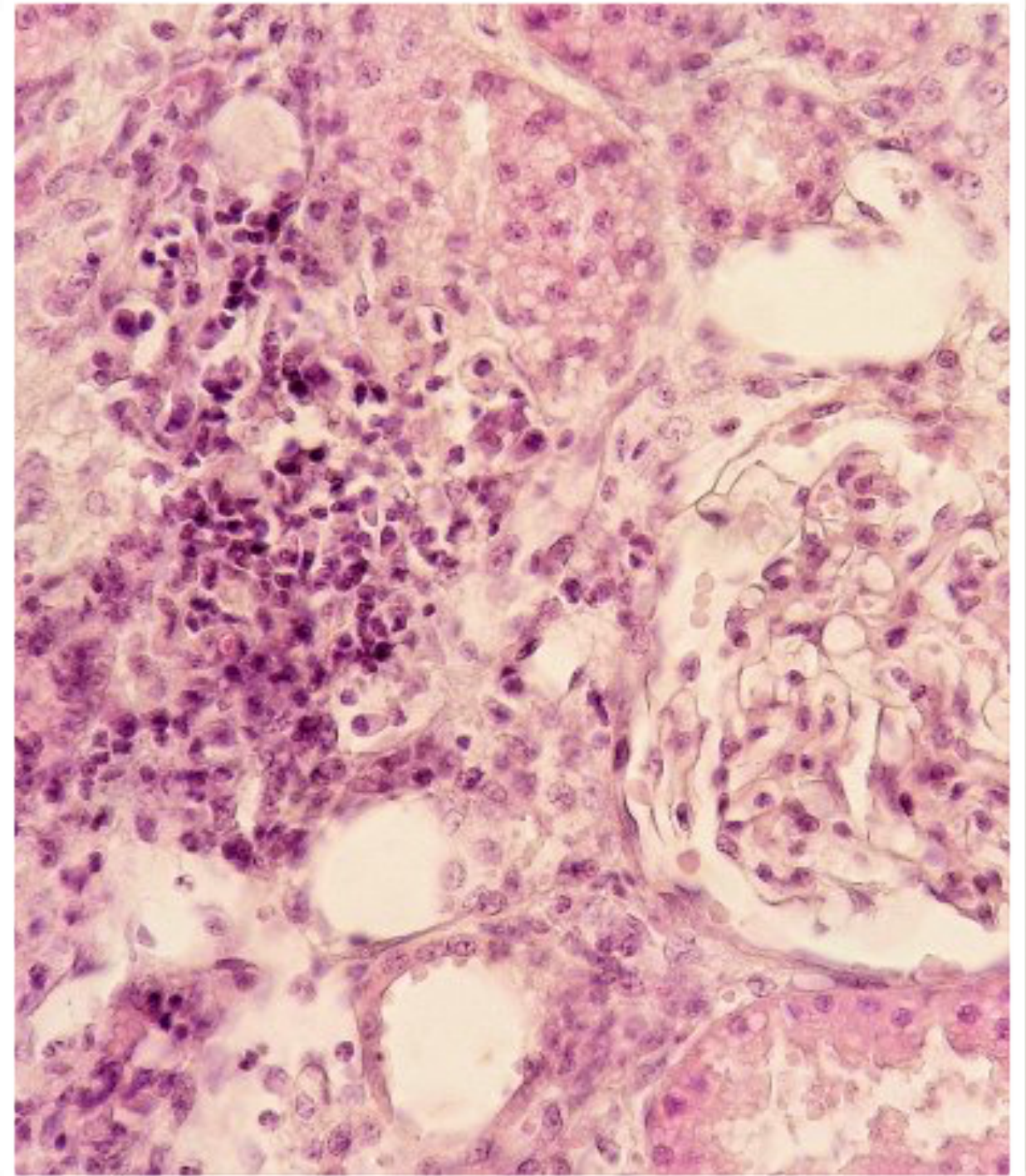
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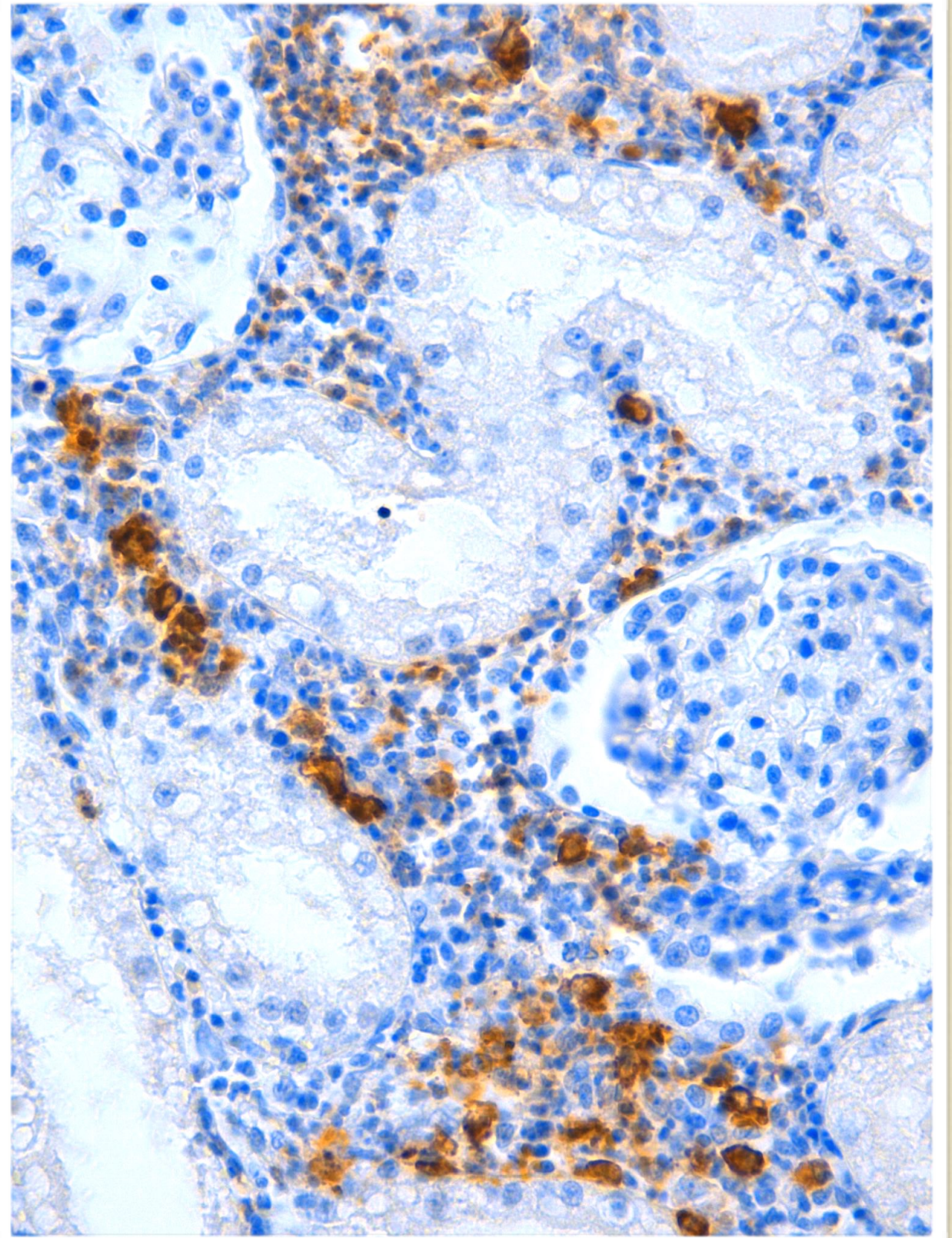
