

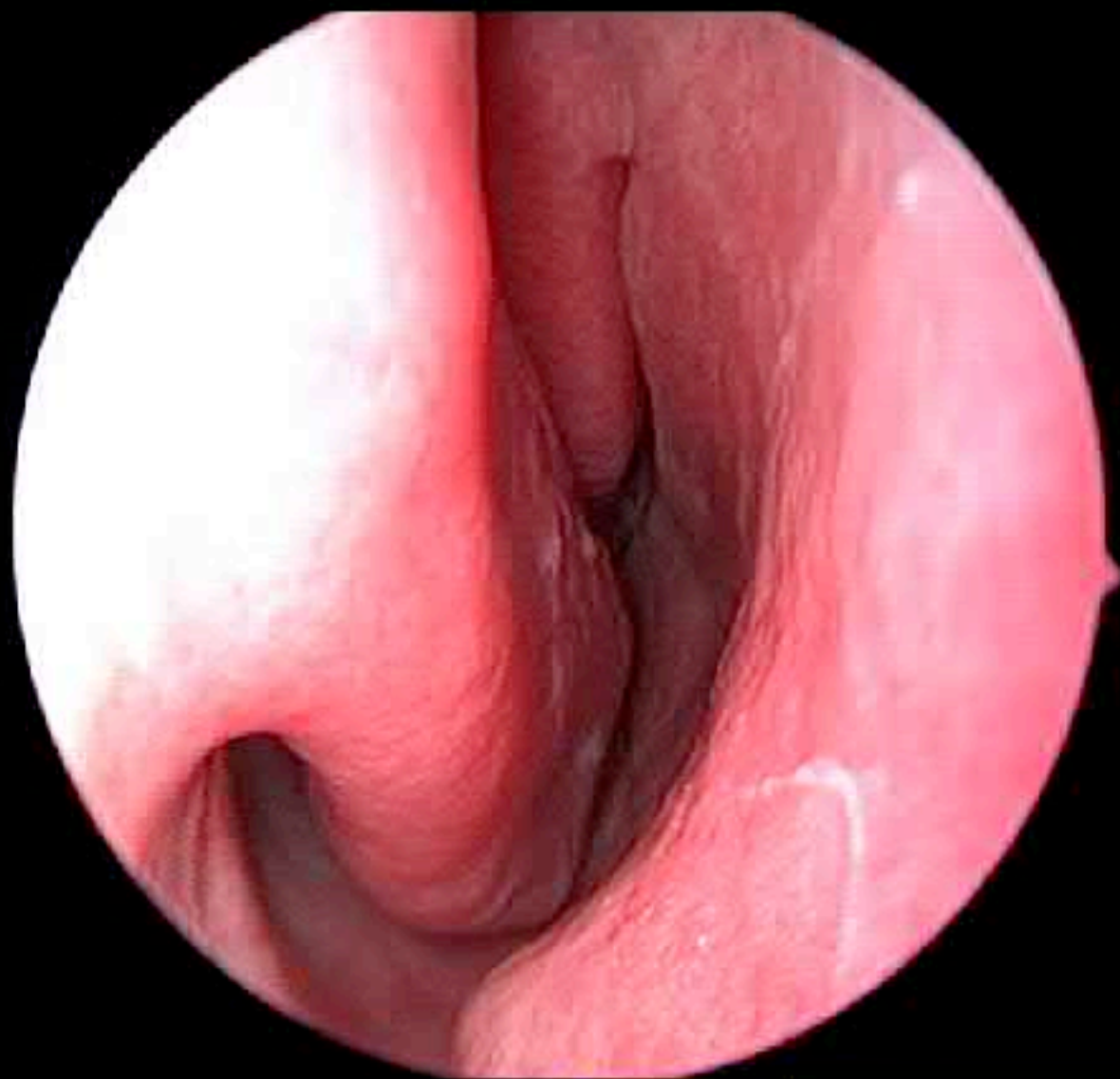
chronic rhinosinusitis update

Richard Douglas

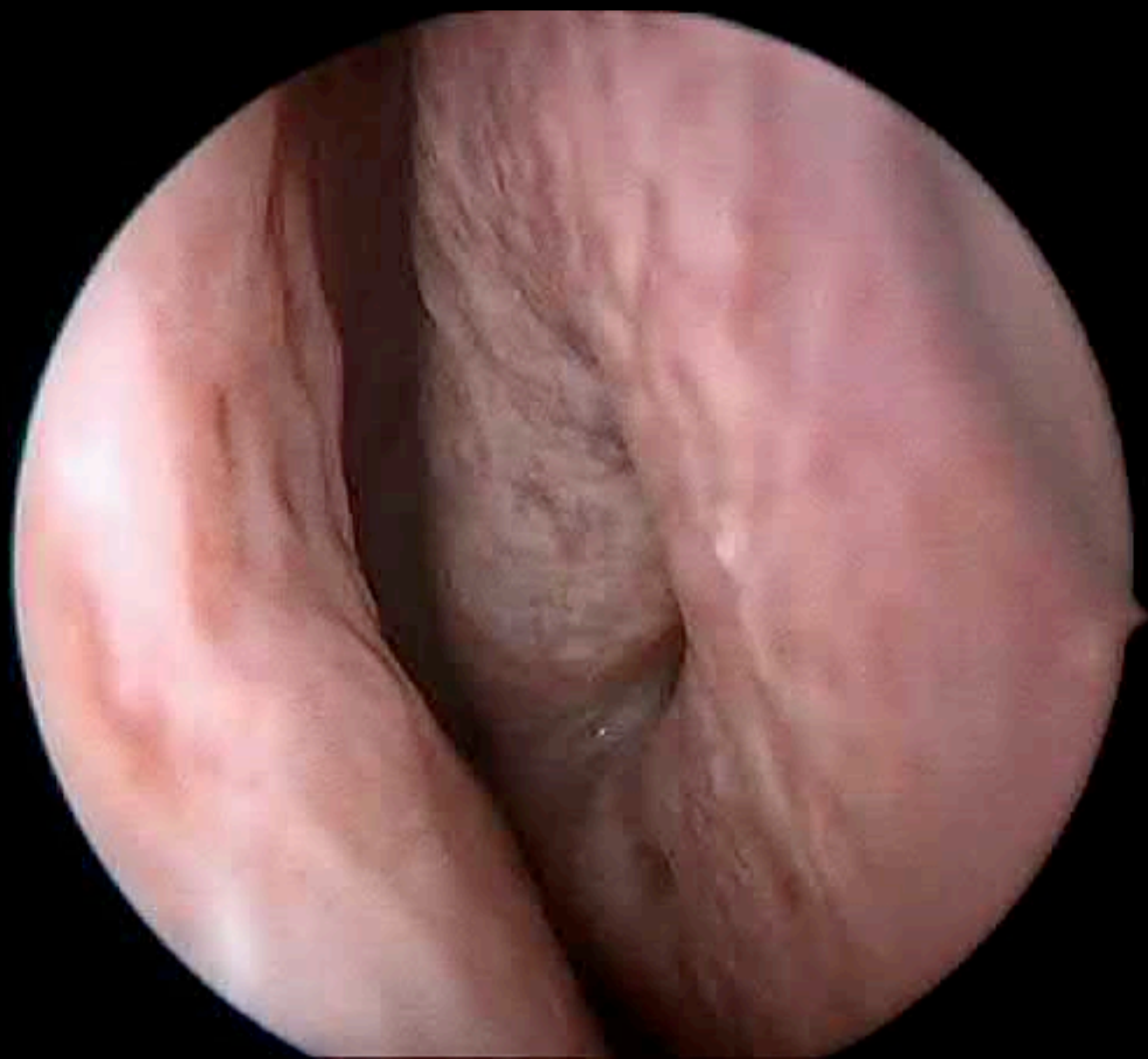
Mauranui Clinic and Auckland City Hospital
The University of Auckland



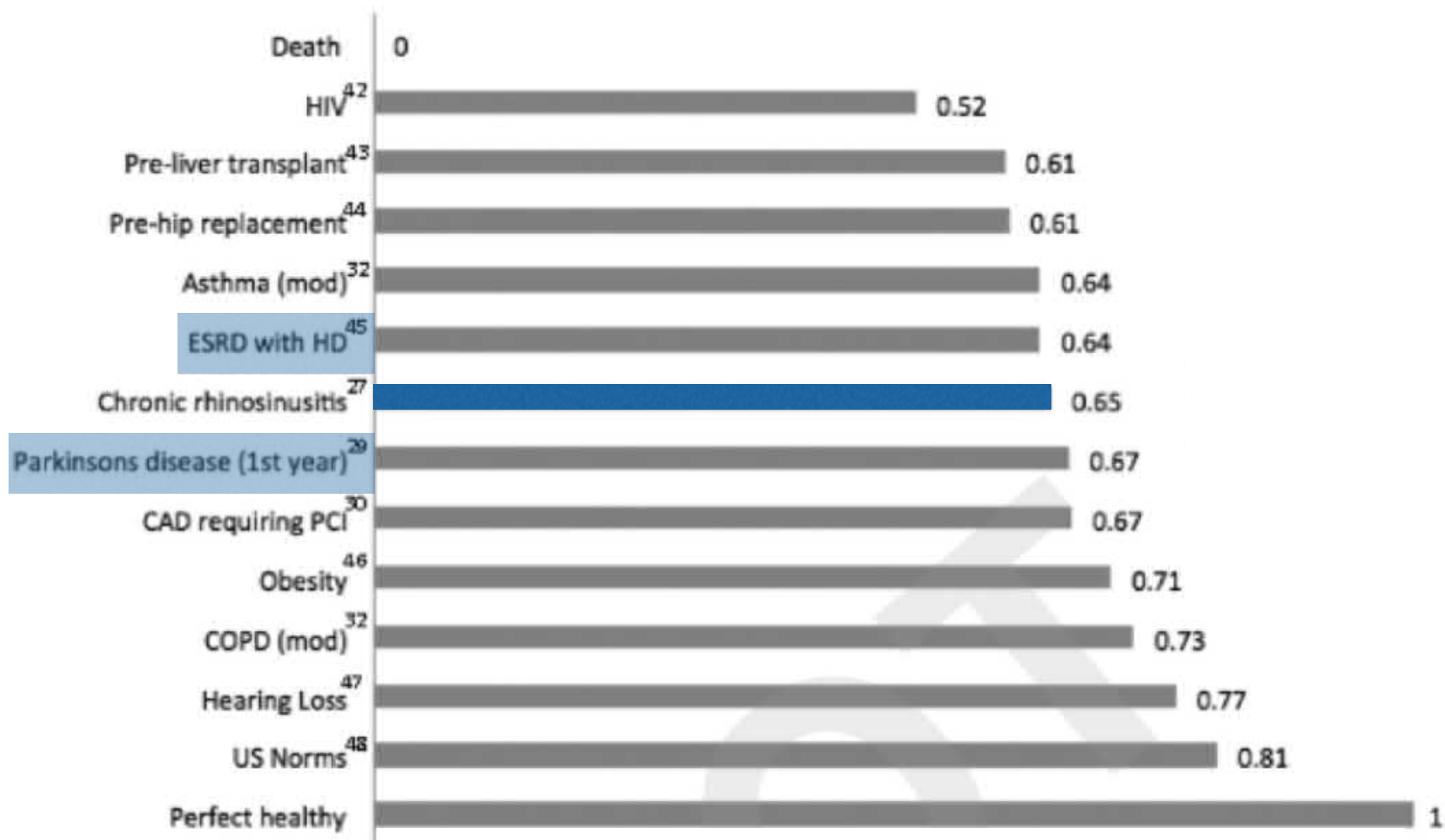




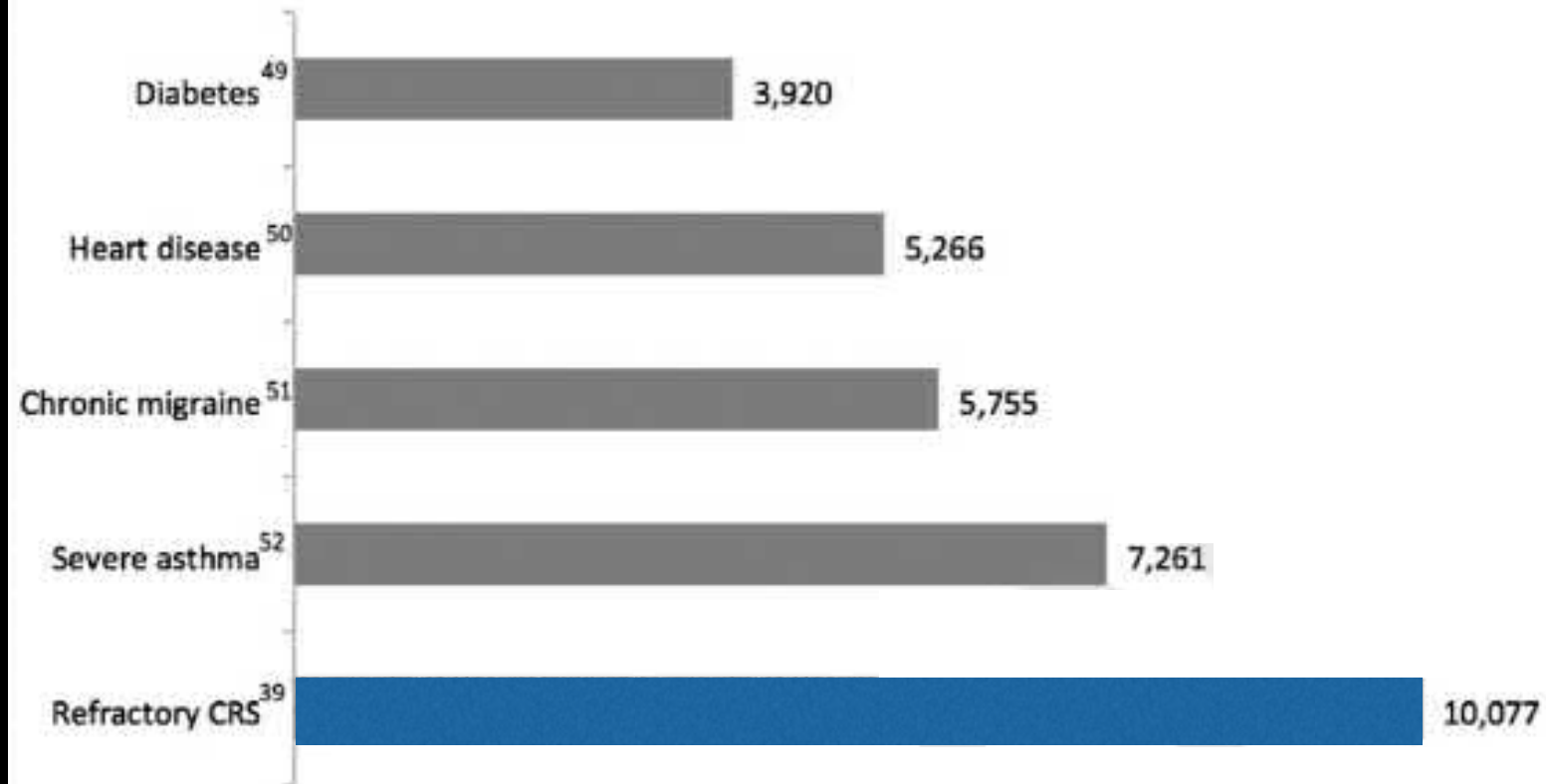




SF-6D utility scores by health state



Annual productivity costs by disease (US\$)



CRS: Epidemiology and burden of disease. DeConde , Soler. American Journal of Rhinology & Allergy. 30(2):134-9, 2016 Mar-Apr

1. how to structure approach to blocked and snotty noses
2. what causes chronic rhinosinusitis
3. medical management of CRS - role of antibiotics
4. surgical management of CRS

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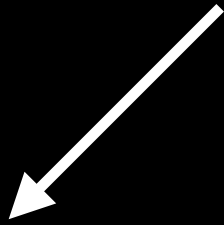
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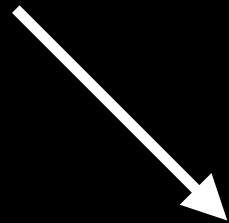
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acute

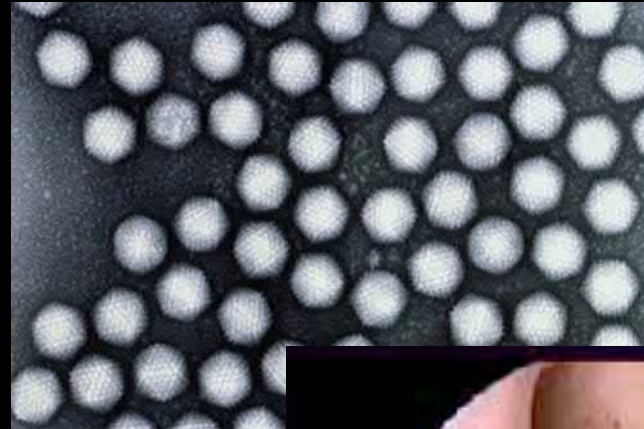
chronic



acute viral rhinitis



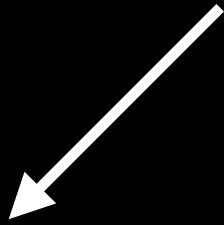
acute sinusitis



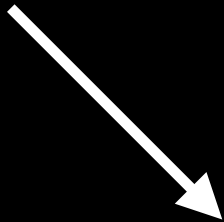




acute

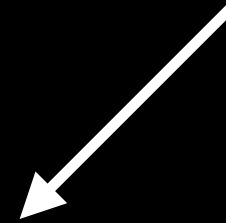


acute viral rhinitis

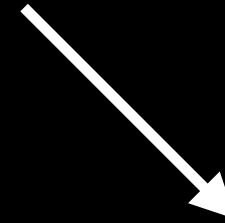


acute sinusitis

chronic

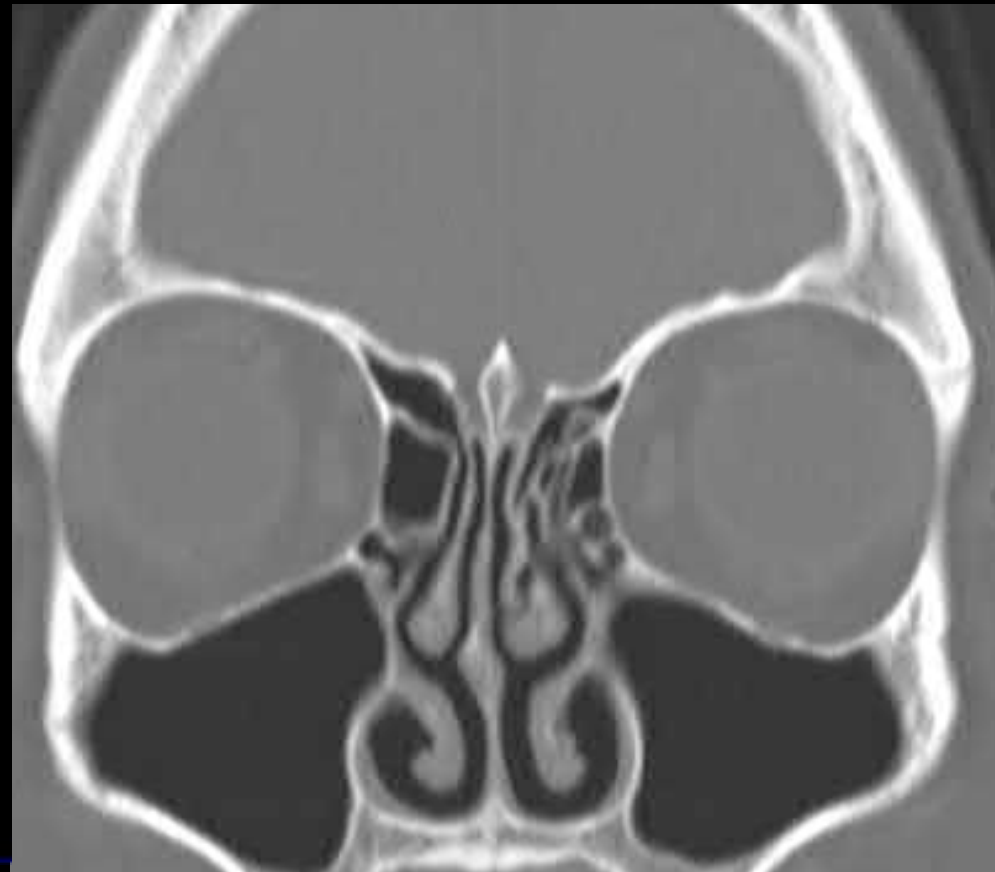


rhinitis

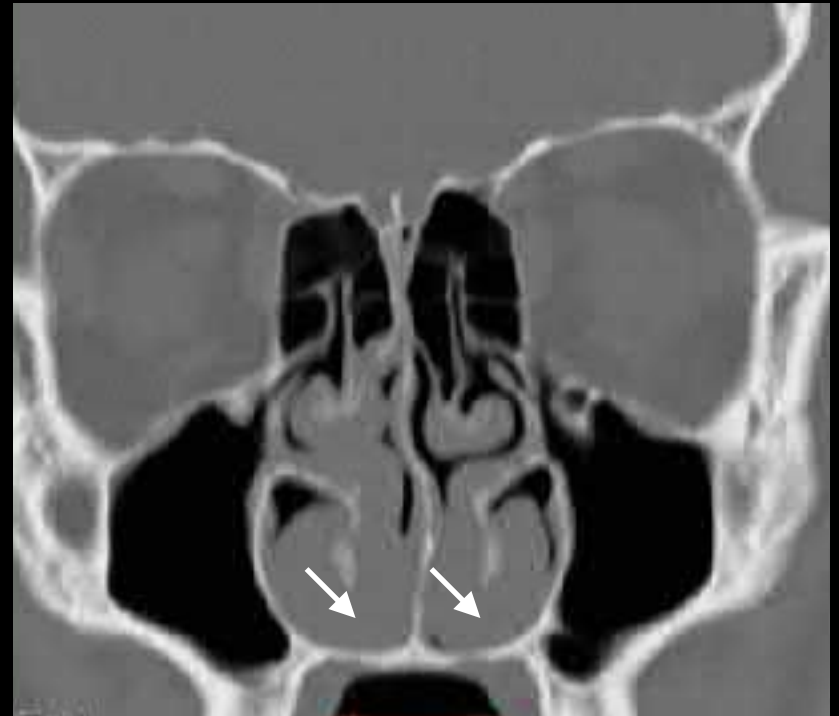


sinusitis

normal nose



chronic rhinitis

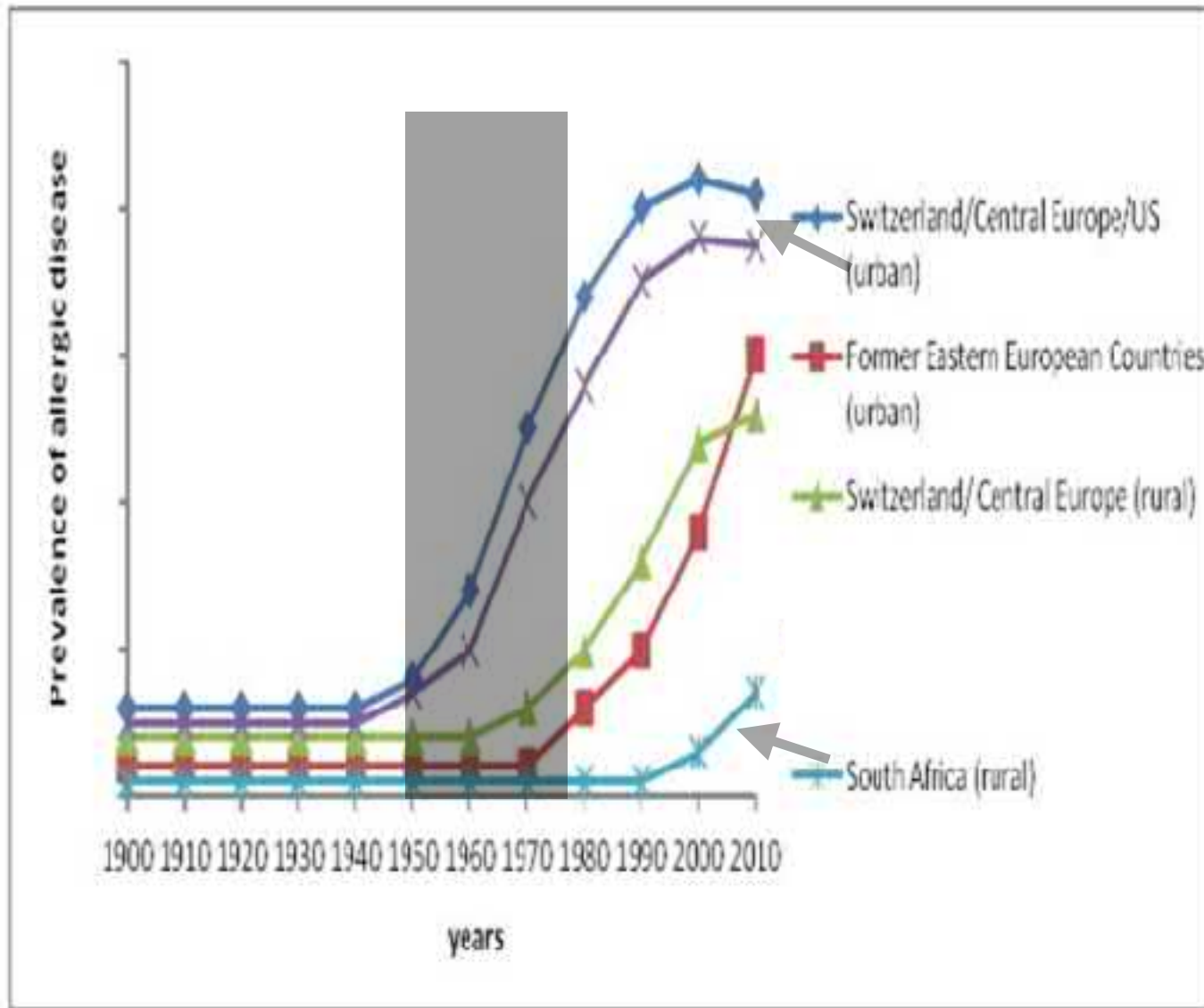


Jonathan Bostock



10 years to find another 28 cases

prevalence of allergic illnesses



chronic sinusitis



diagnosis

1. Nasal blockage	0	1	2	3	4	5
2. Discharge (mucus) from the nose	0	1	2	3	4	5
3. Post nasal drip	0	1	2	3	4	5
4. Facial pain, pressure or headaches	0	1	2	3	4	5
5. Loss of sense of smell*	0	1	2	3	4	5

diagnosis

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4. Facial pain, pressure or headaches	0	1	2	3	4	5
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headache