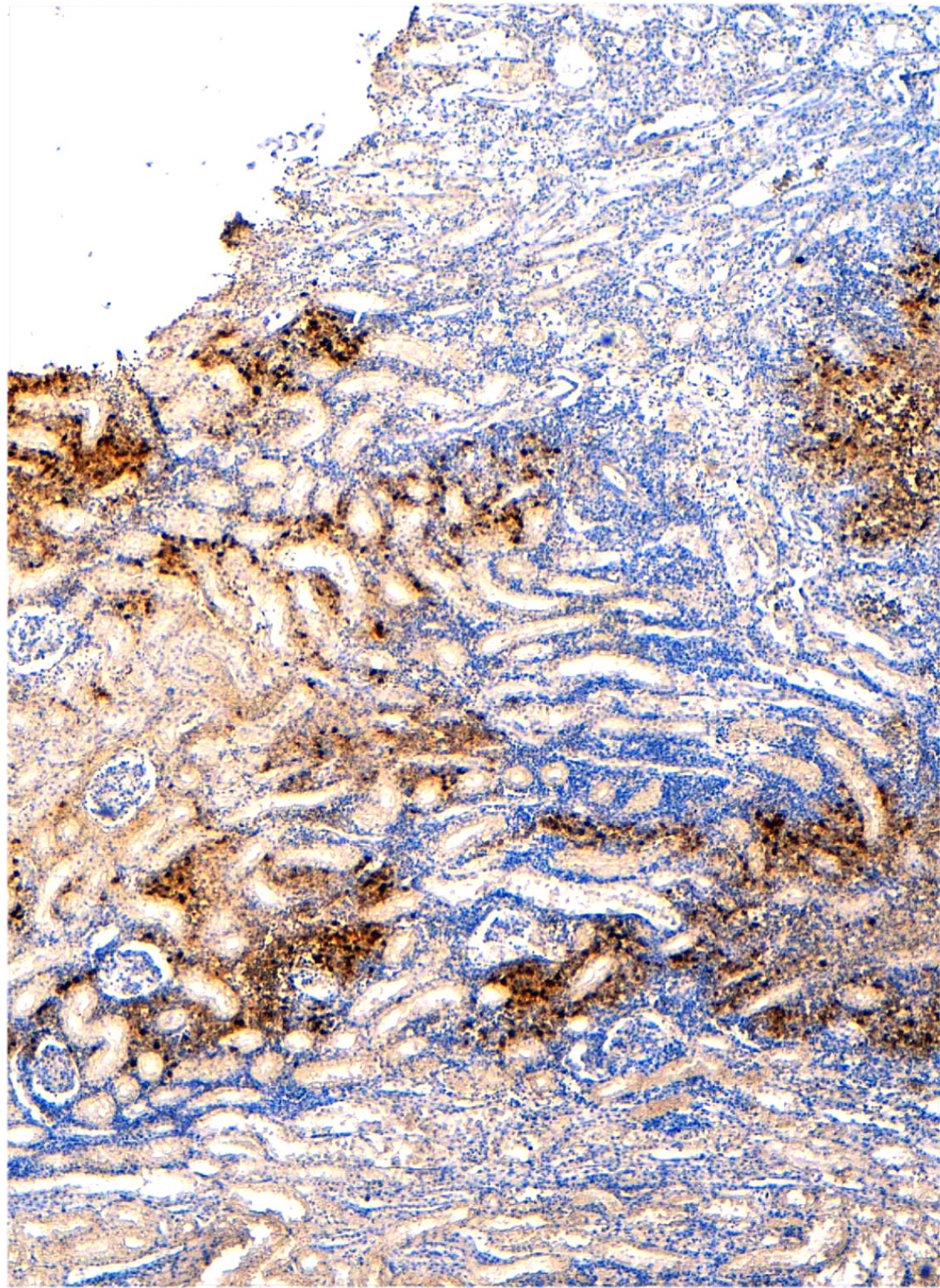
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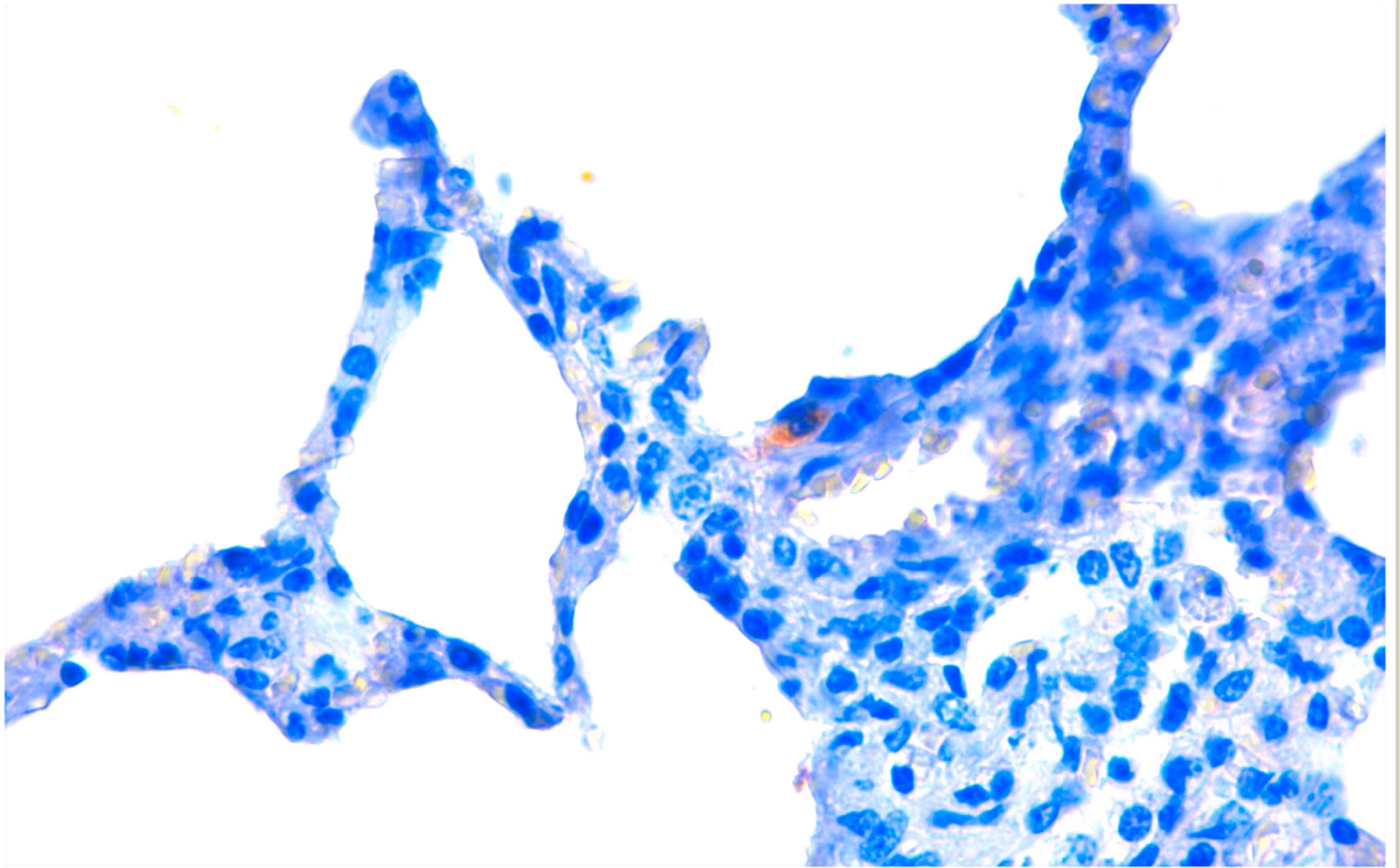