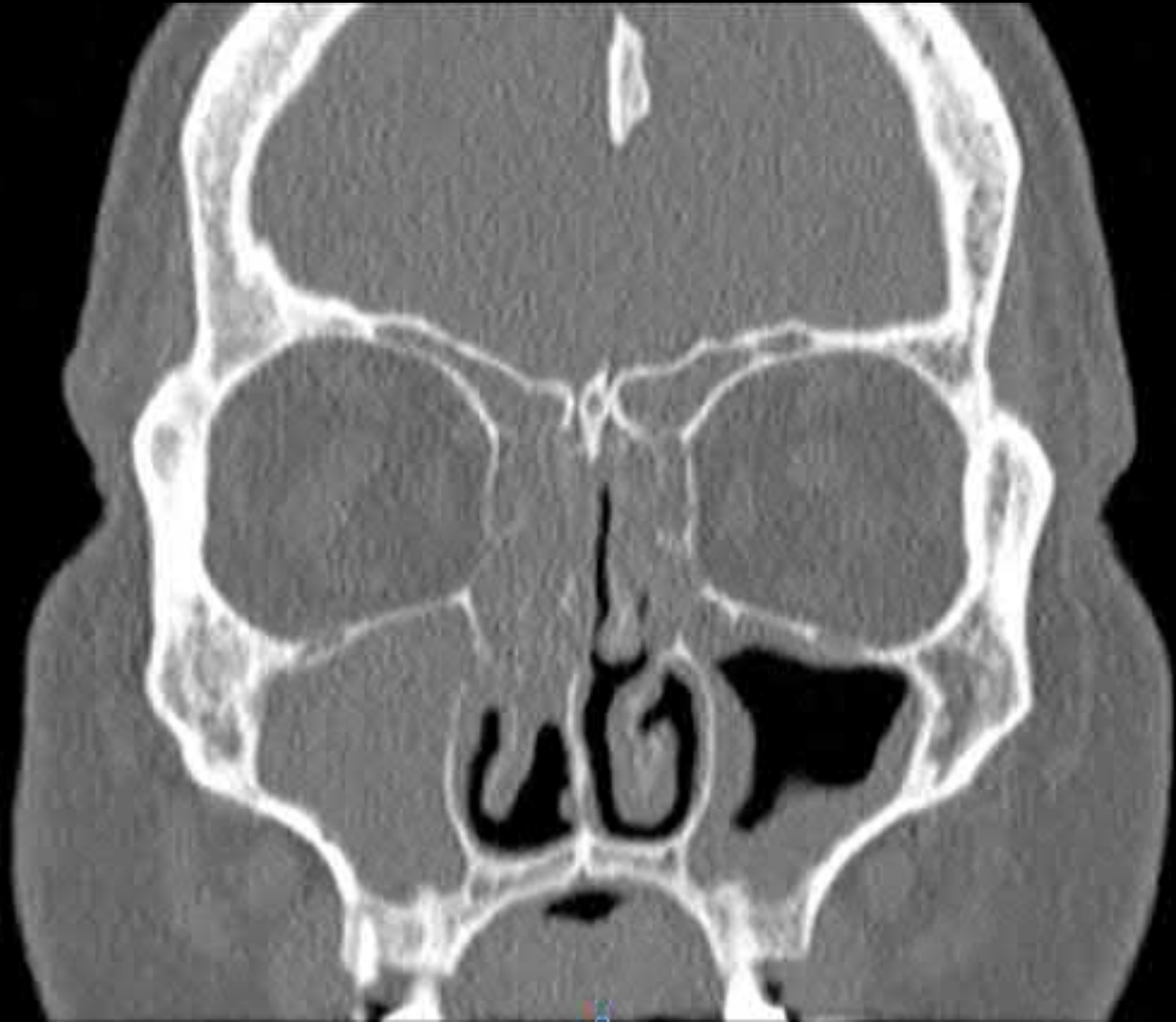
tension headache

migraine

temporomandibular joint syndrome

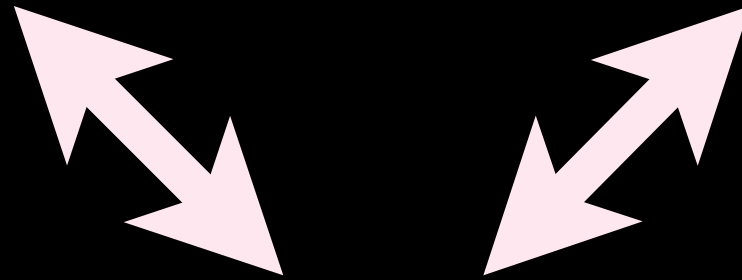




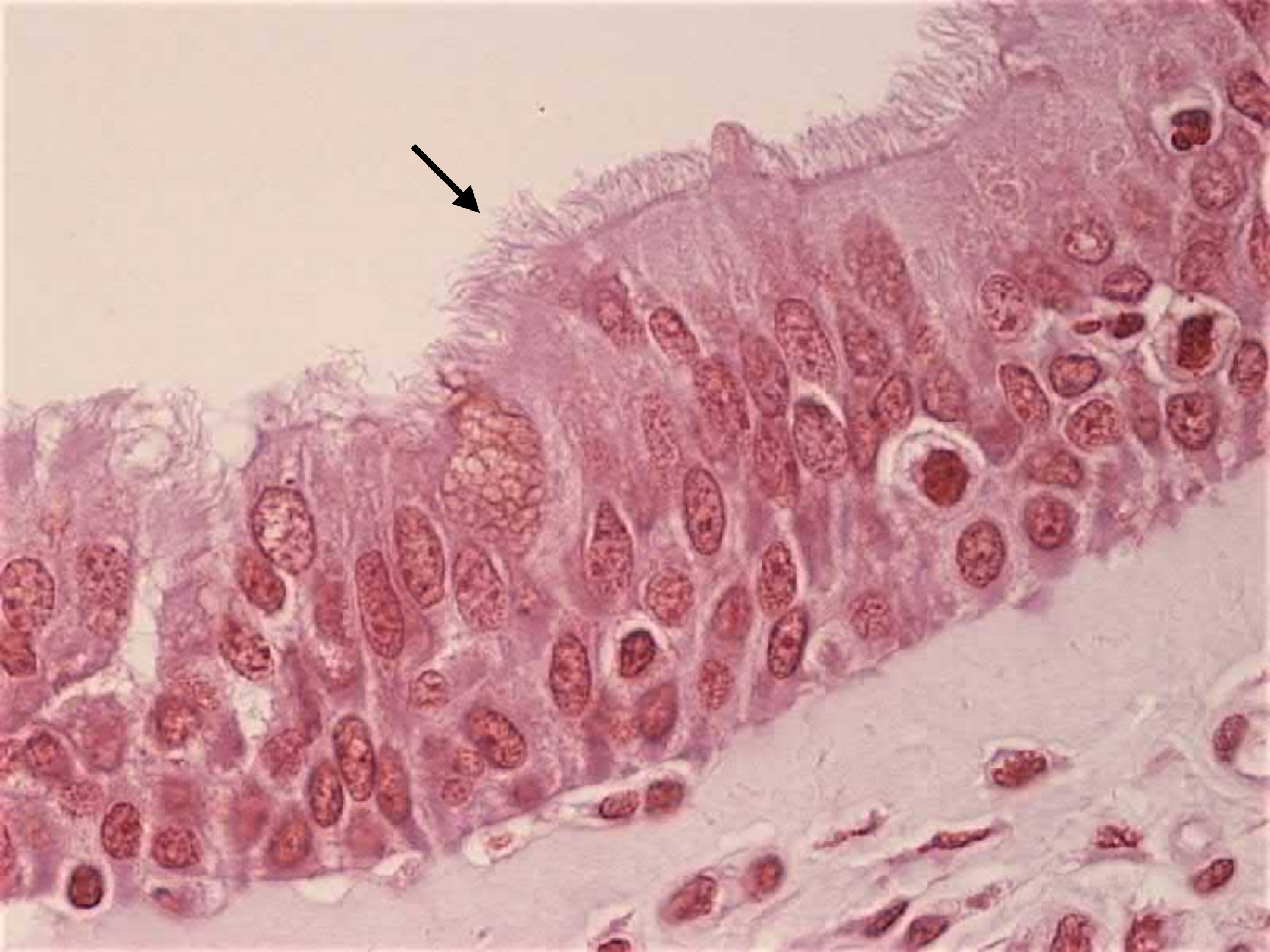


Rhinitis

Sinusitis

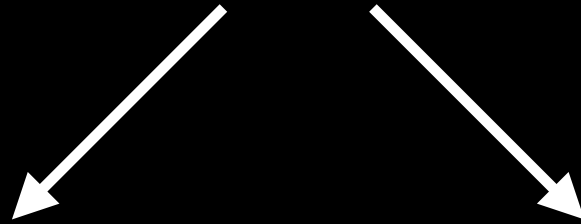


Asthma



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chronic rhinitis

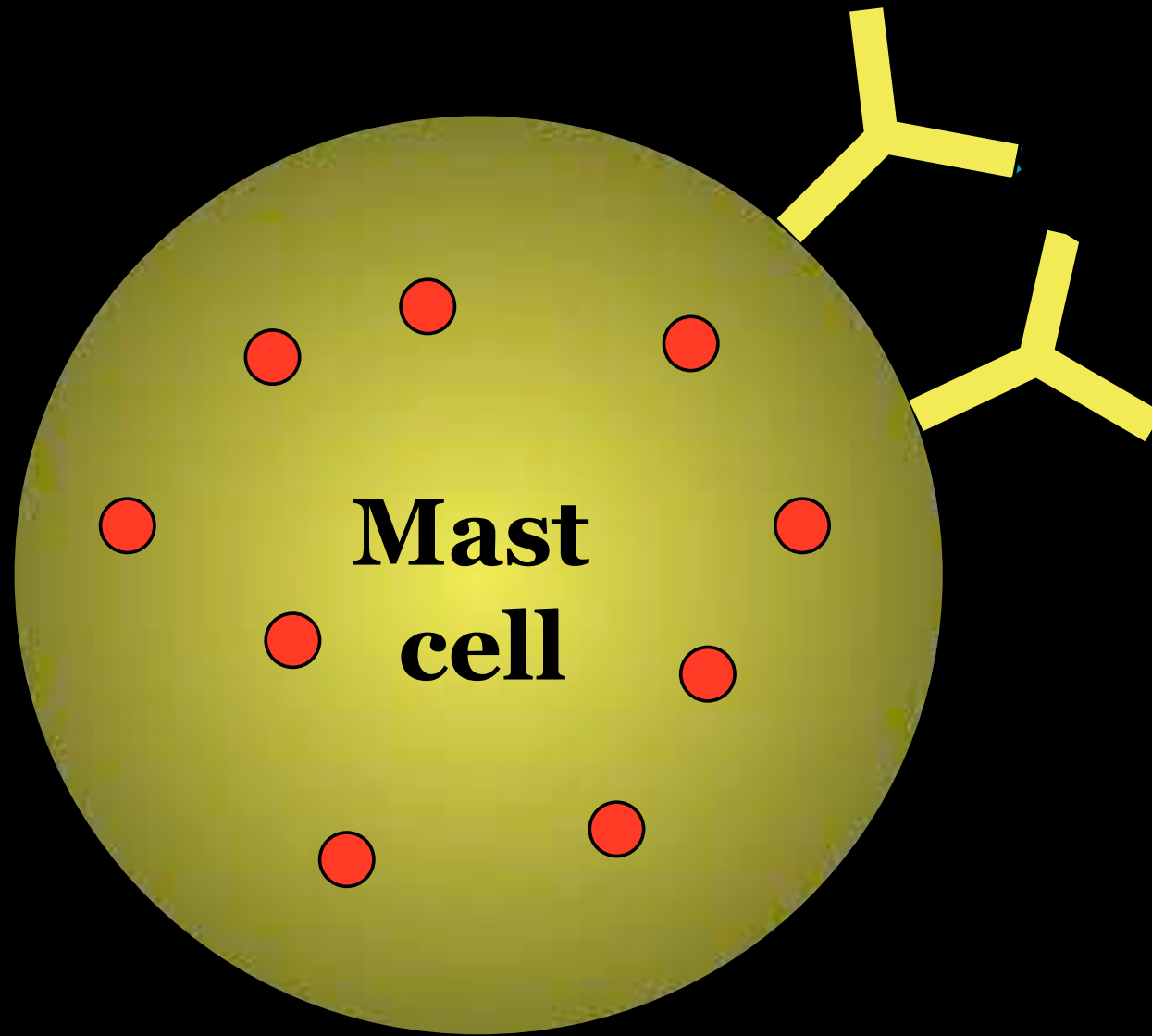


allergic

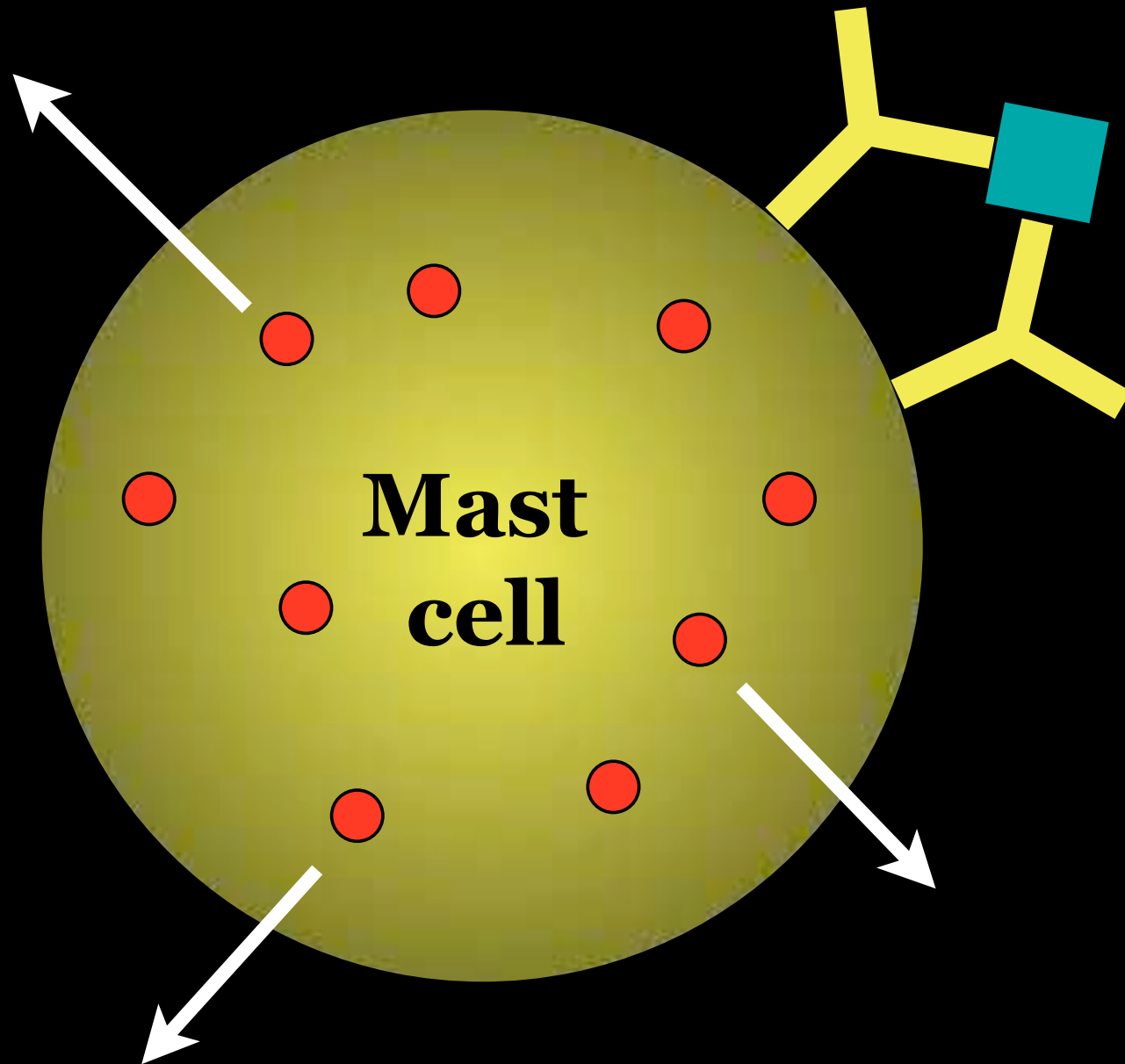
non-allergic



pathogenesis of allergic rhinitis



pathogenesis of allergic rhinitis



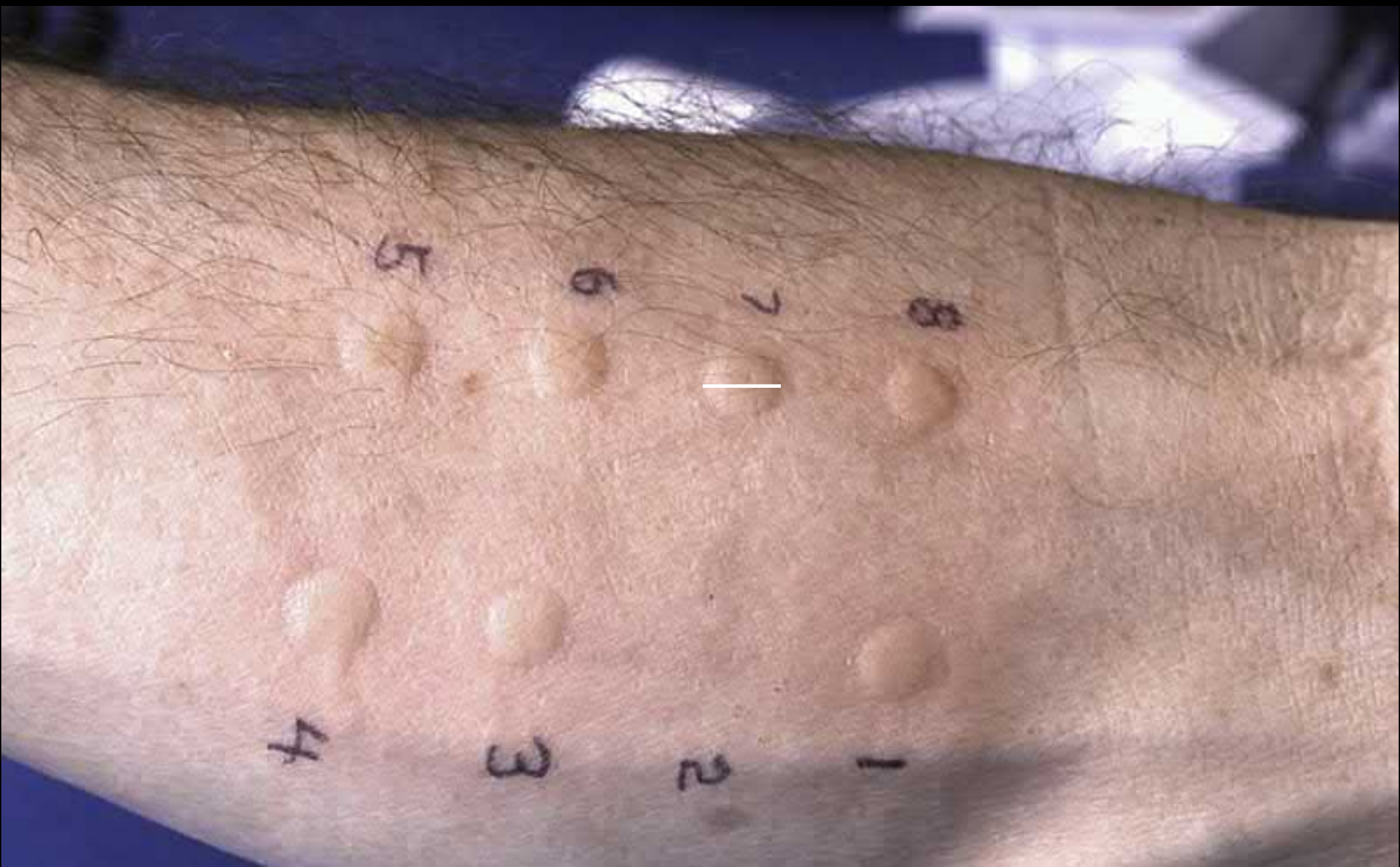
grass pollen



house dust mites



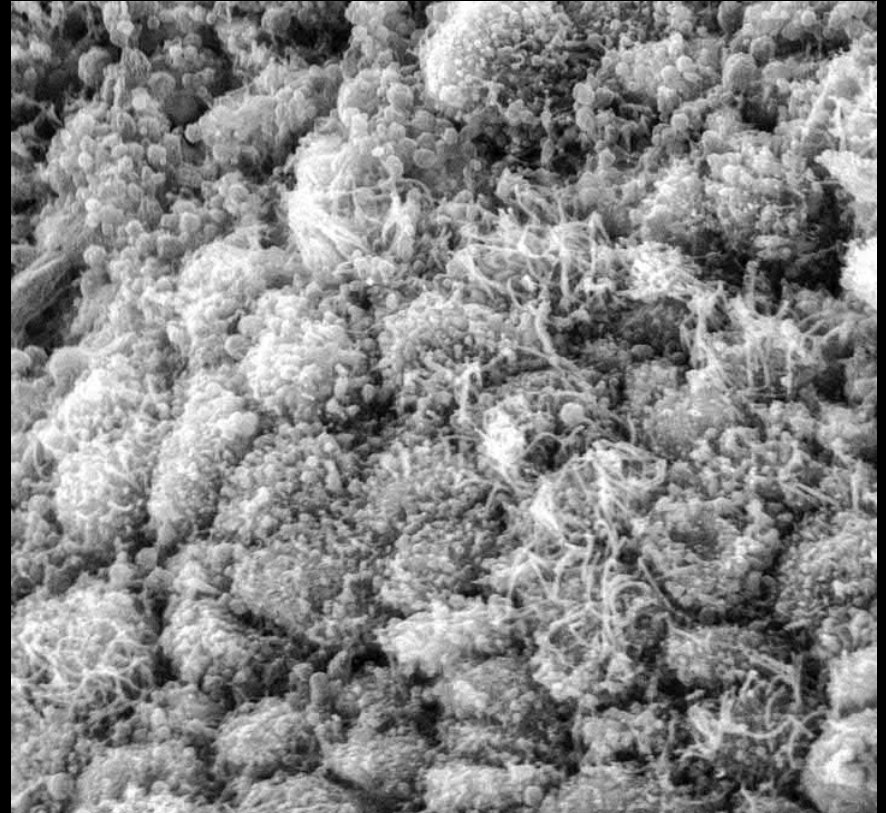




- 5
- 6
- 7
- 8
- 4
- 3
- 2
- 1

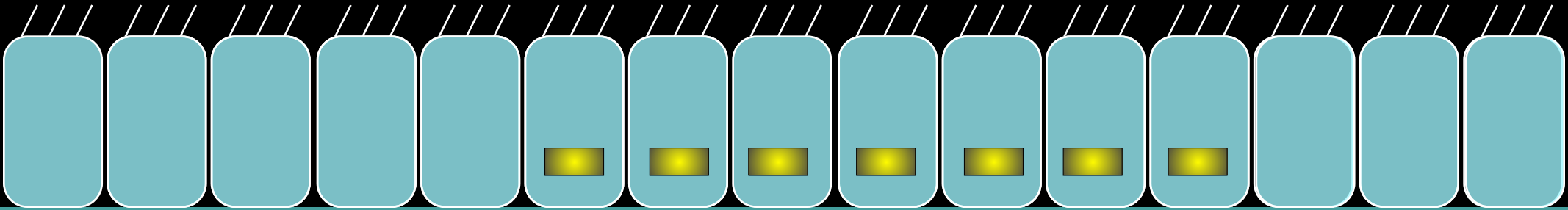
chronic sinusitis without polyps



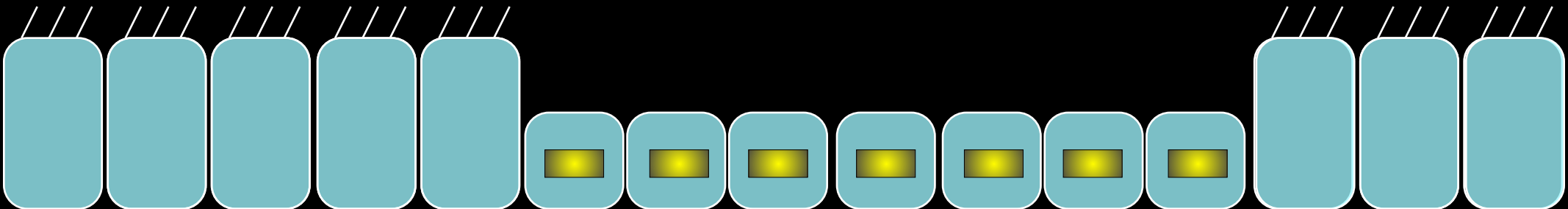


disruption of mucociliary clearance

injury to the mucociliary mechanism



injury to the mucociliary mechanism

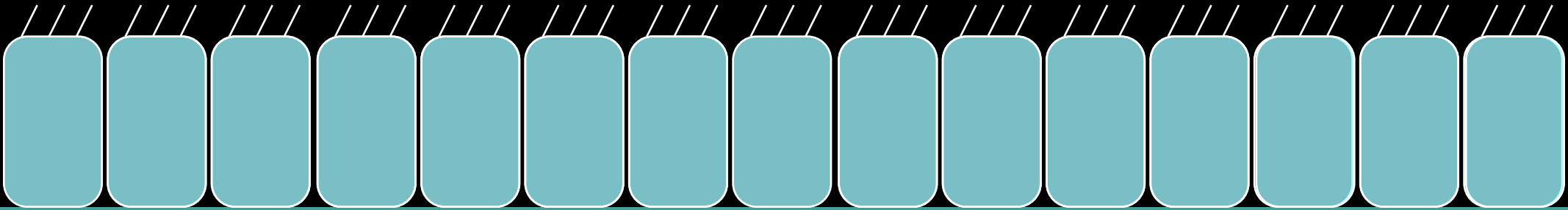


clearance of the virus



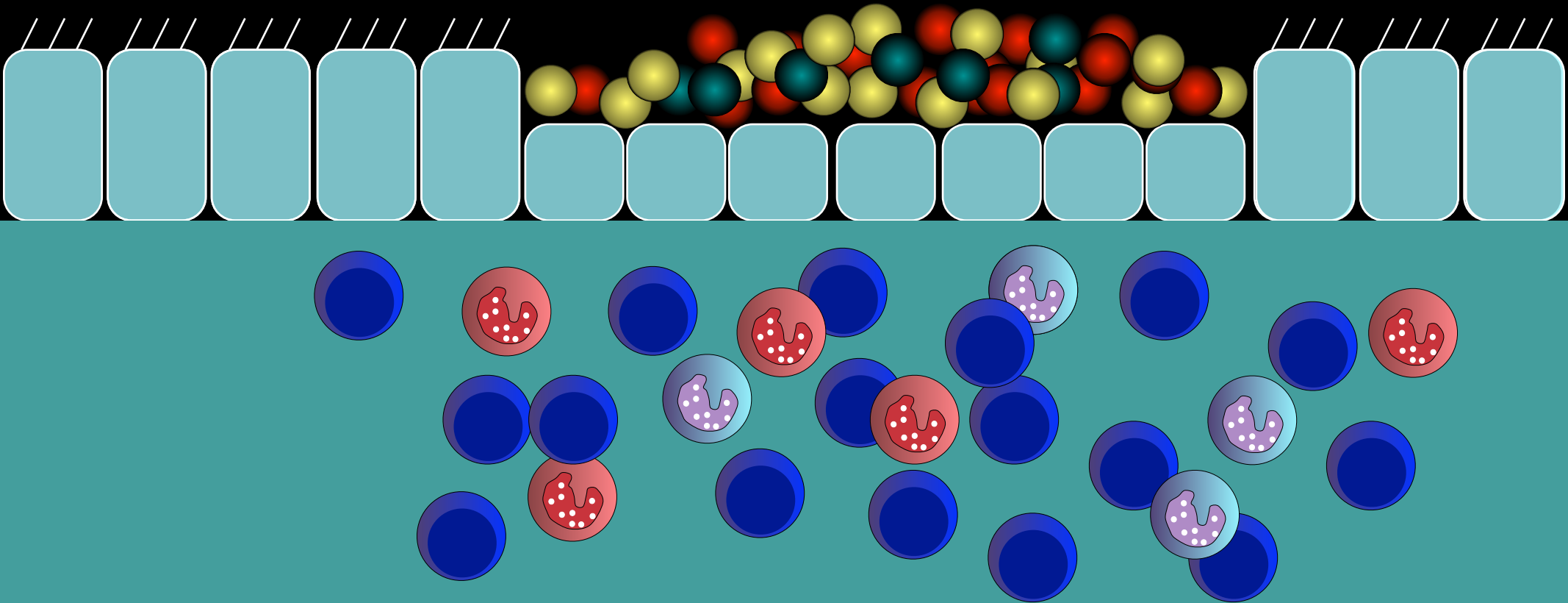
restoration of the mucociliary mechanism

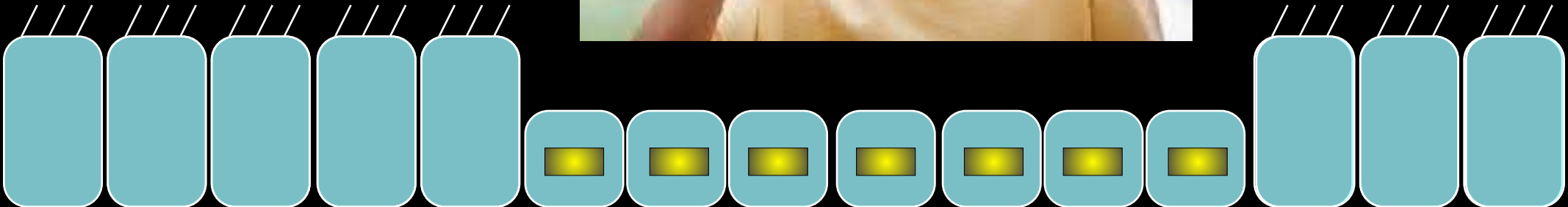
→ return to healthy sinuses



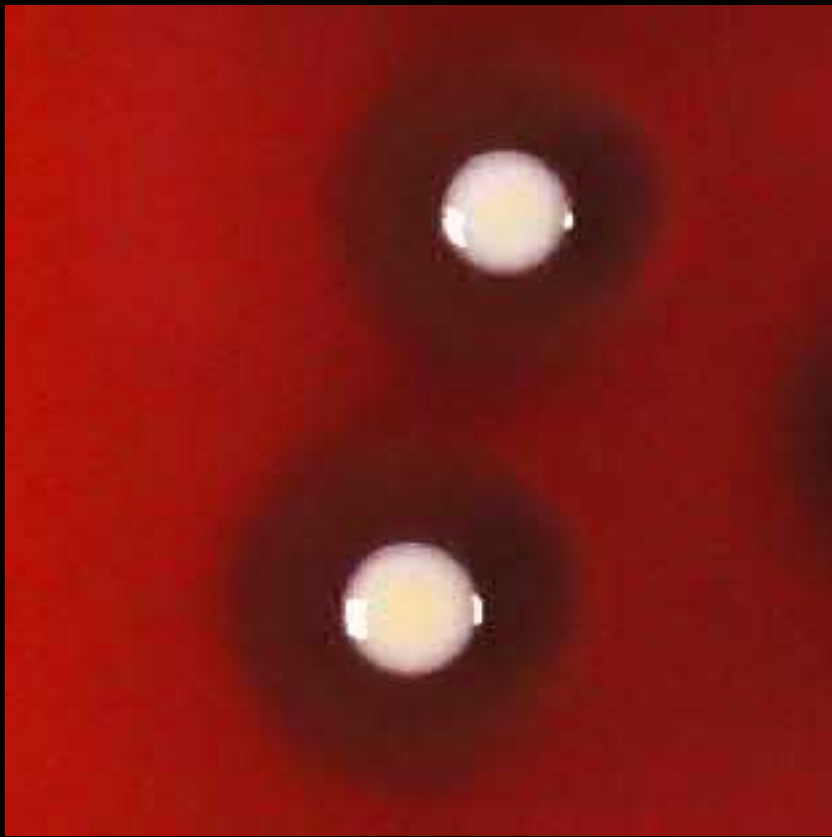
persisting mucosal injury

→ chronic rhinosinusitis





RSV infection increases asthma for next 10 years



SPECIMEN: LEFT NOSTRIL SWAB

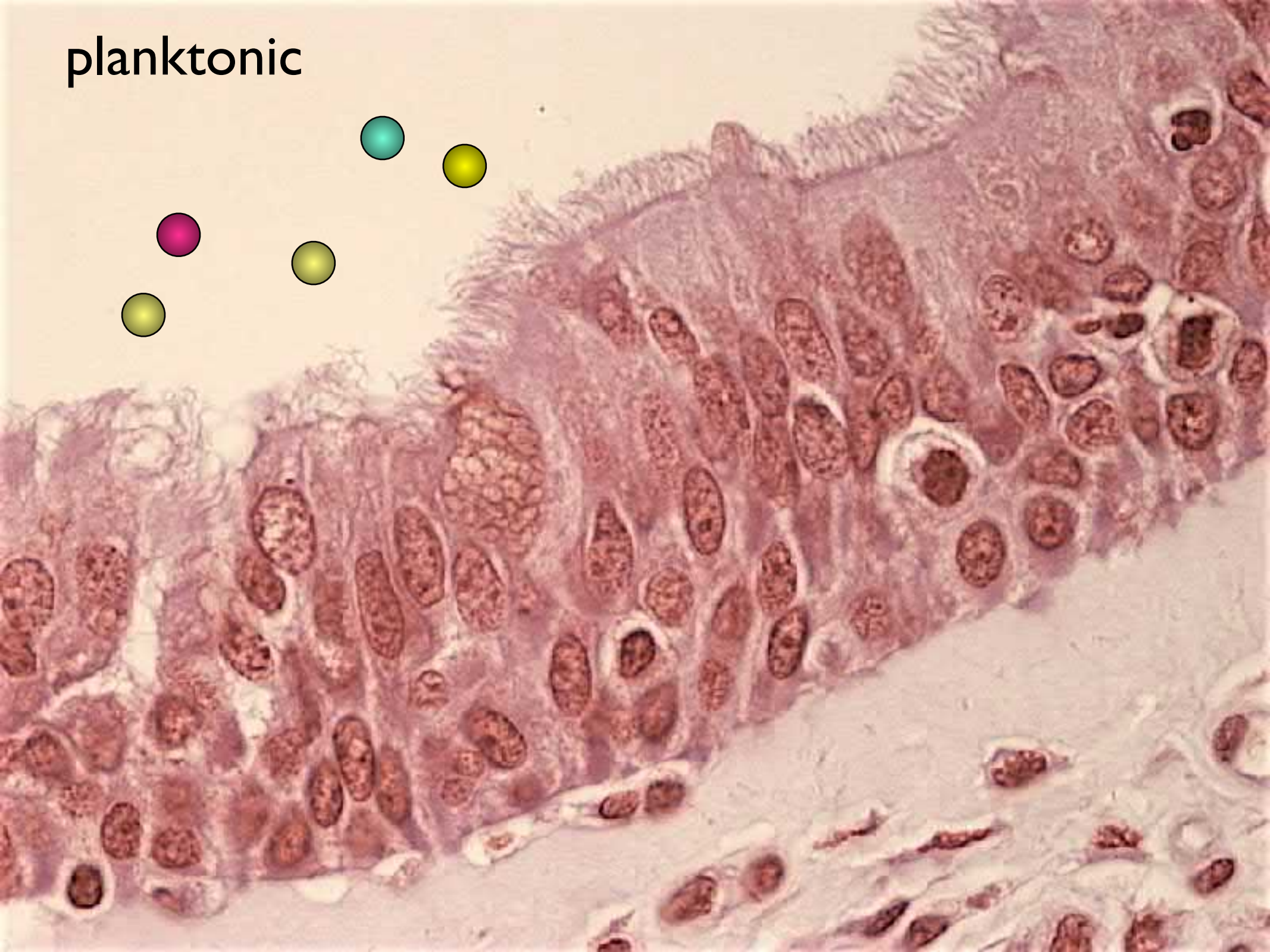
CULTURE:

Heavy growth of *Staphylococcus aureus*

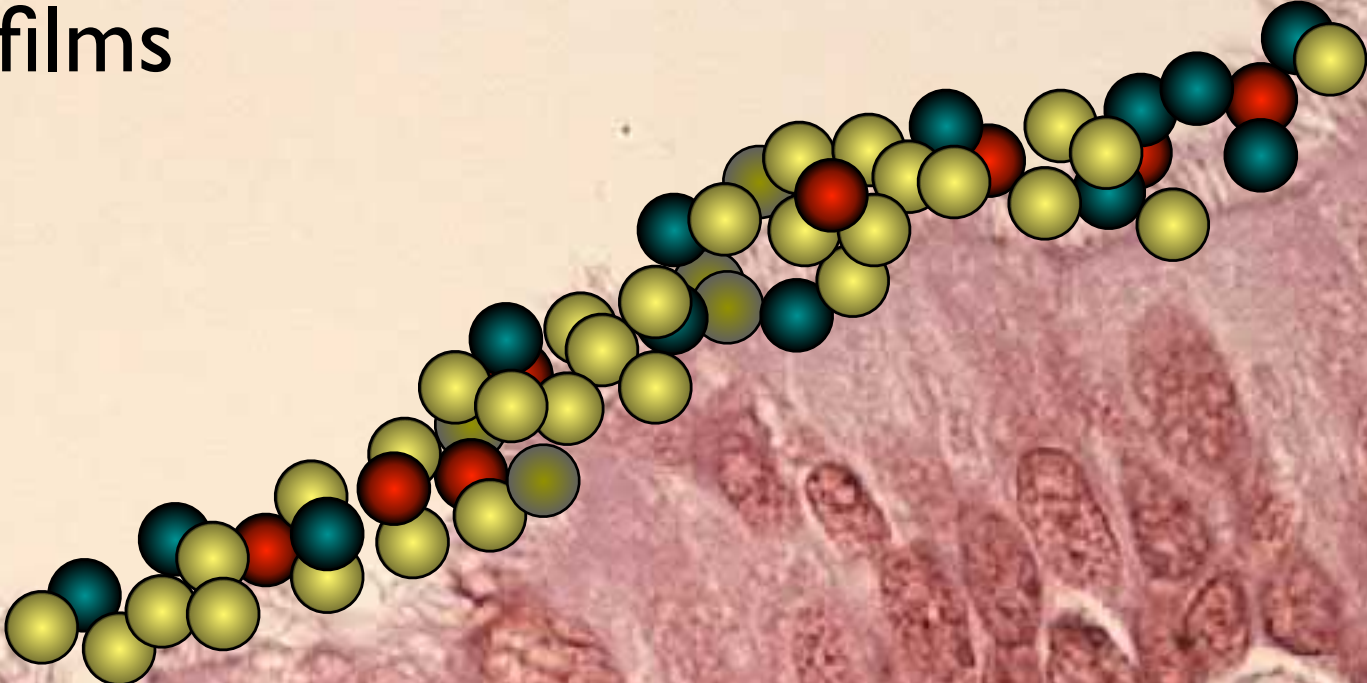
SUSCEPTIBILITIES

Erythromycin	S
Fusidic Acid	S
Mupirocin	S
Flucloxacillin	S
Penicillin	R
Rifampicin	S
Cotrimoxazole	S
Tetracycline	S

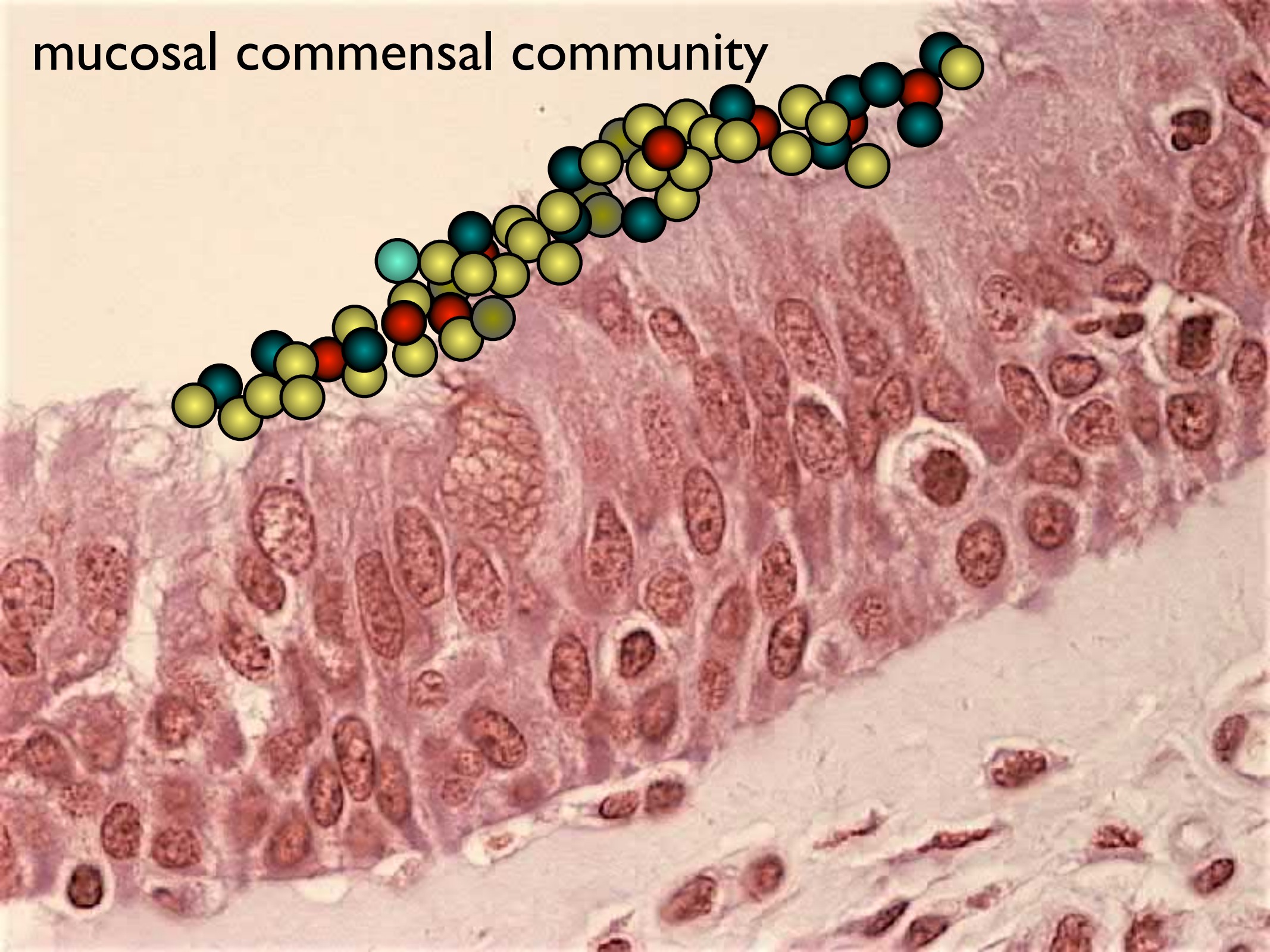
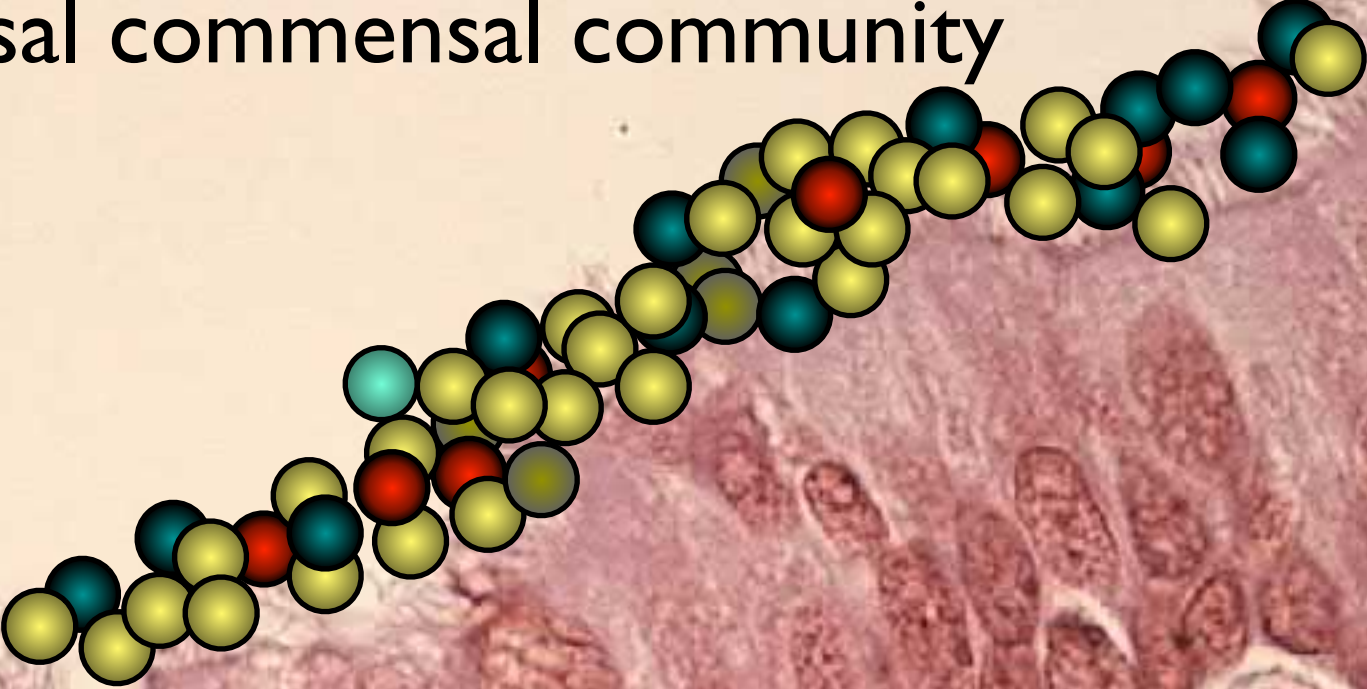
planktonic



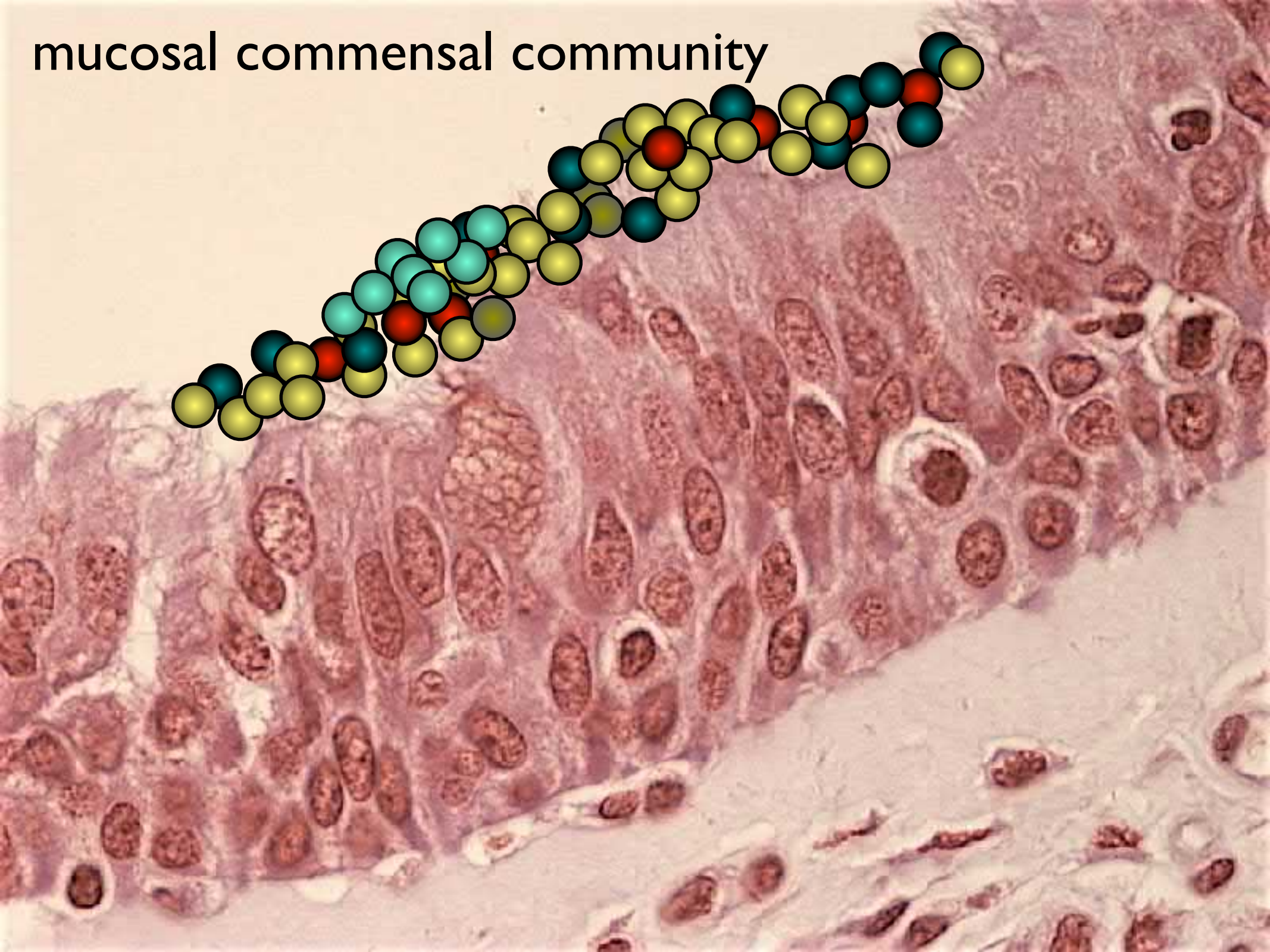
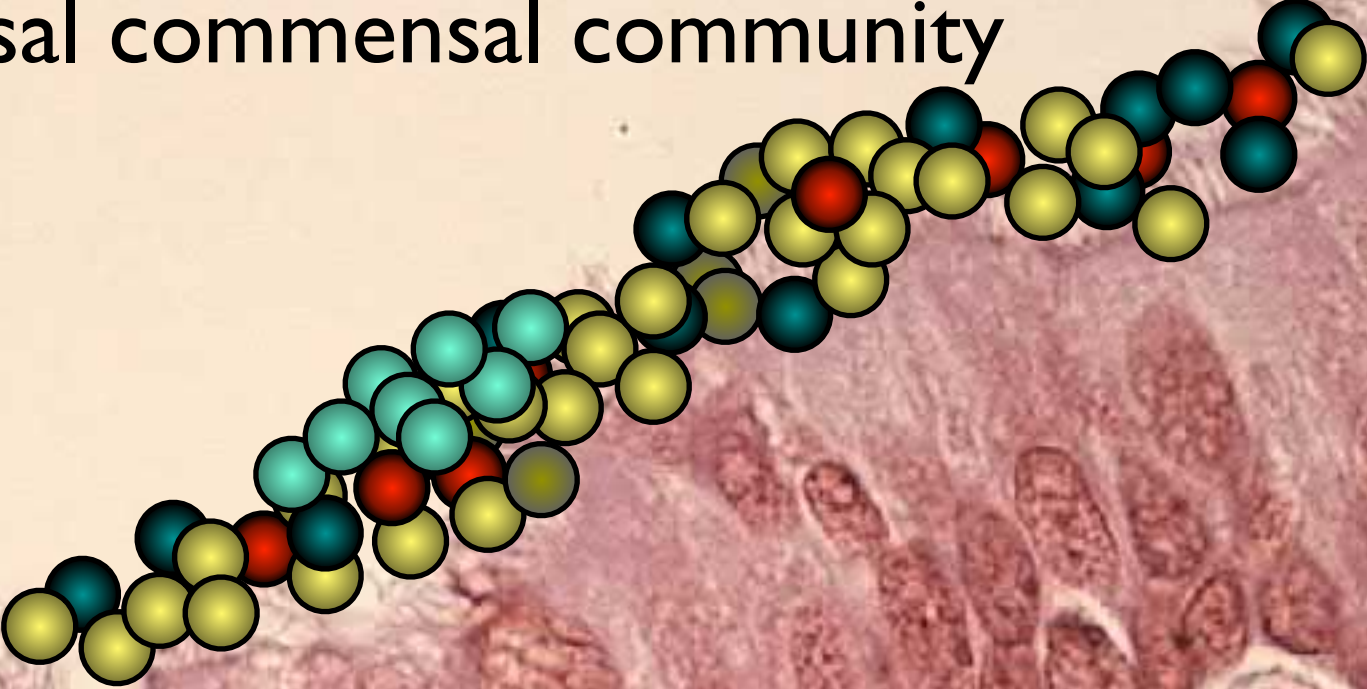
biofilms