MALATTIE INFETTIVE



MALATTIE INFETTIVE



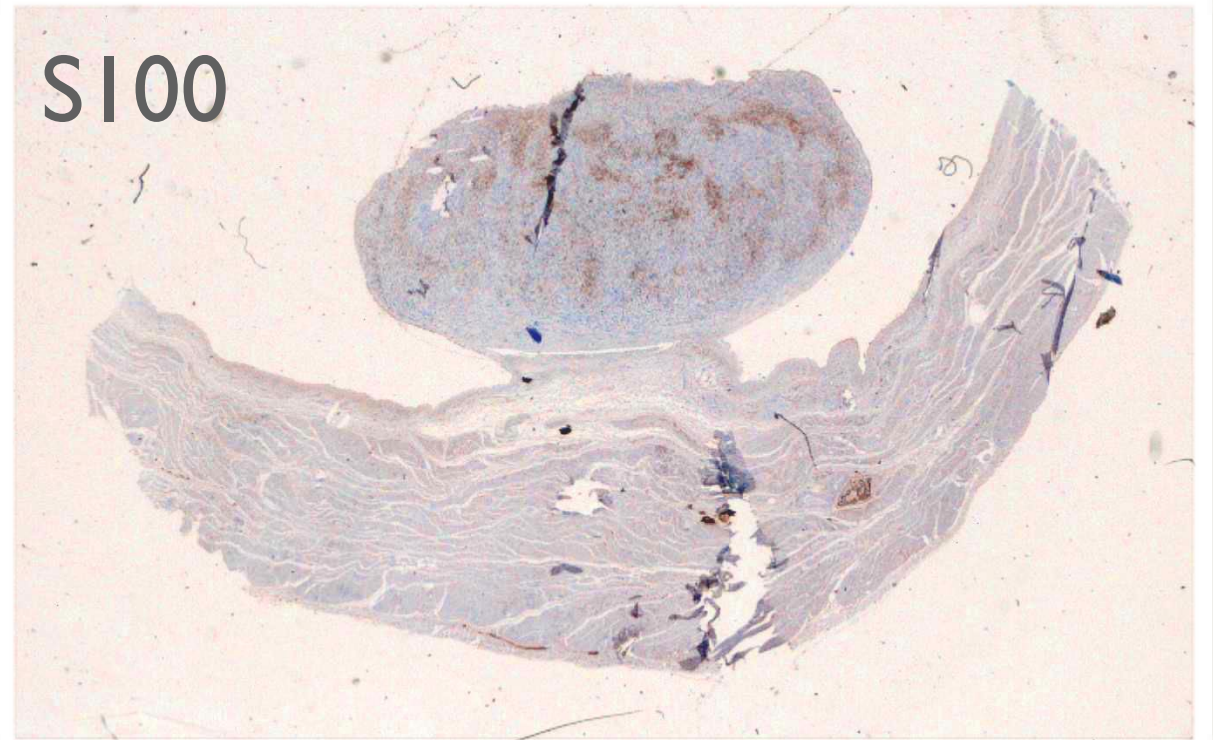


DIAGNOSI DEI TUMORI