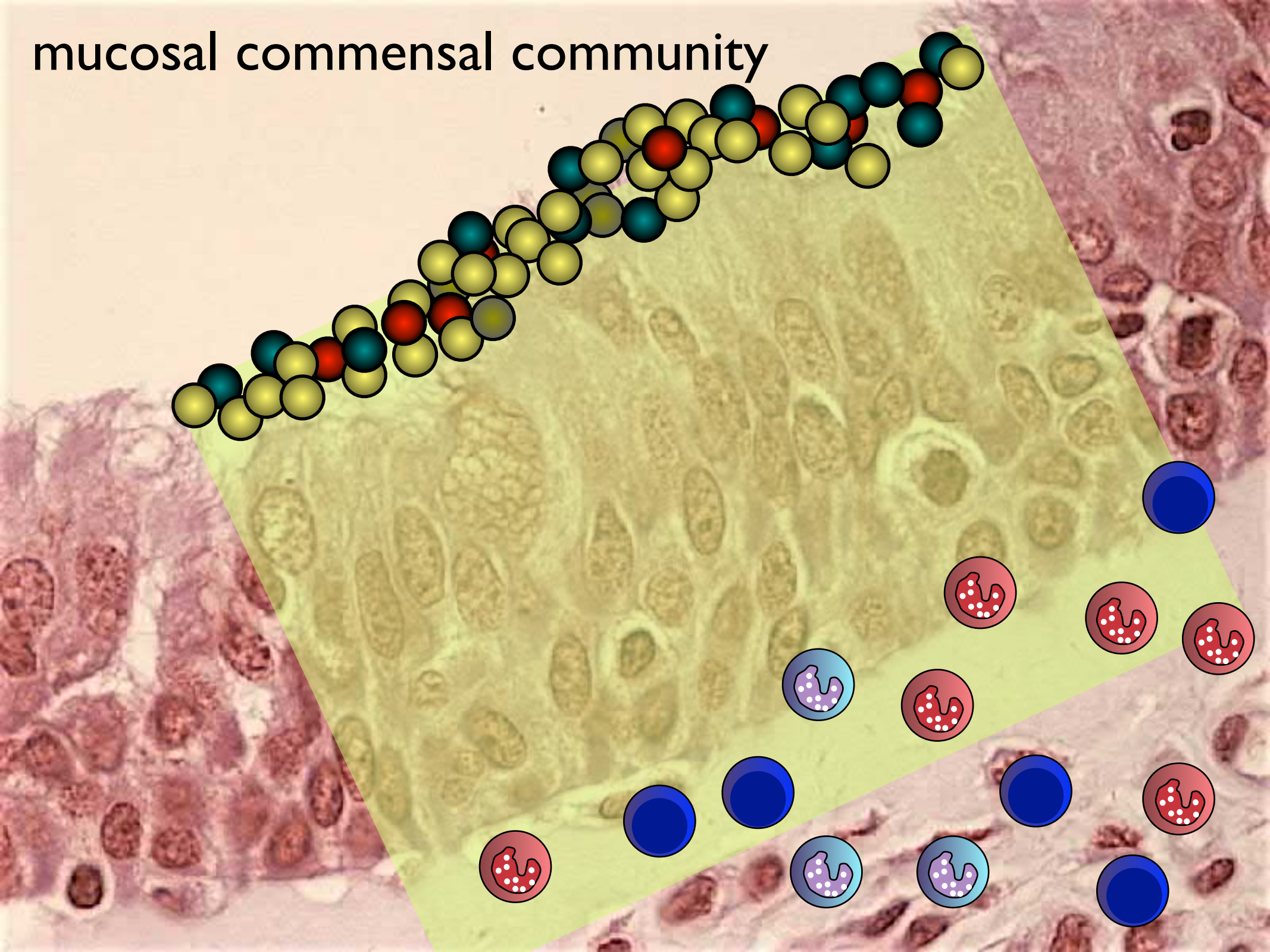
mucosal commensal community



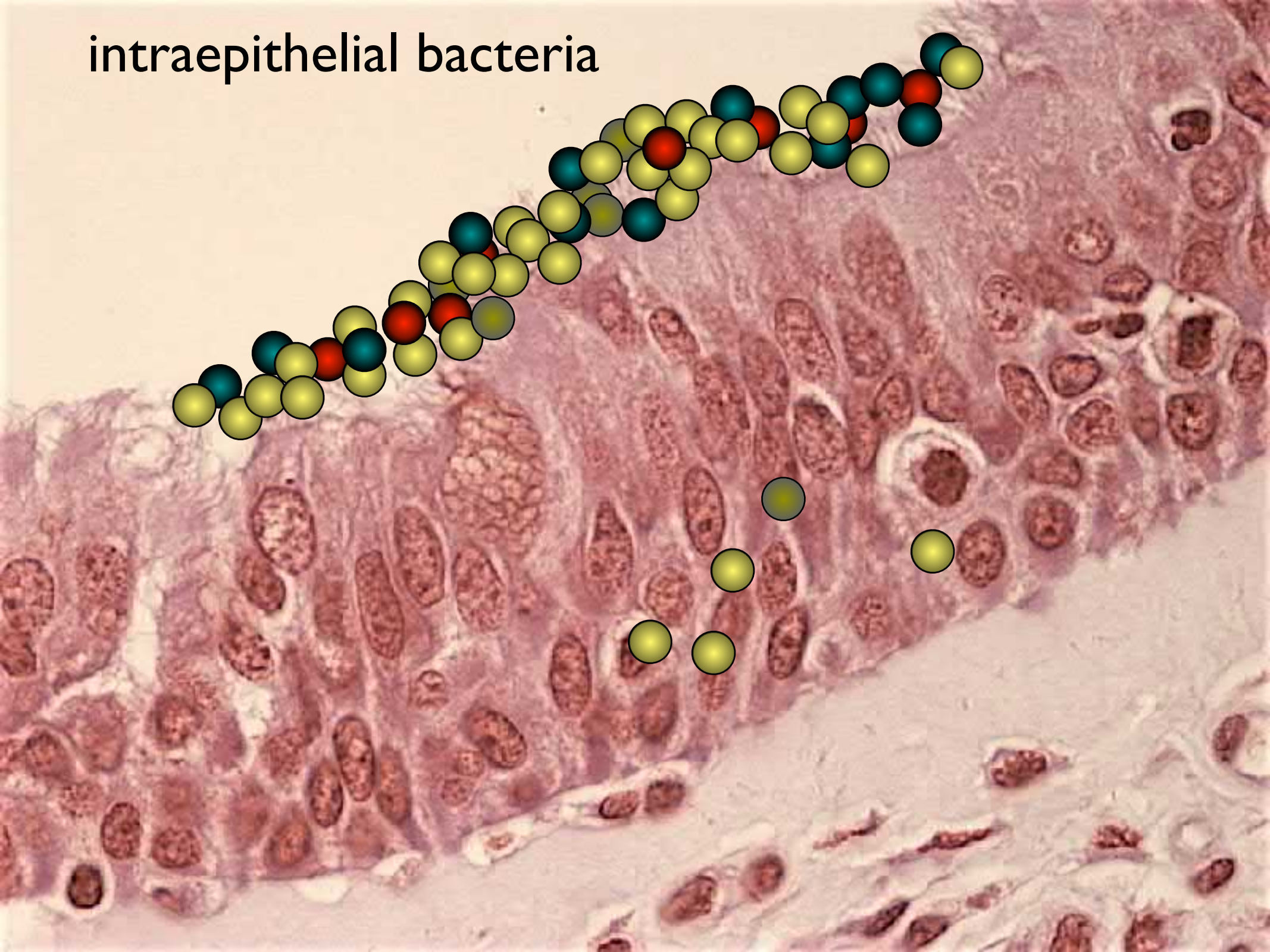
mucosal commensal community



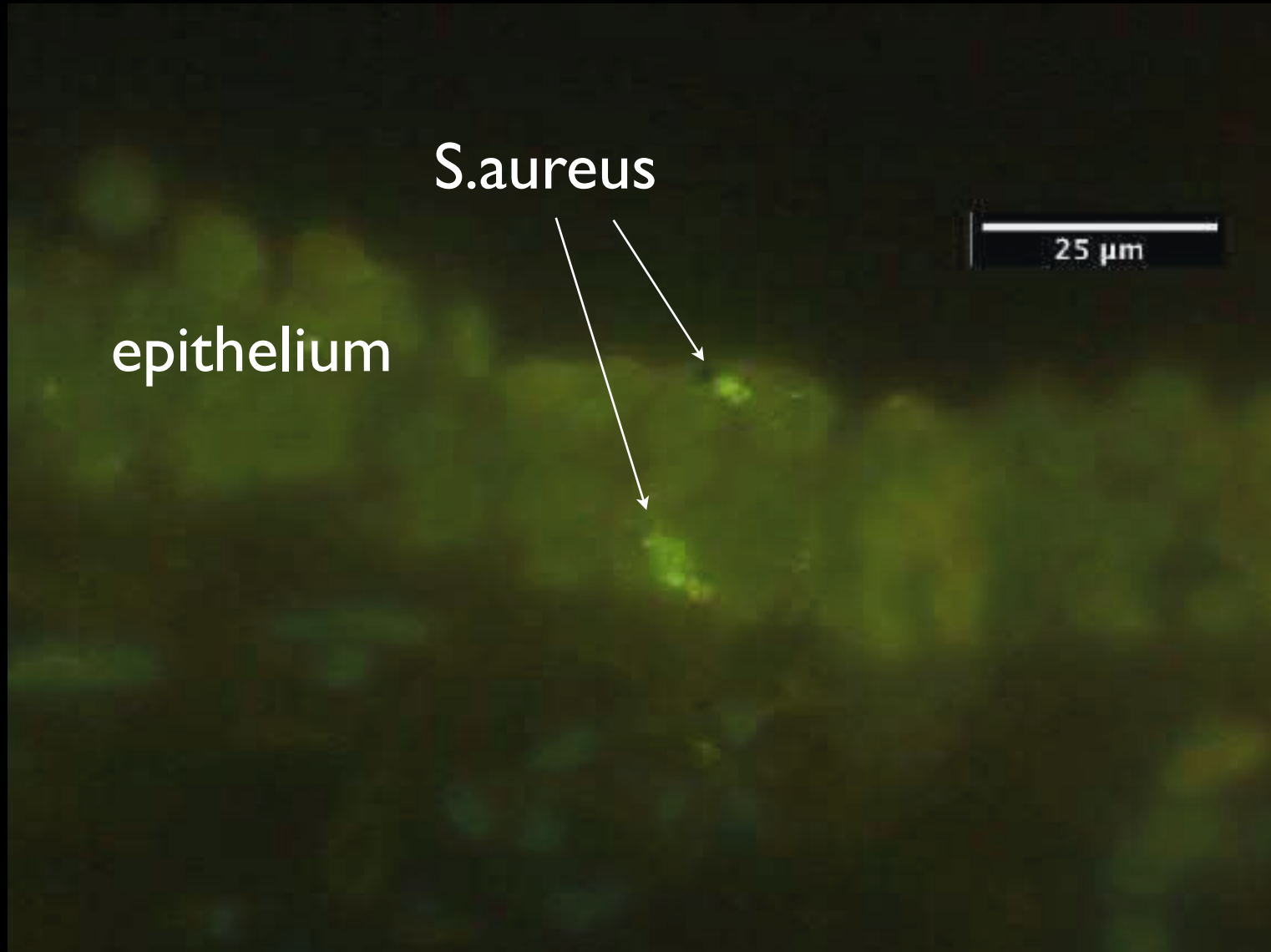
mucosal commensal community



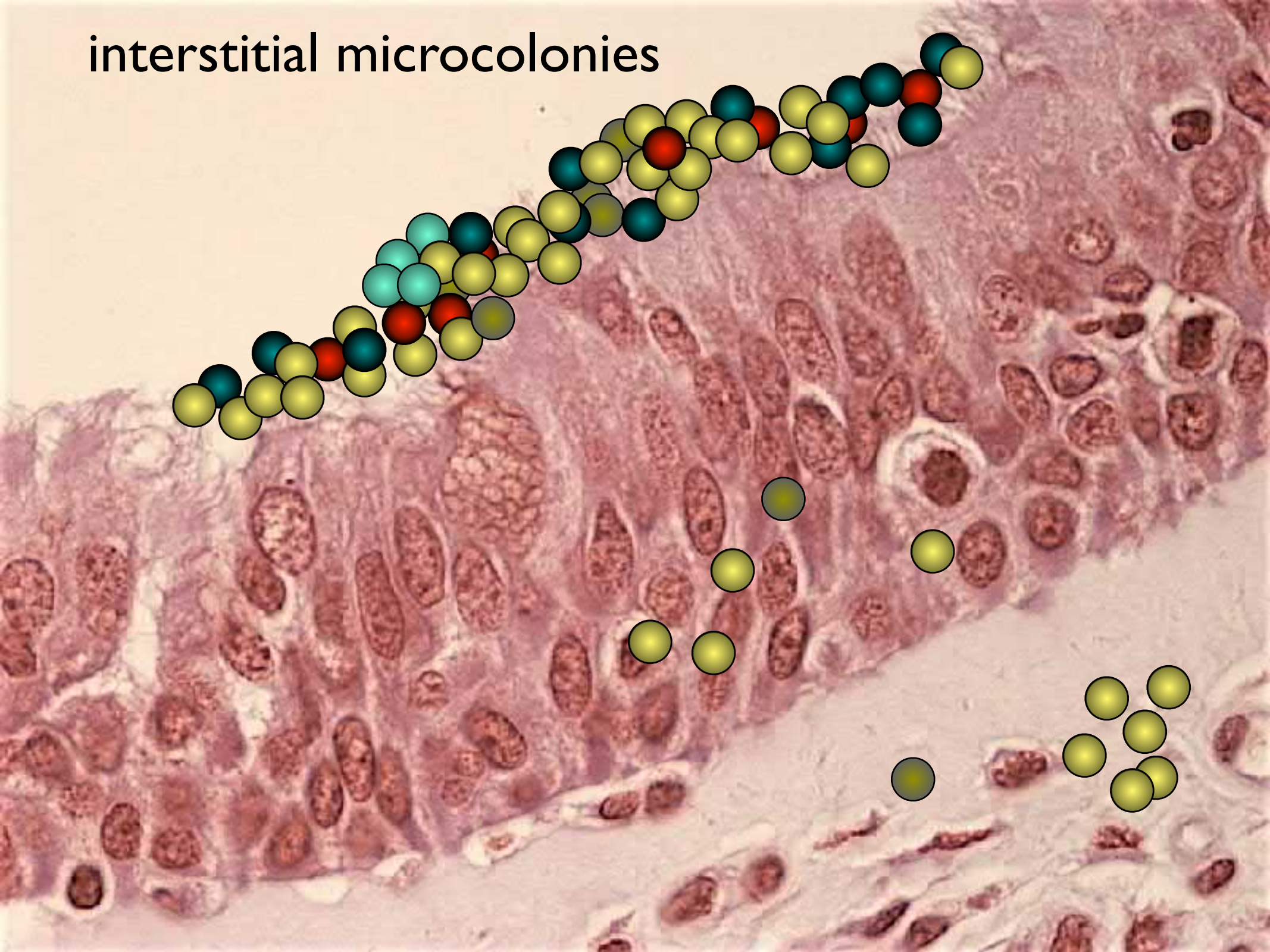
intraepithelial bacteria



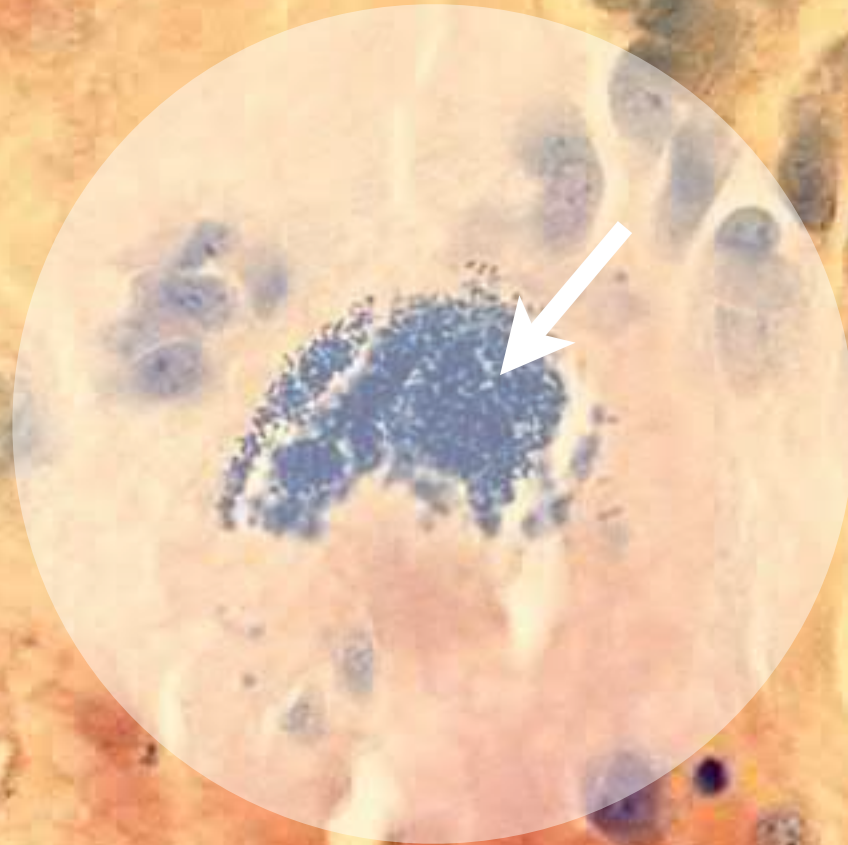
intraepithelial bacteria



interstitial microcolonies



interstitial microcolonies





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Medical therapy for CRS

1. prednisone

2. intranasal steroids

3. saline irrigation

4. antibiotics

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30 mg daily for one week then
20 mg daily for one week

Medical therapy for CRS

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4. antibiotics



fluticasone 50 ug 2 puffs bd
both nostrils



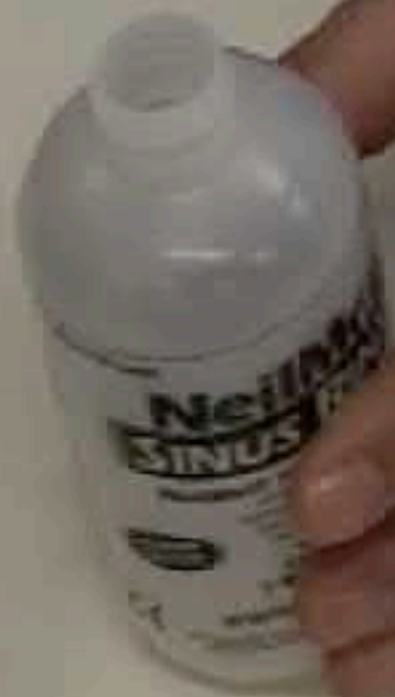
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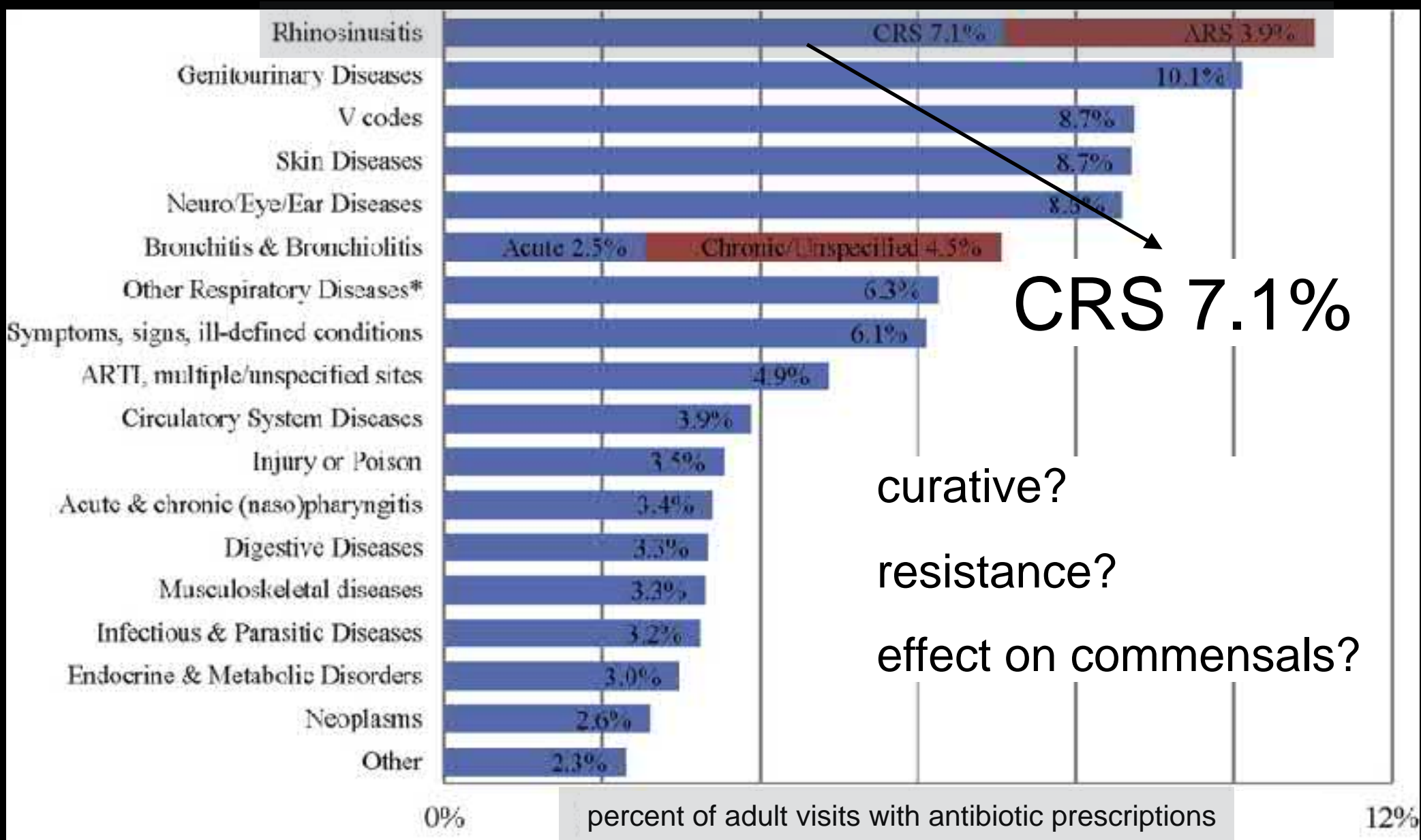
Medical therapy for CRS

1. prednisone

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antibiotics



long term antibiotic treatment

CRSsNP

2 RCTs

roxithromycin, azithromycin

positive effects

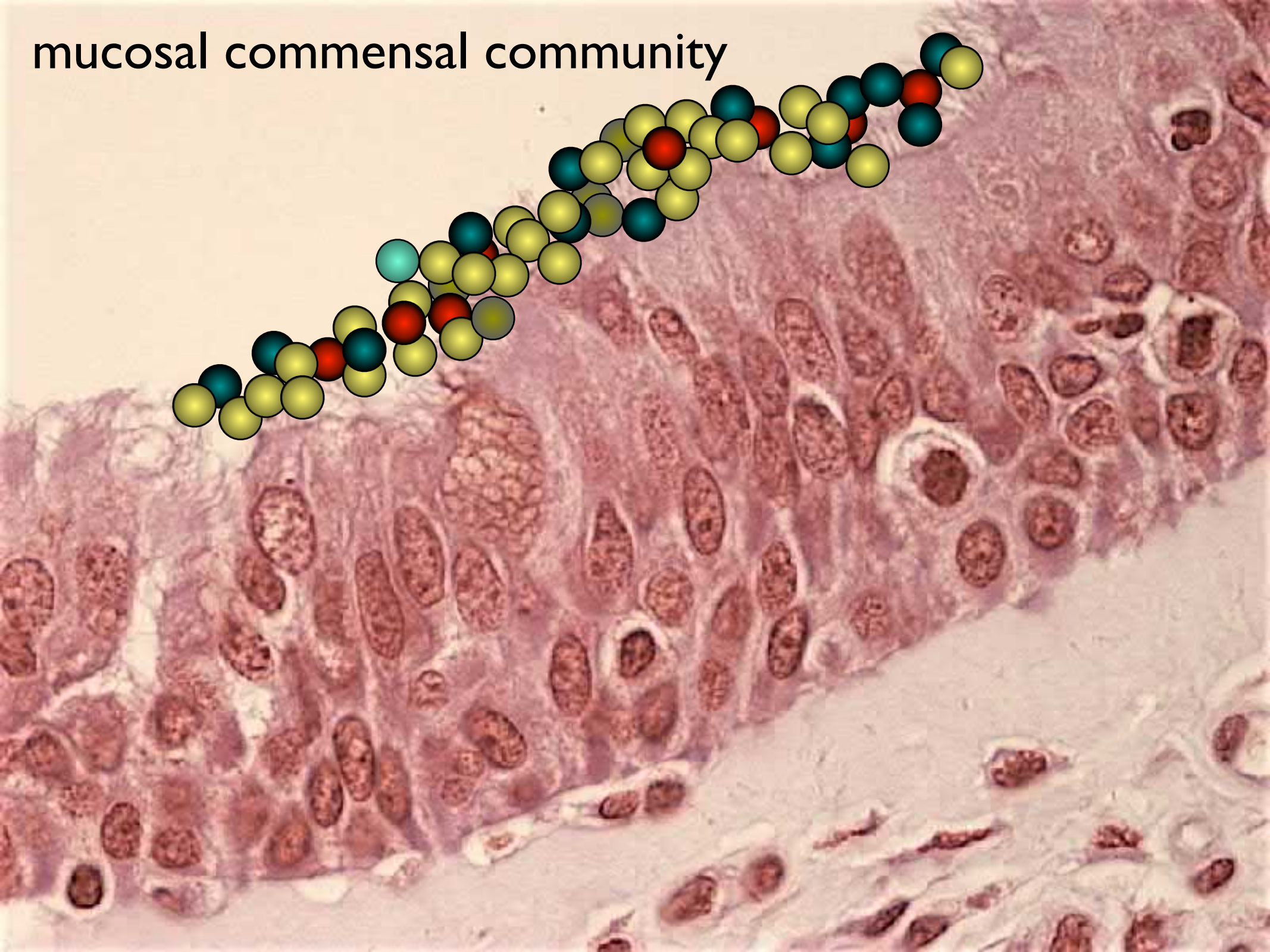
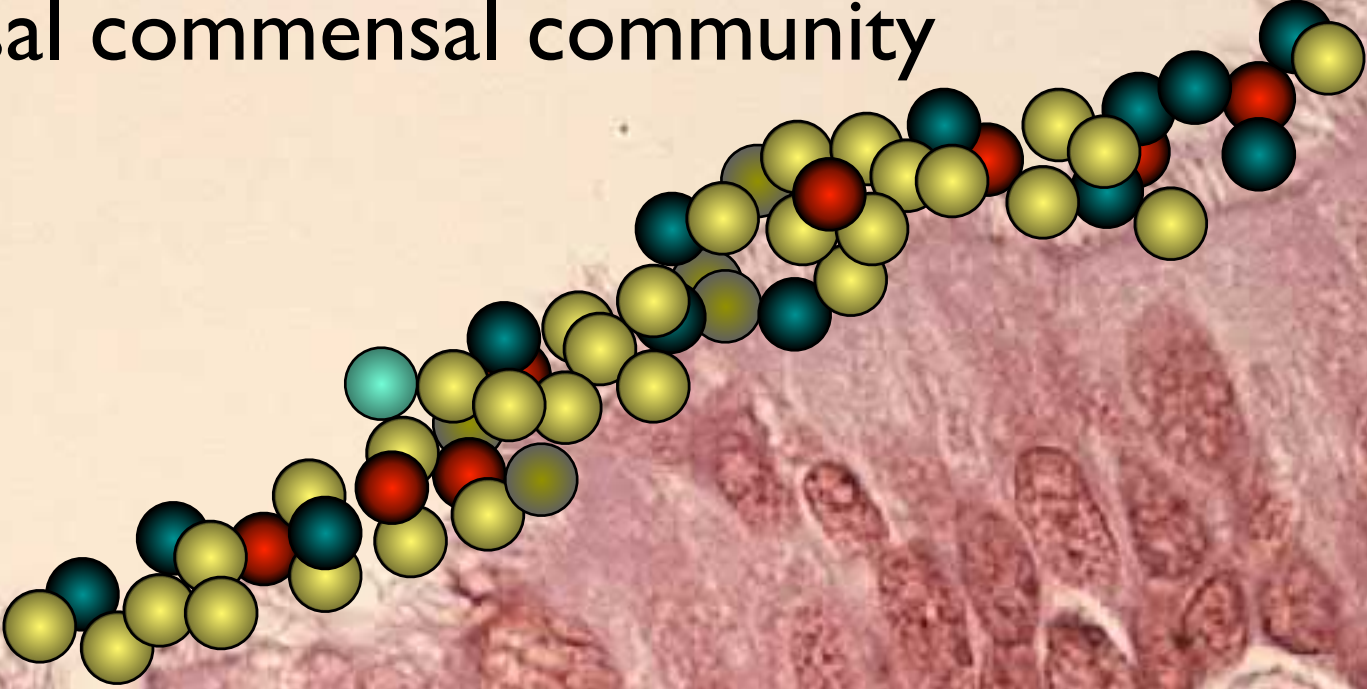
low IgE

anti-inflammatory

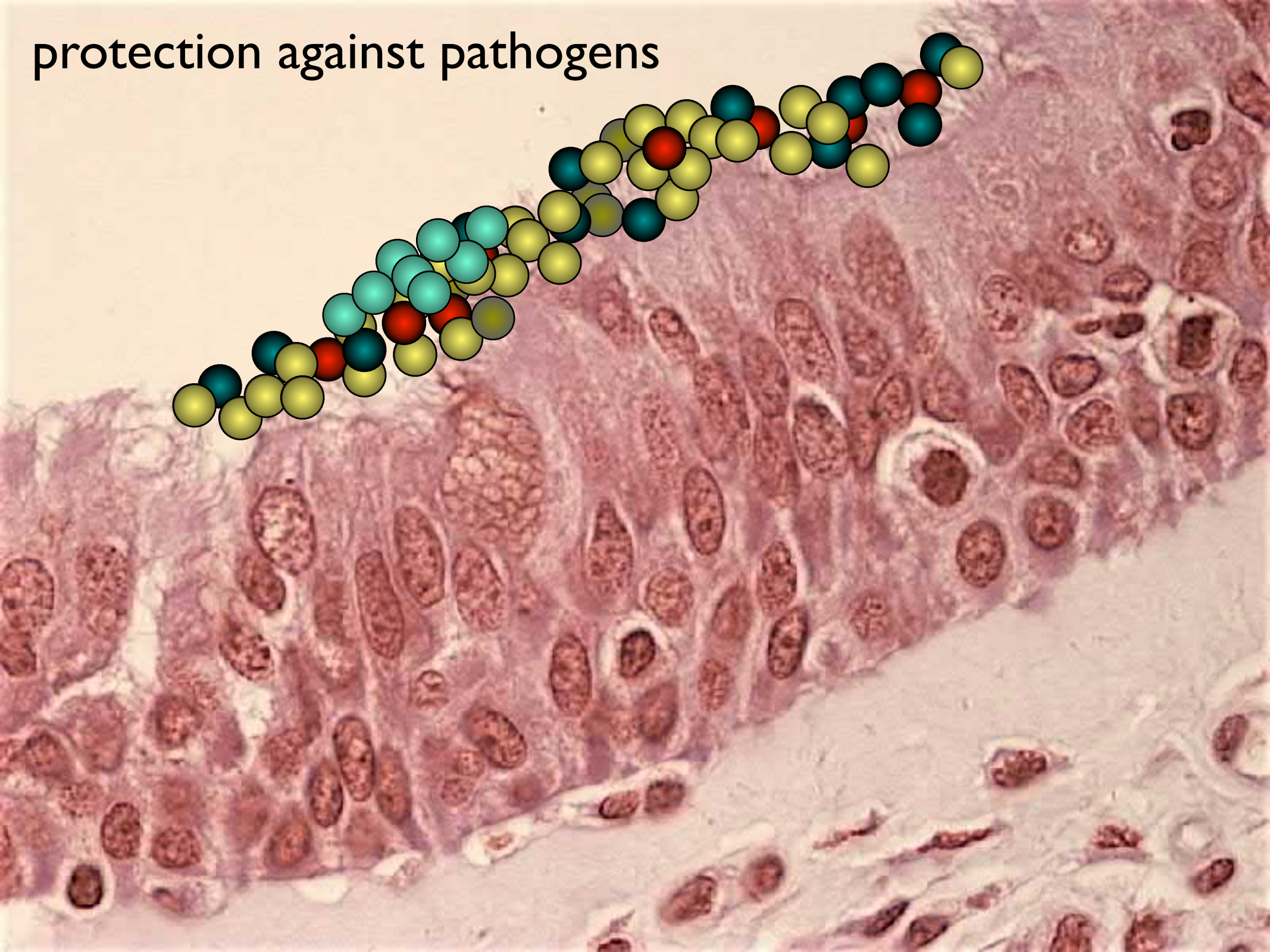
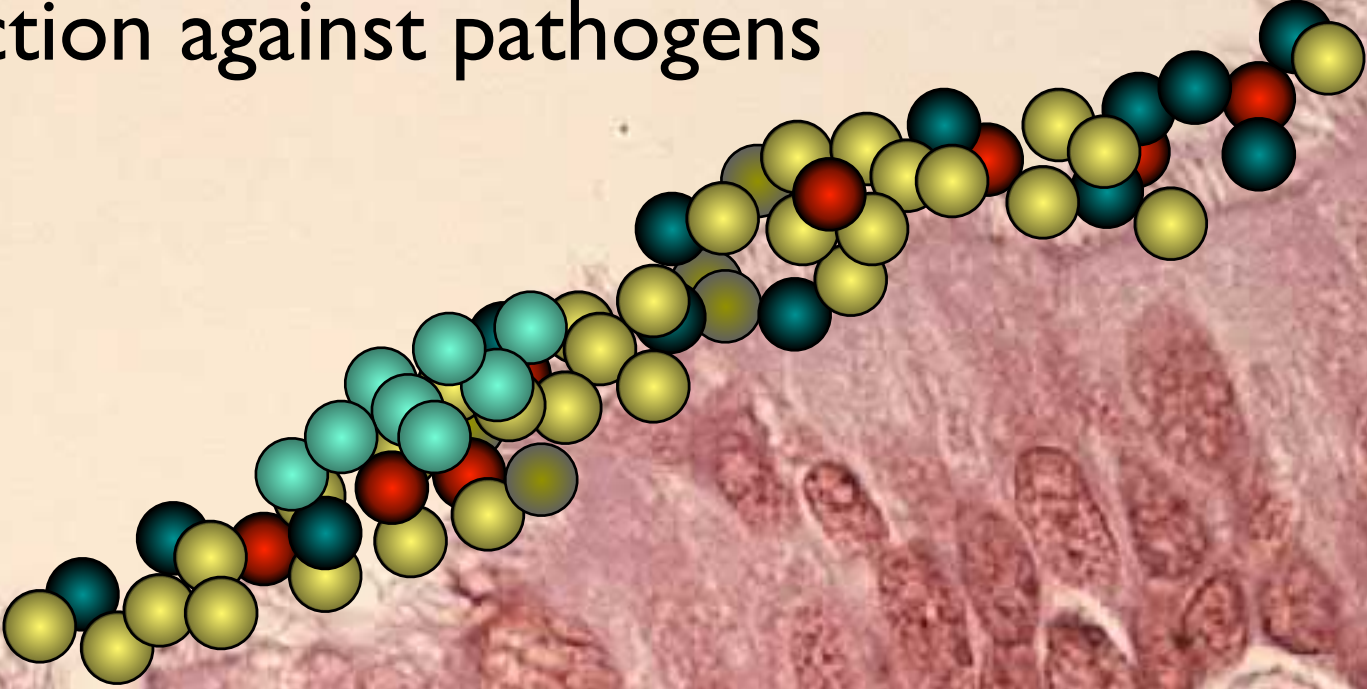