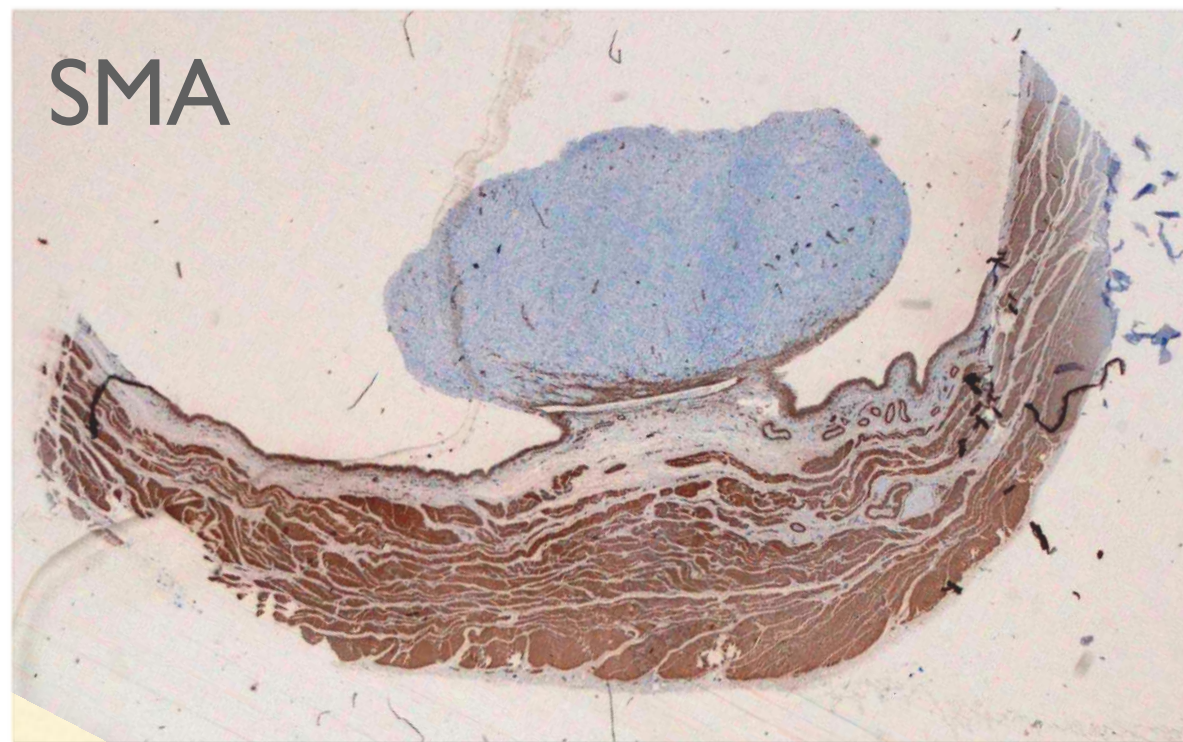
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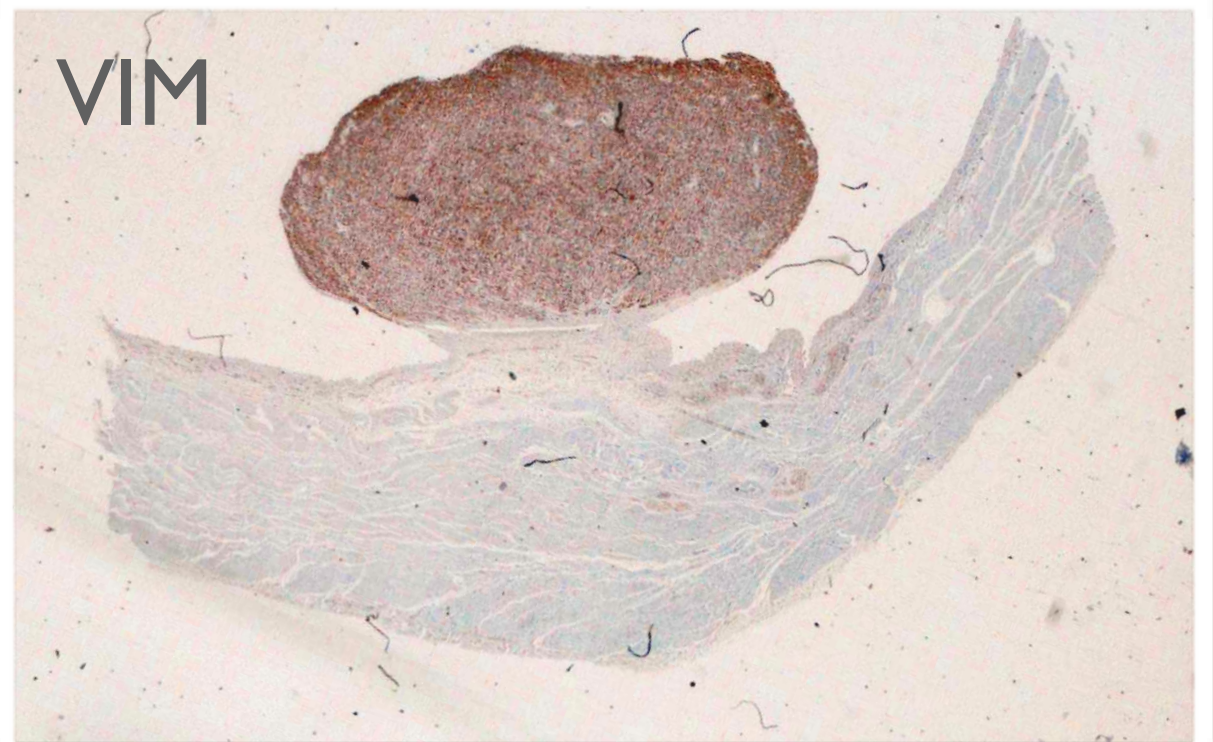