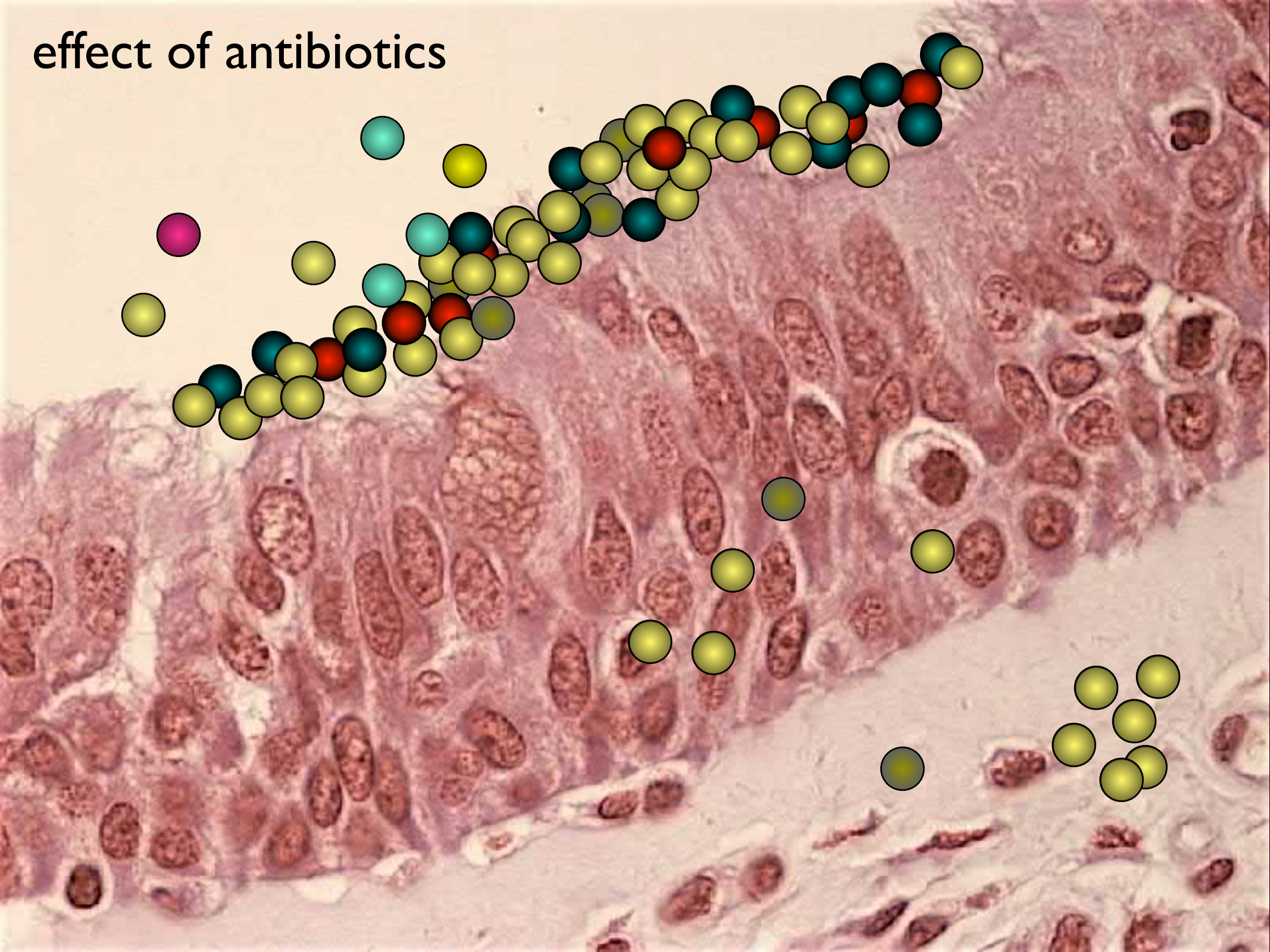
mucosal commensal community



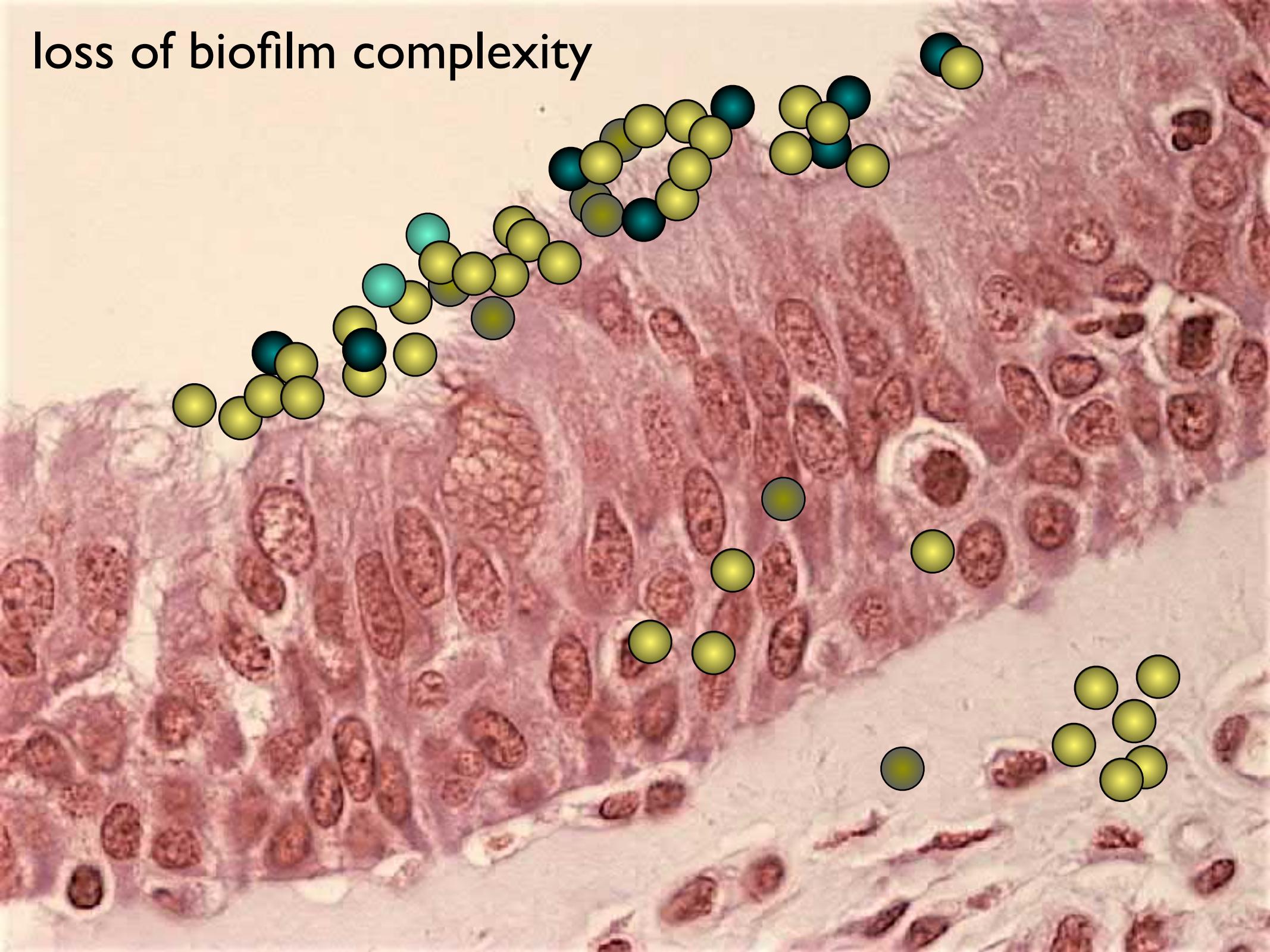
protection against pathogens



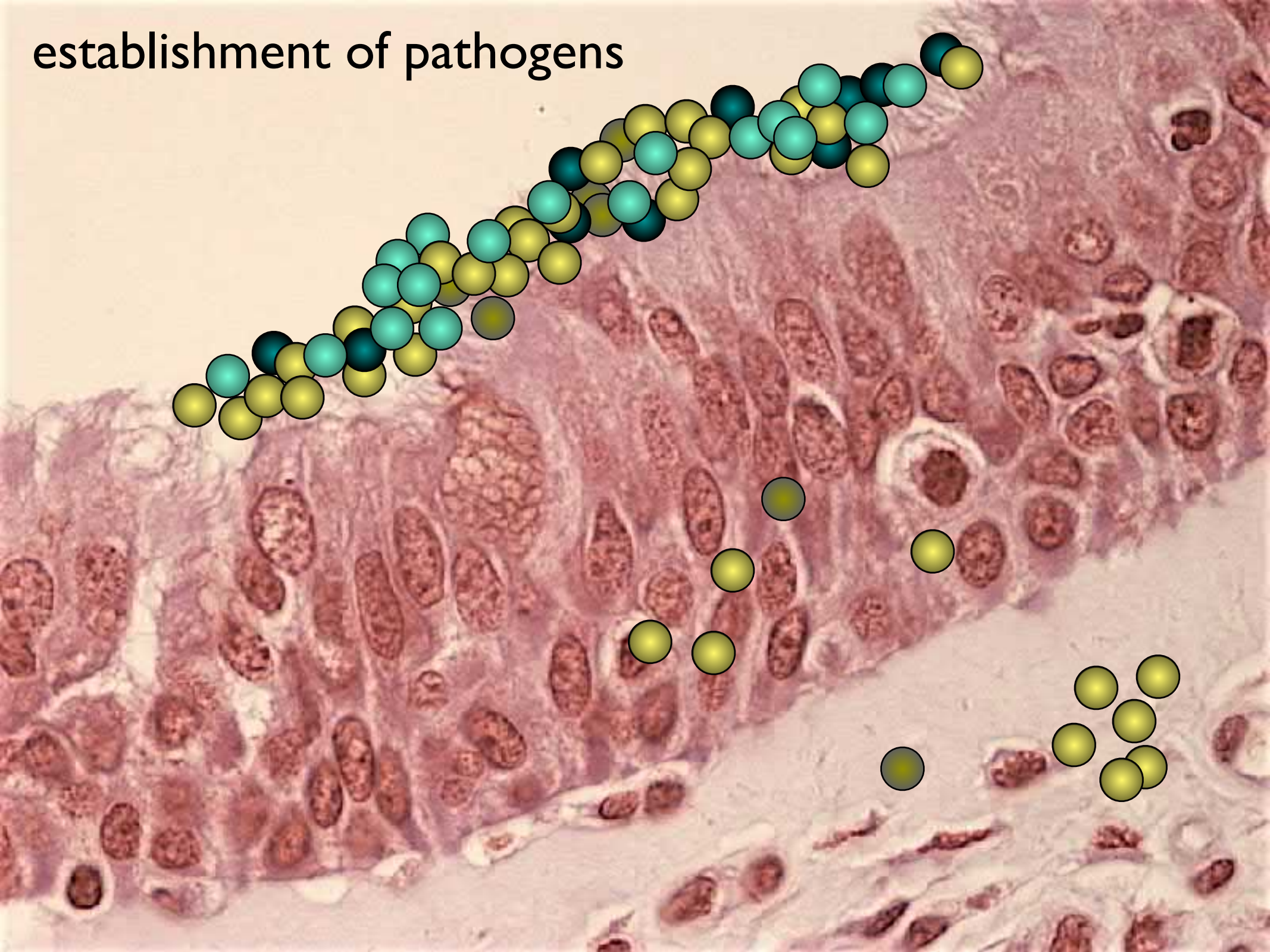
effect of antibiotics



loss of biofilm complexity



establishment of pathogens



acute rhinosinusitis



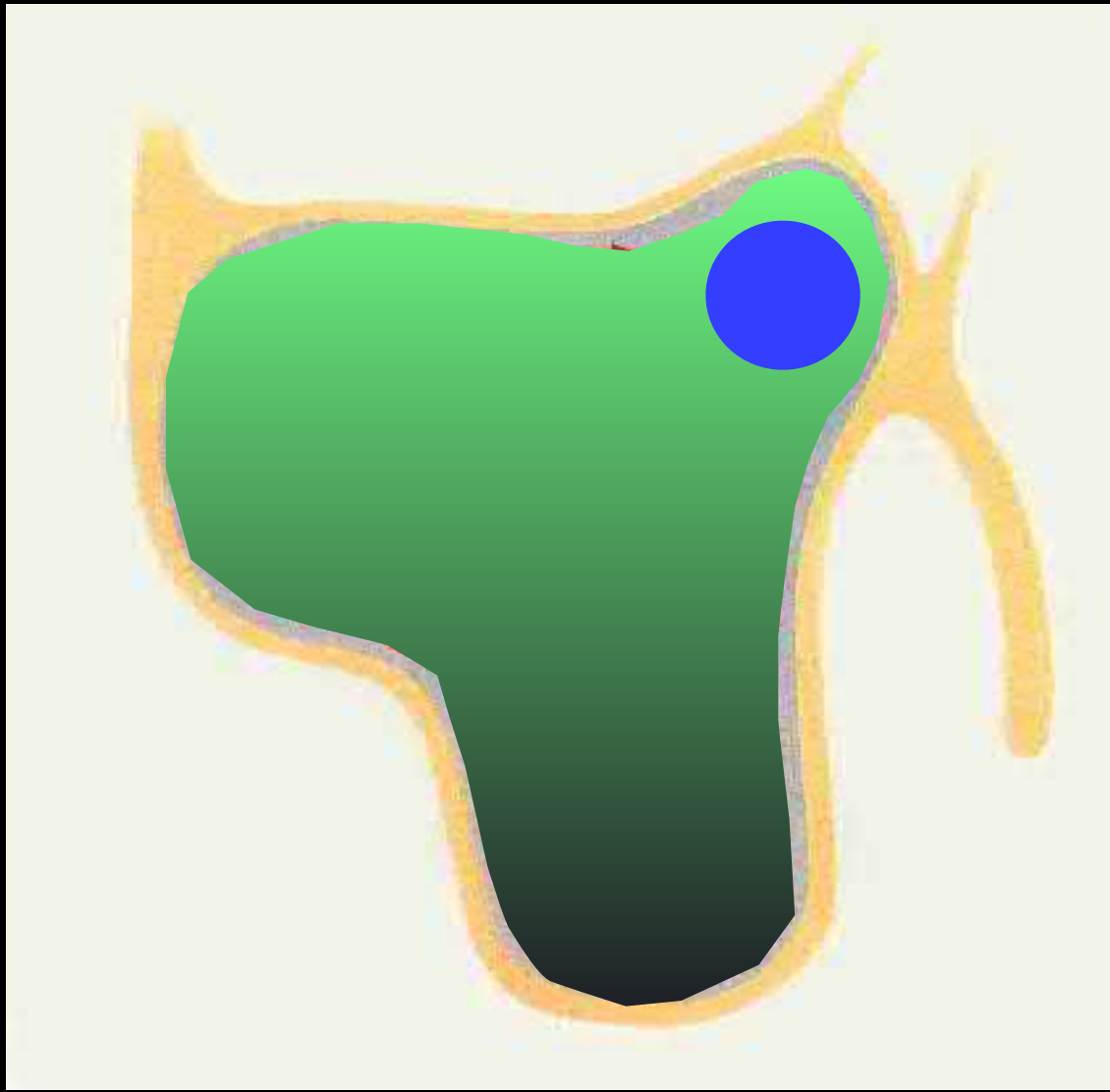
antibiotics clearly help in acute sinusitis

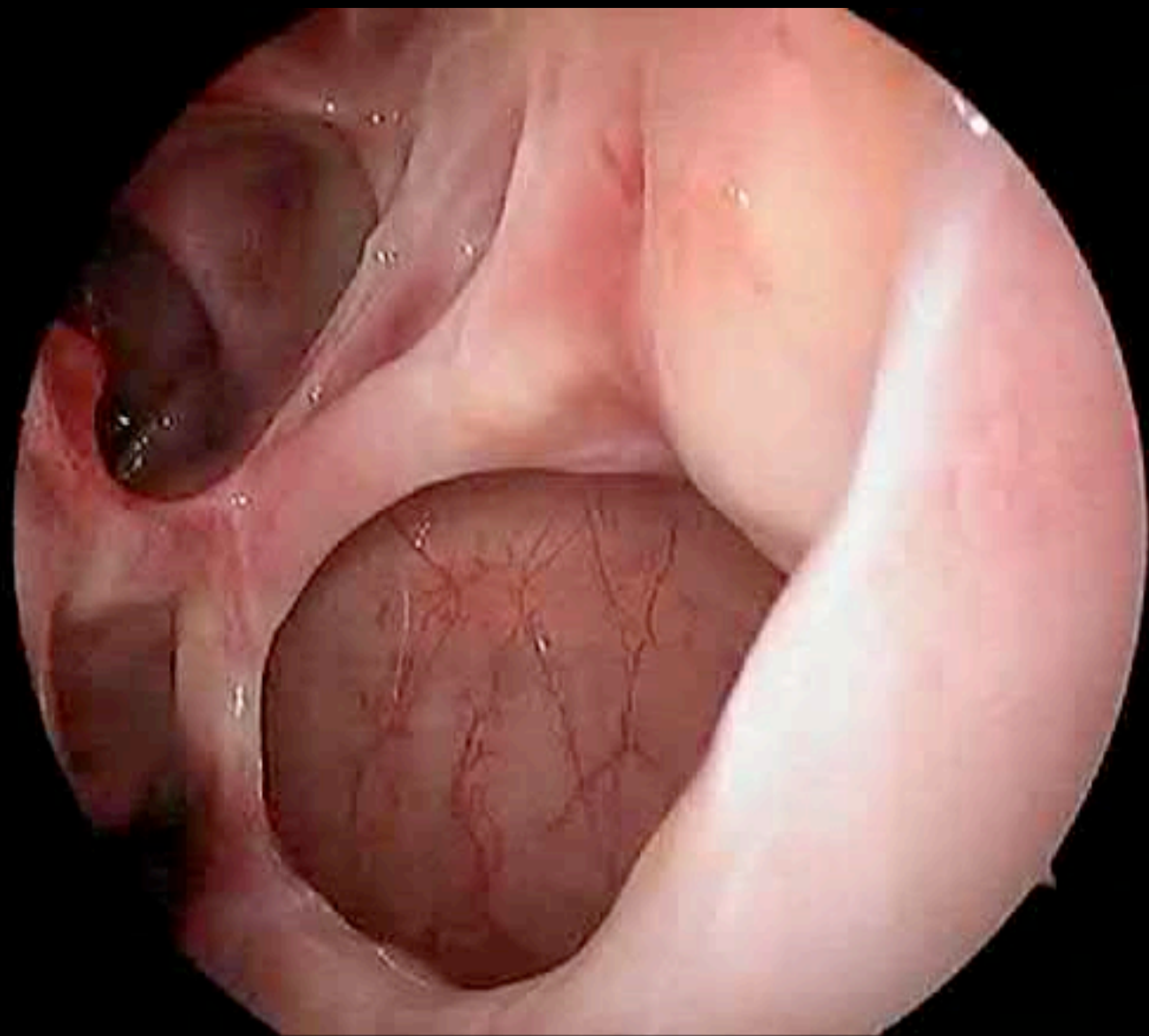
many patients find relief for acute exacerbations of CRS