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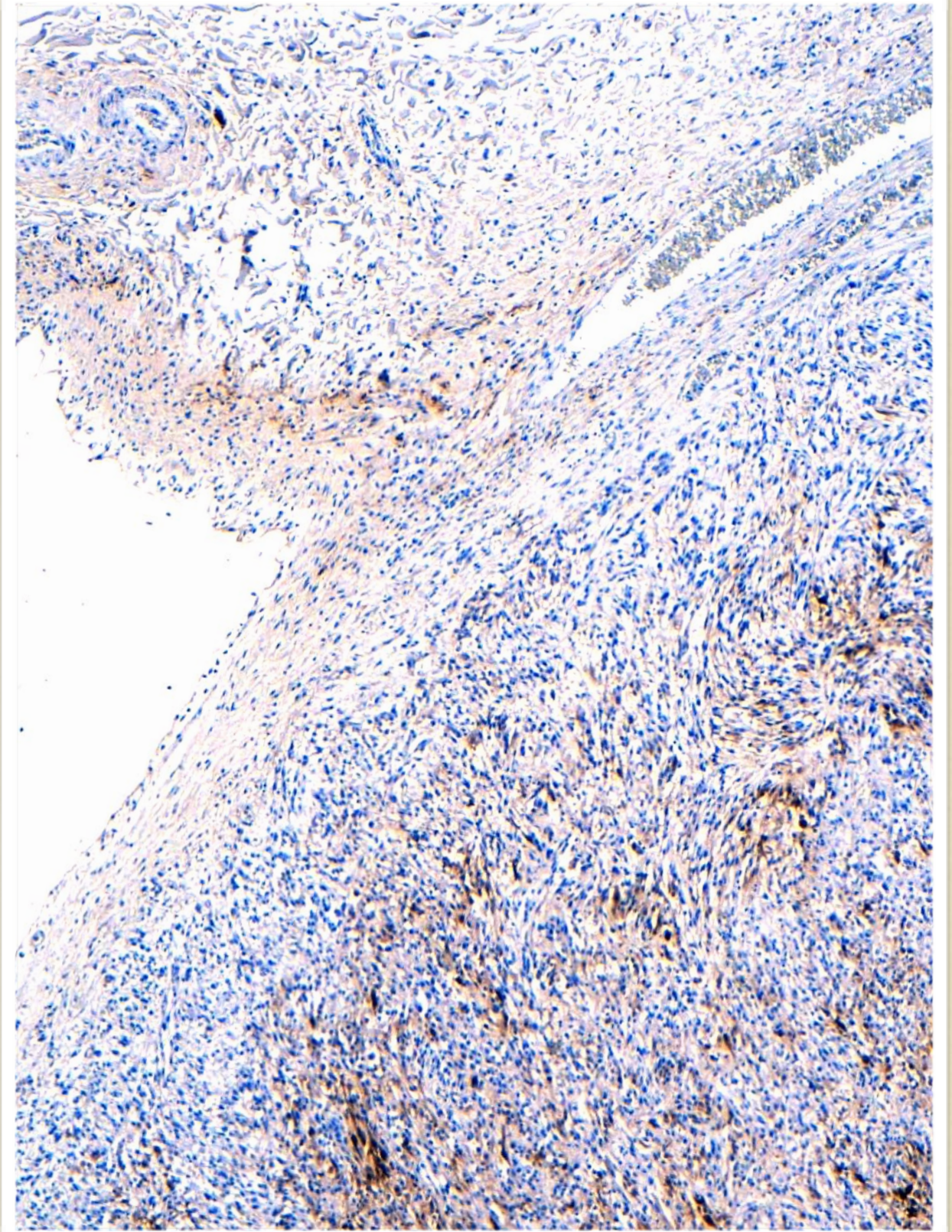
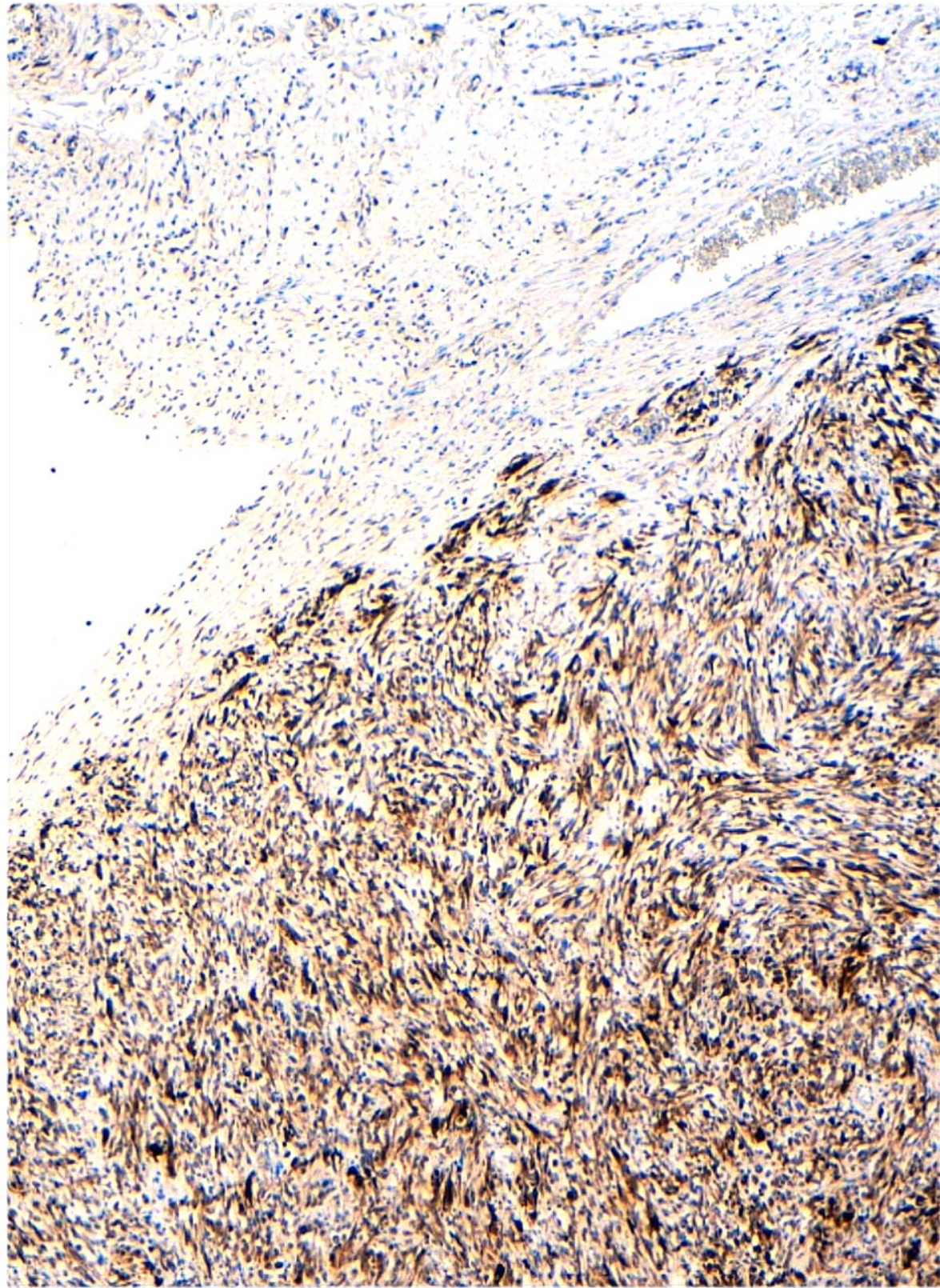