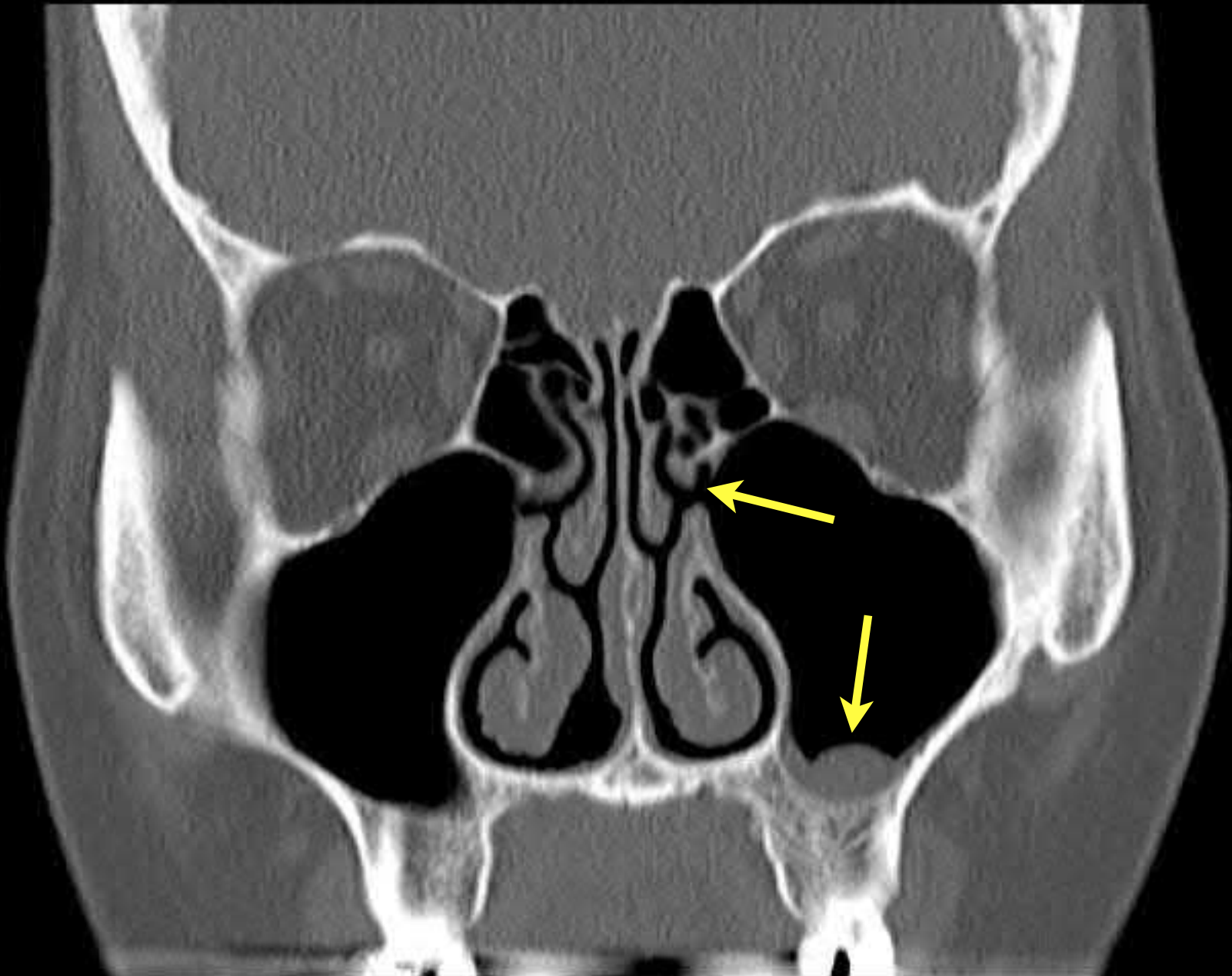
limited efficacy for CRS

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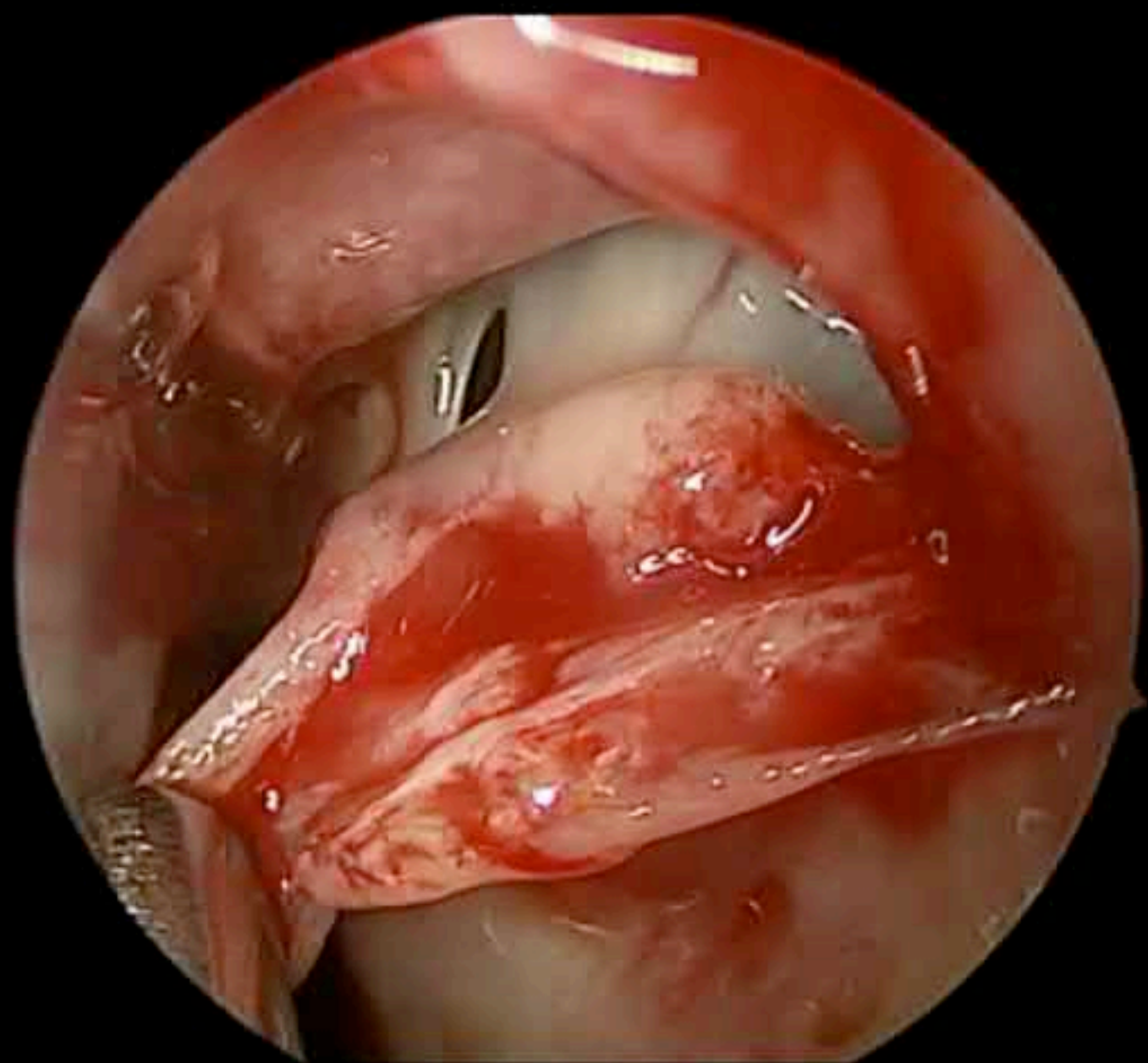
failure of medical therapy \longrightarrow surgery