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VIM

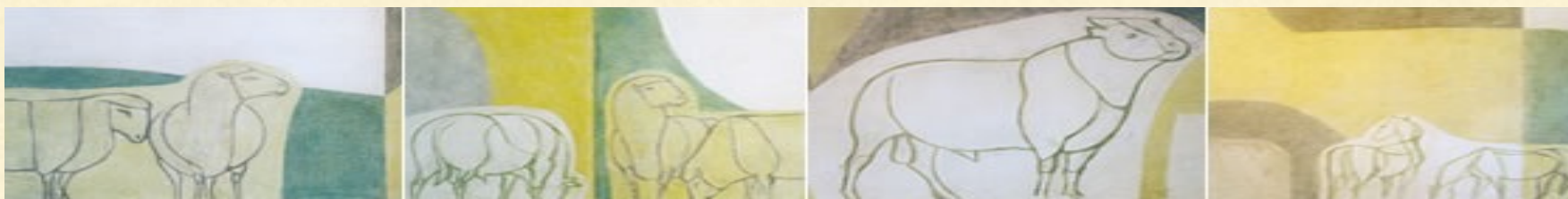


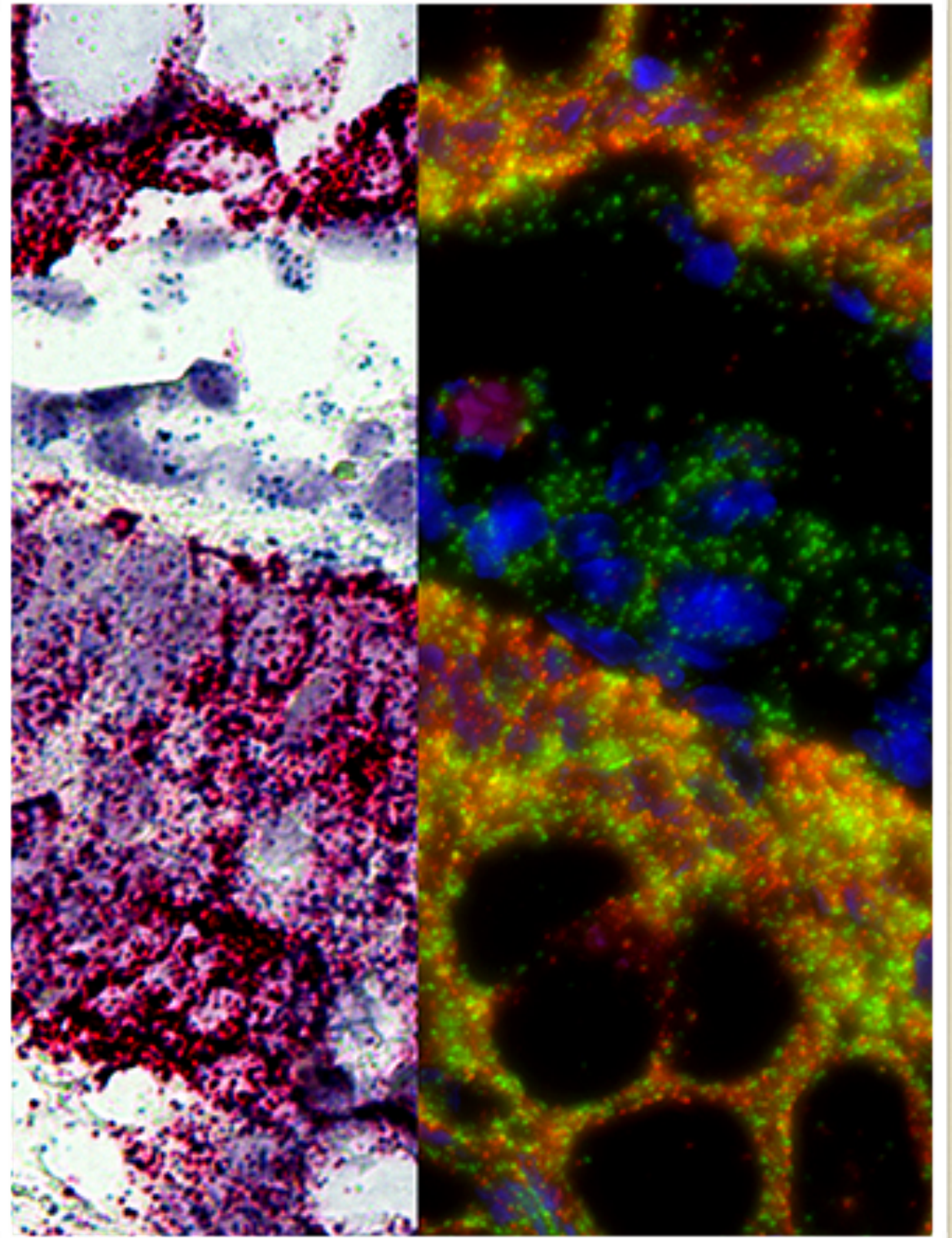
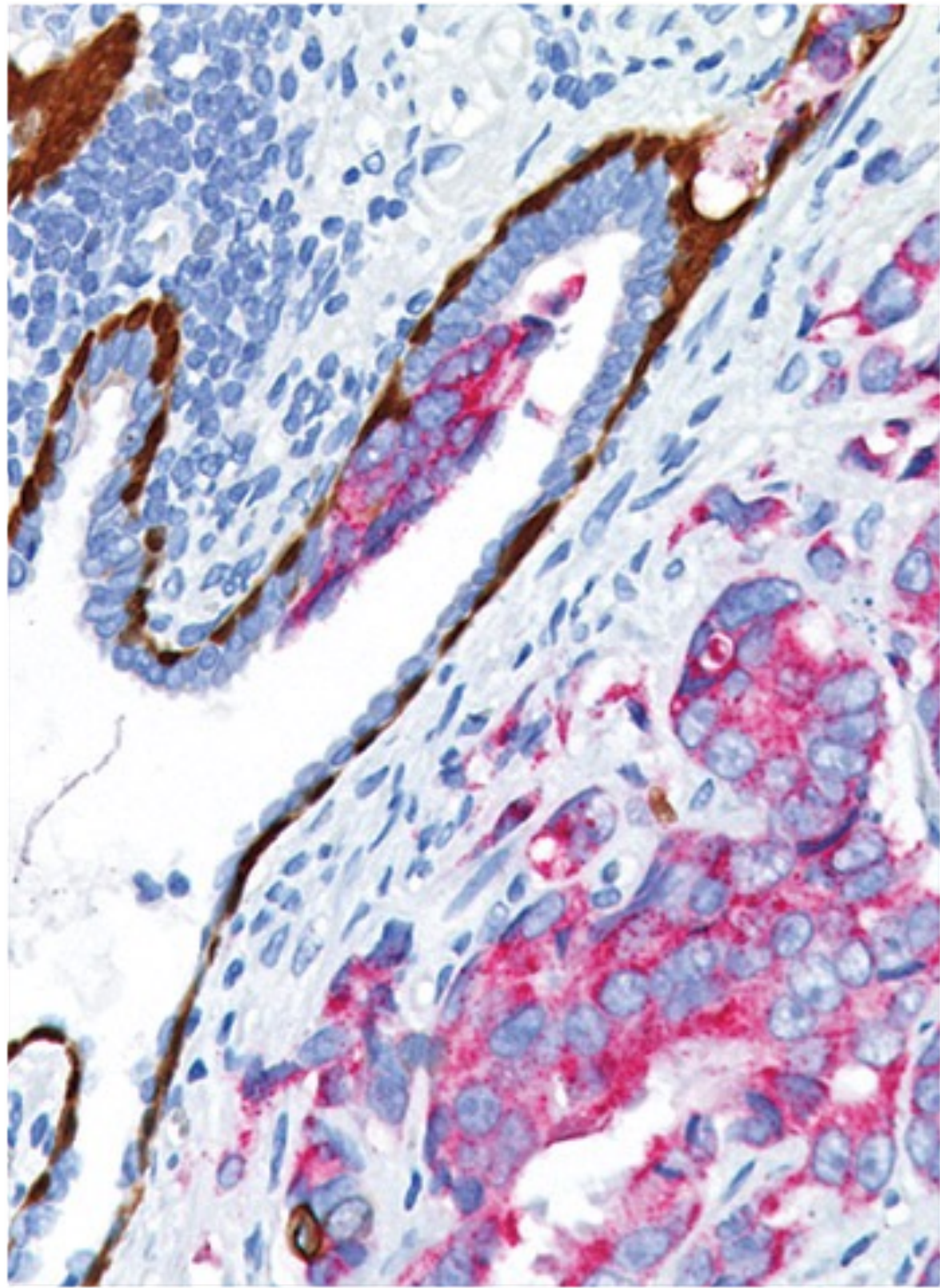
DIAGNOSI DEI TUMORI



NUOVE TECNICHE

- Doppia o tripla immunocolorazione
- ISH (In situ hybridization)
- FISH (Fluorescent in situ hybridization)
- ...





GRAZIE PER L'ATTENZIONE