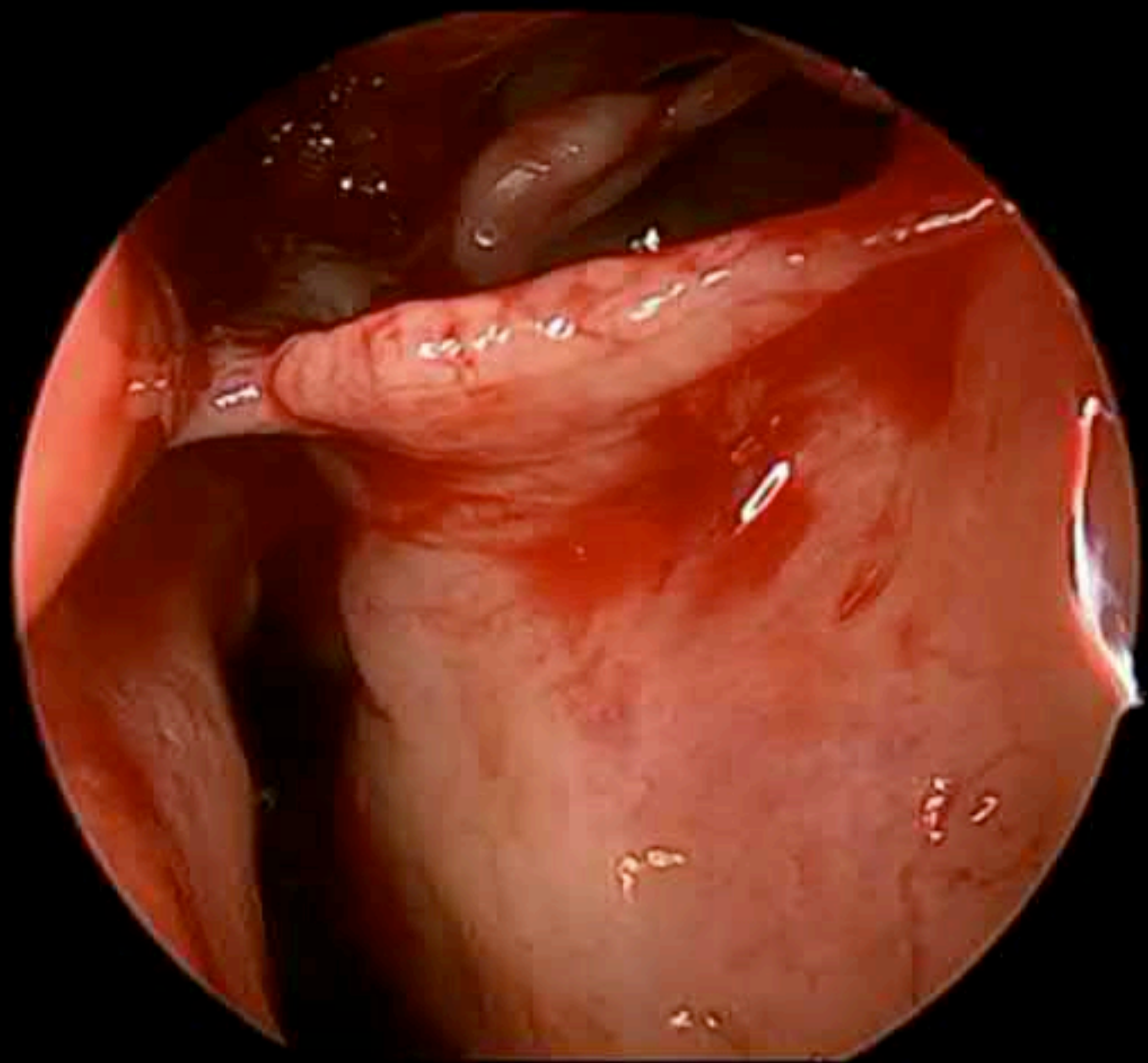


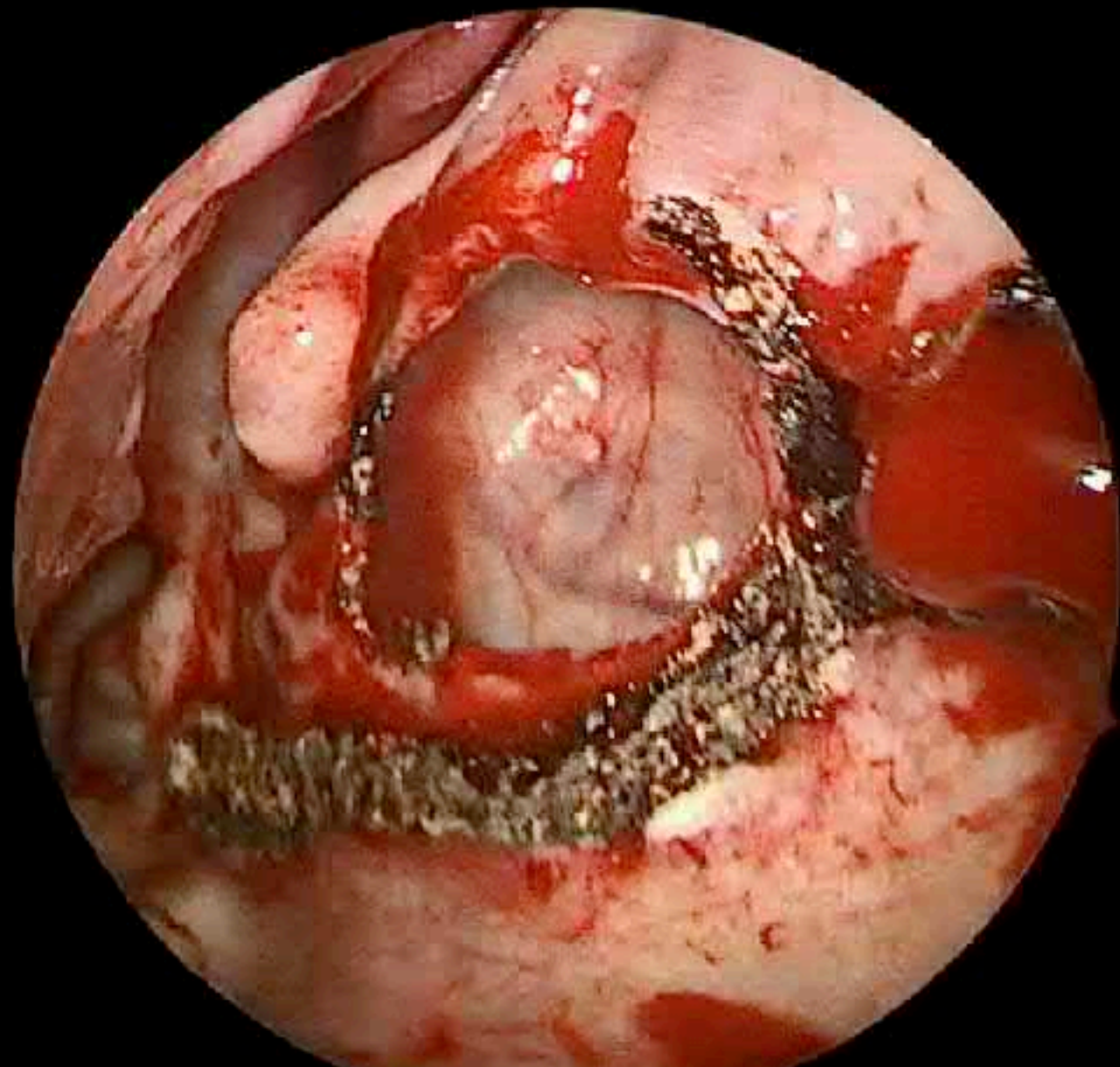


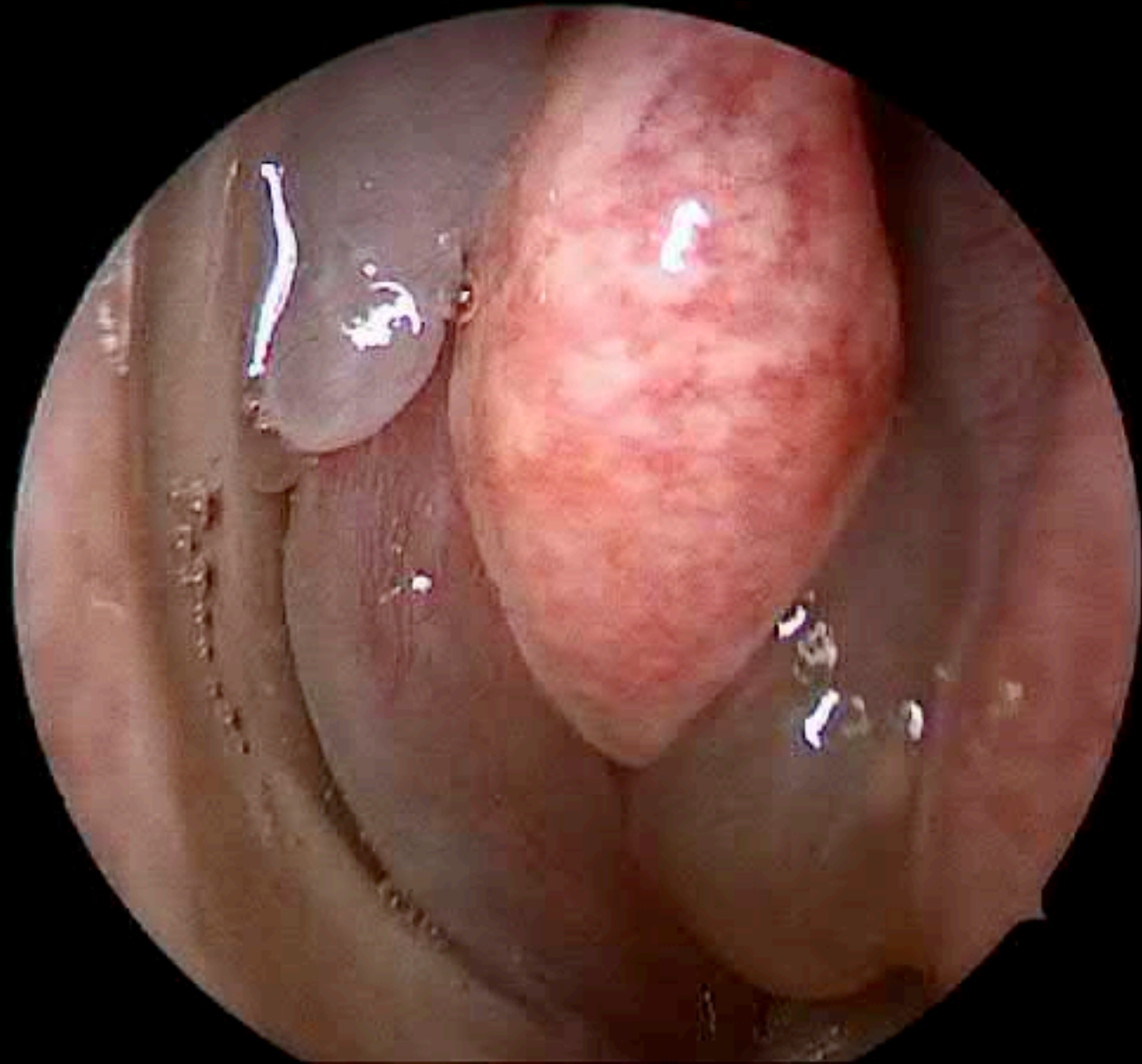


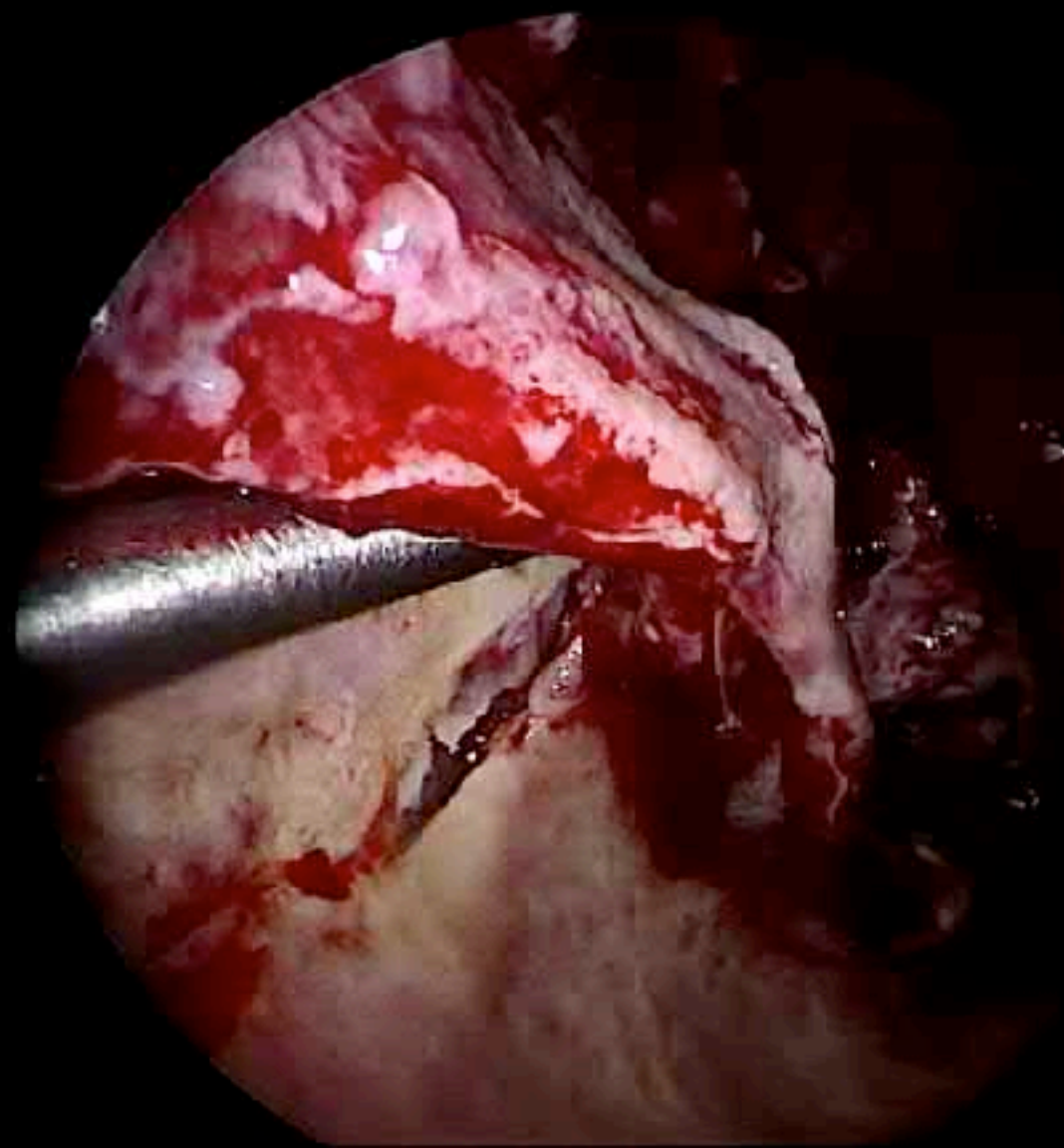


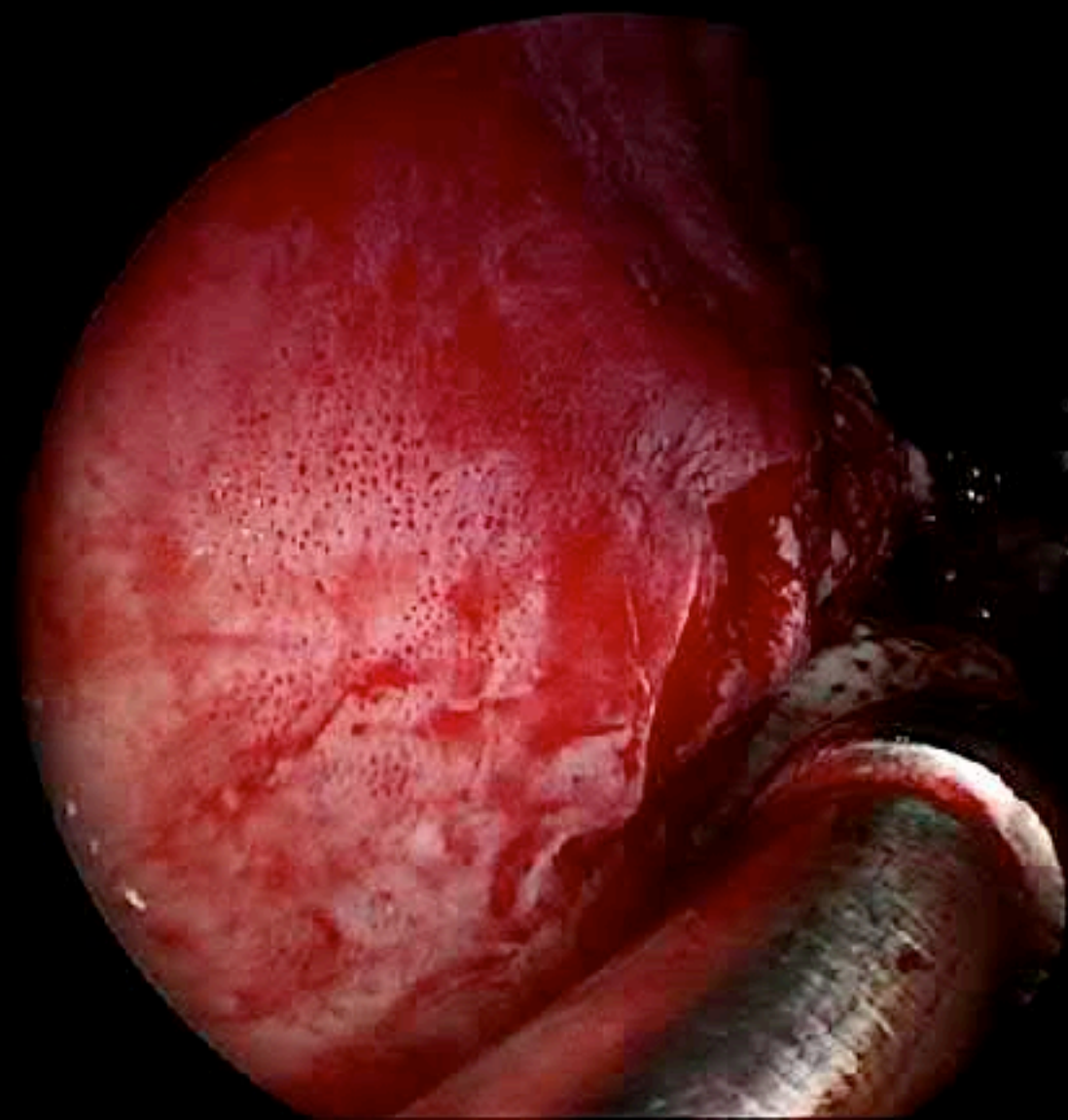


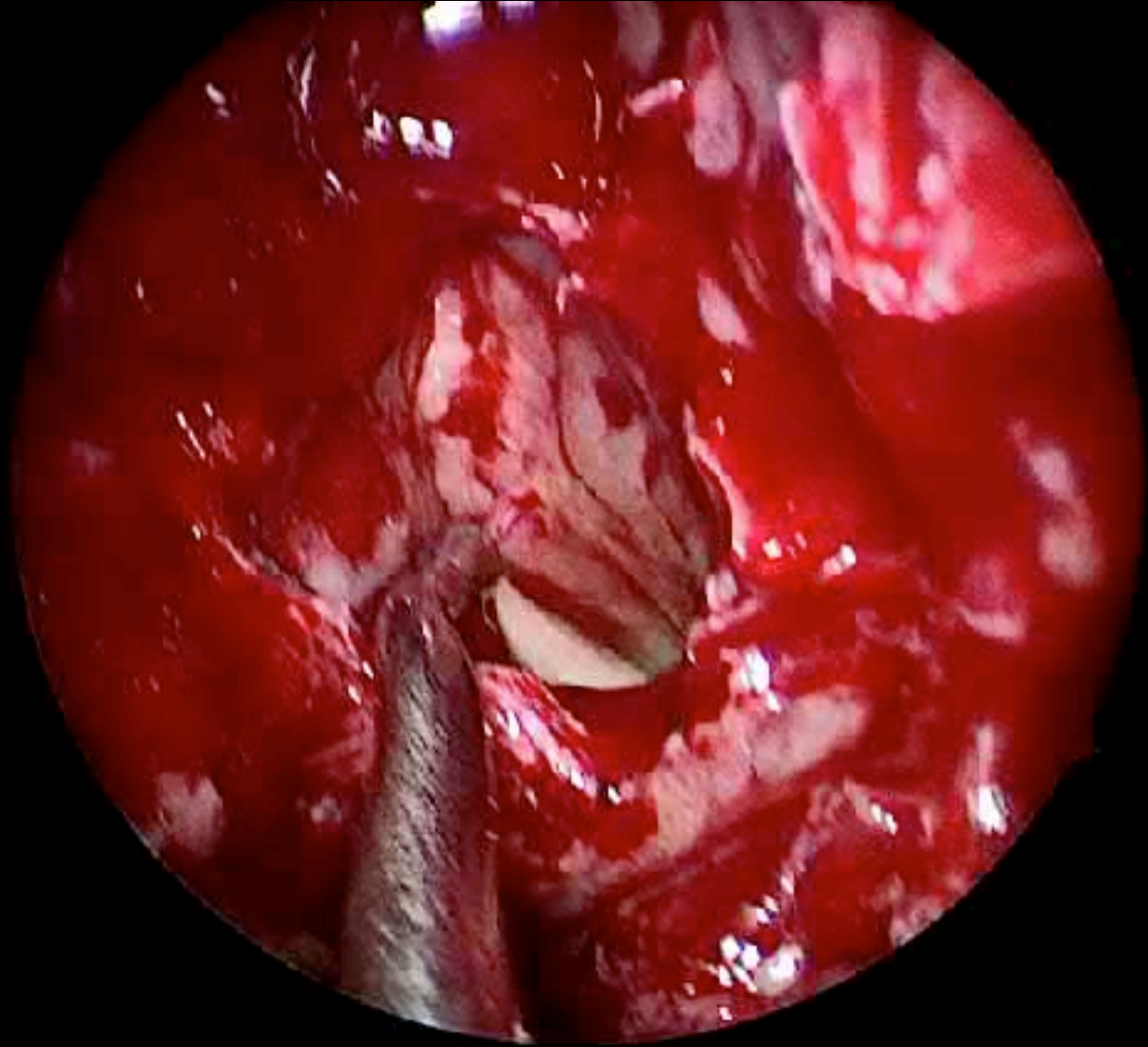


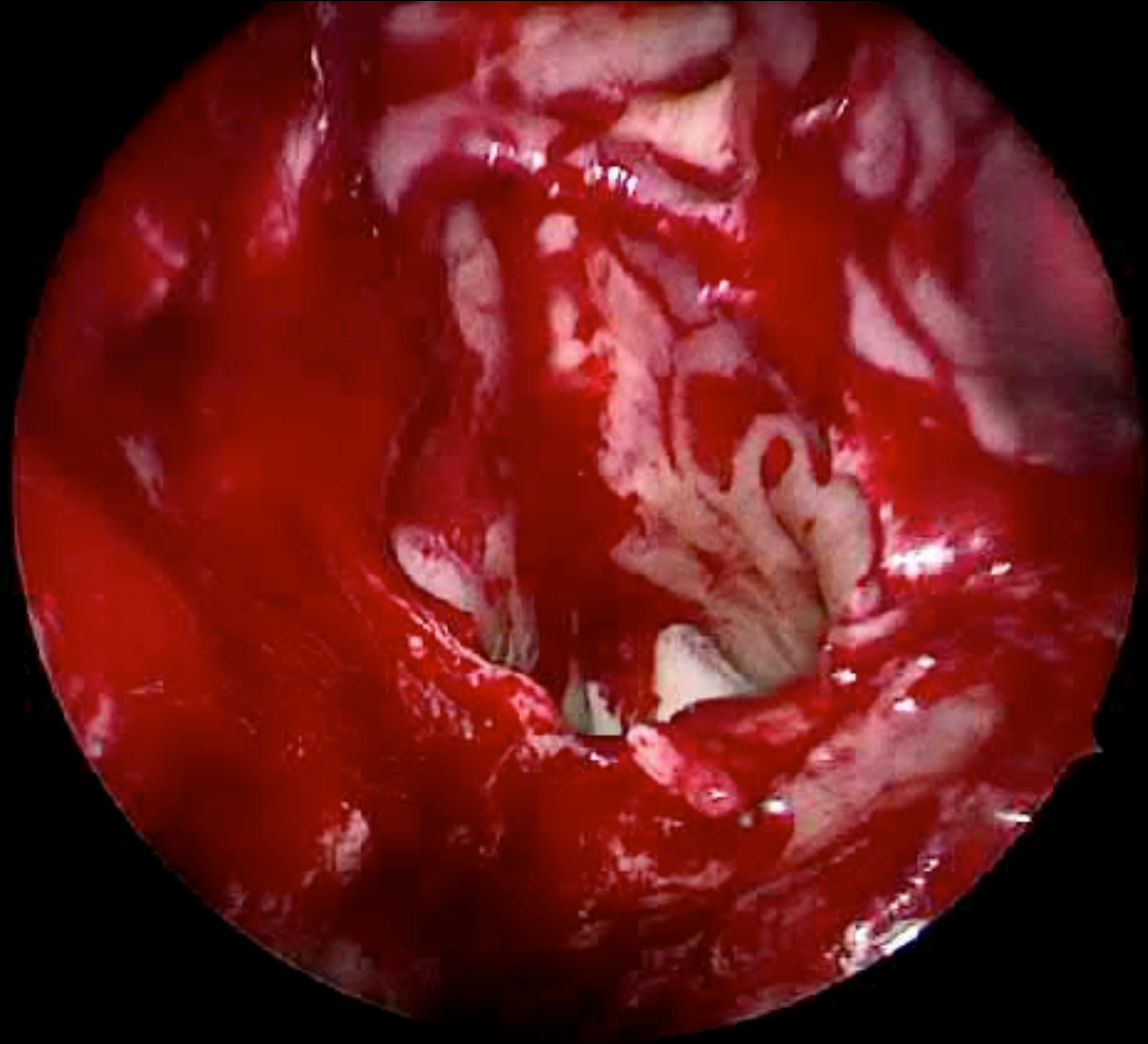




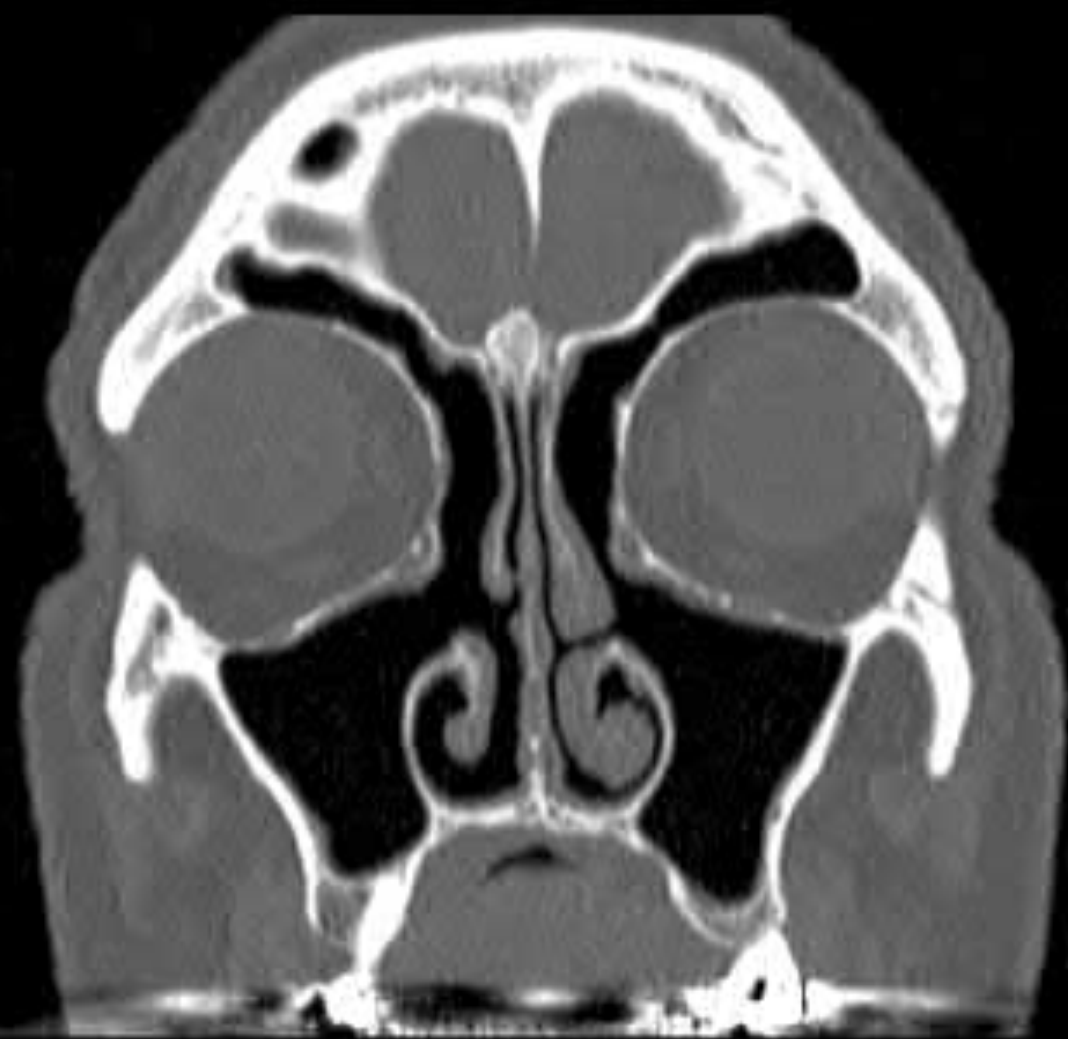


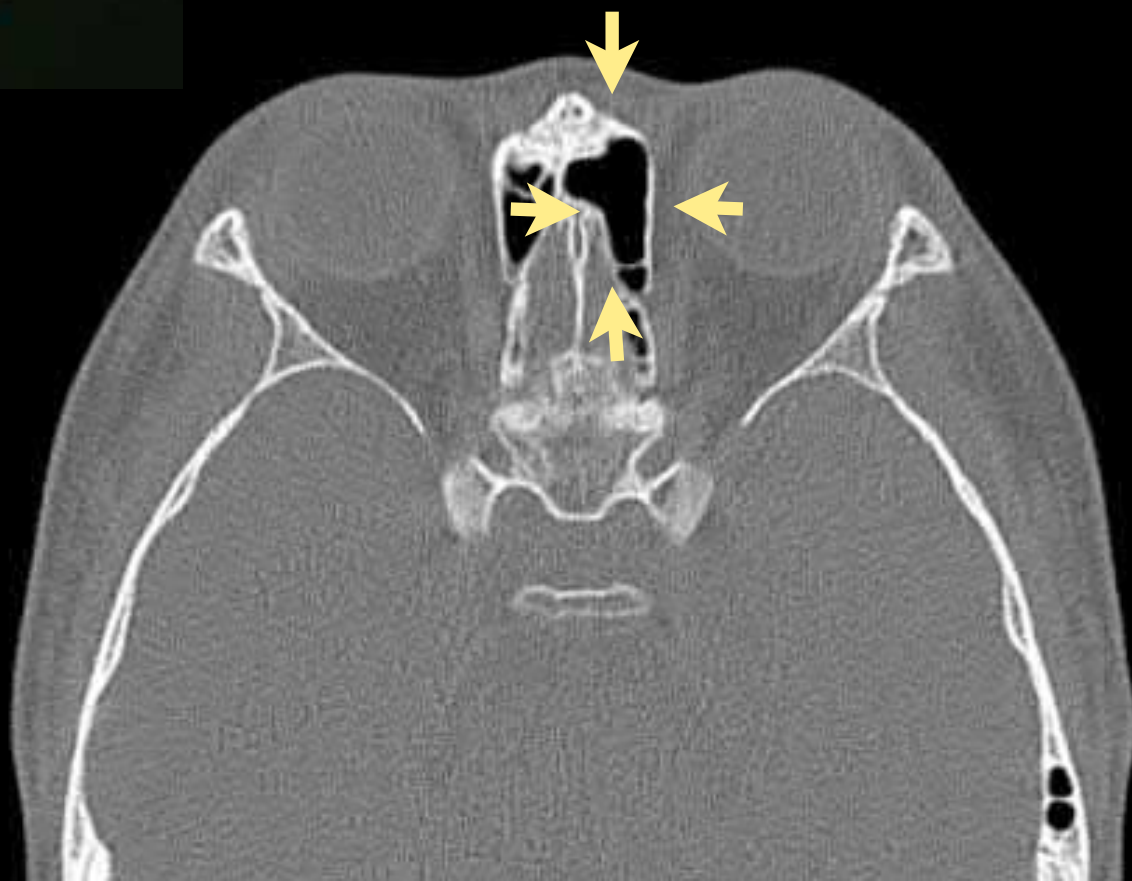
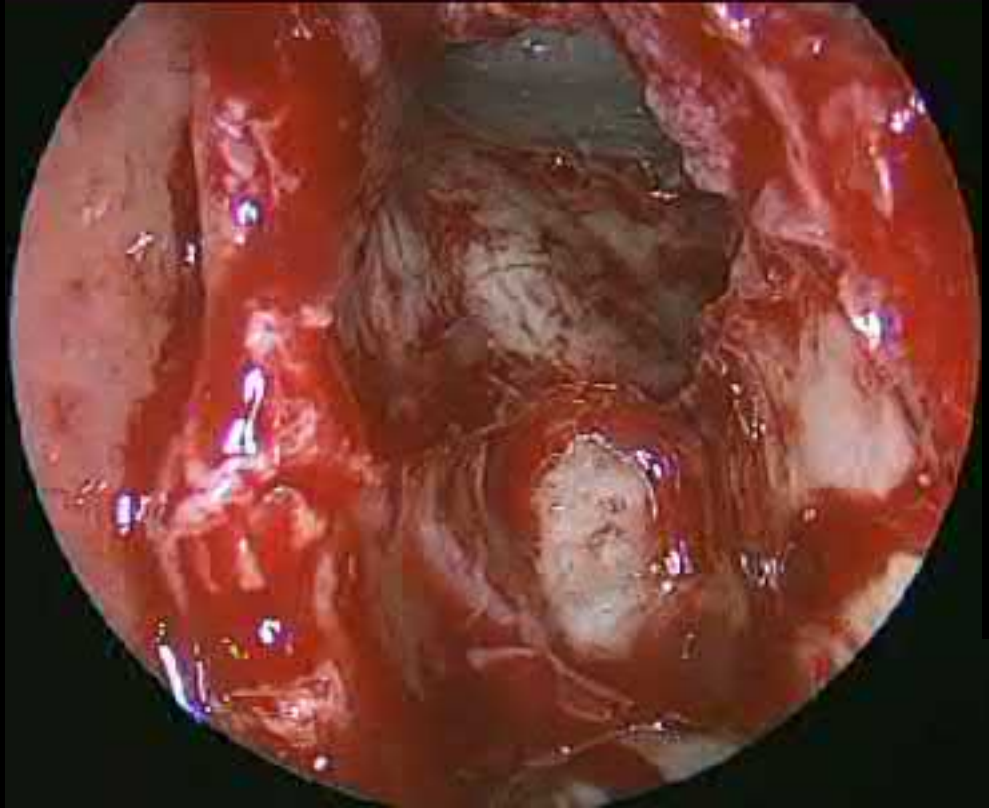










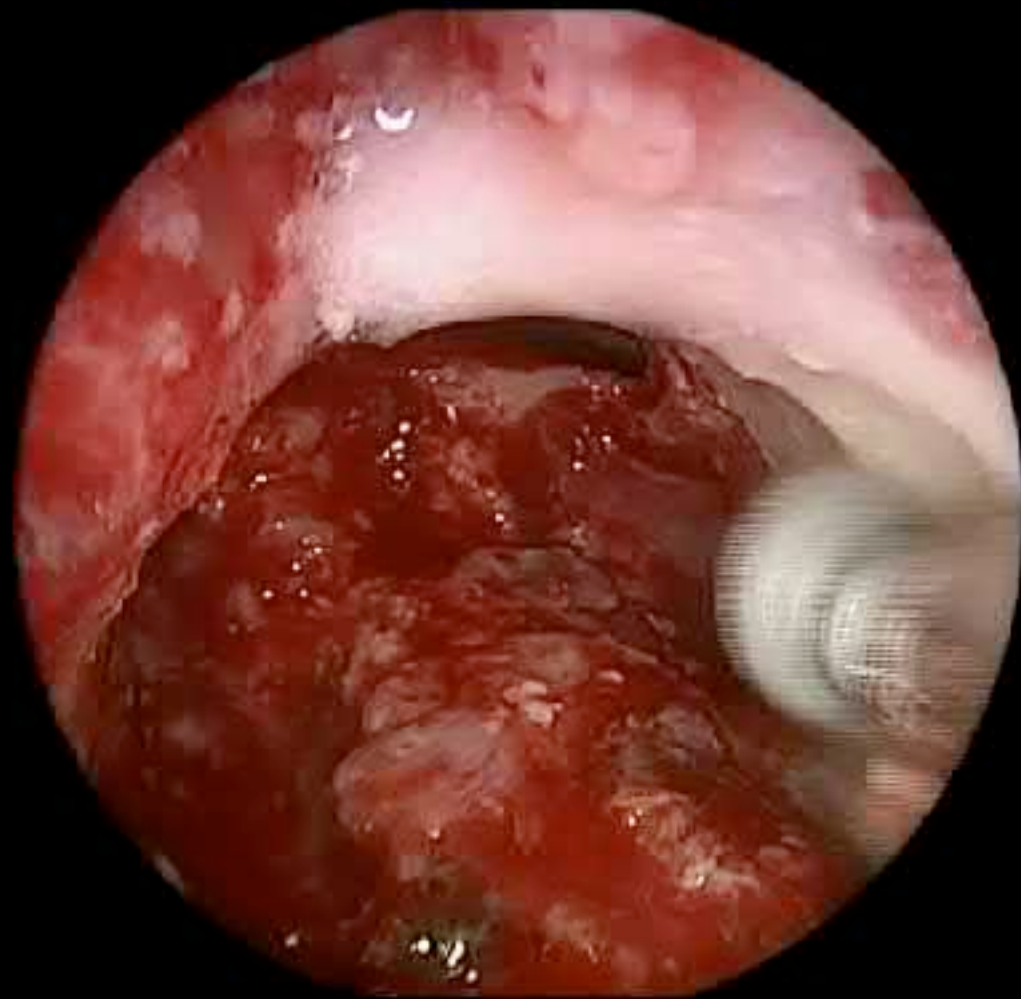




frontal sinus drill out



frontal beakectomy



frontal beakectomy

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