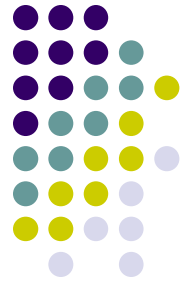


Lacrimal Gland Enlargement

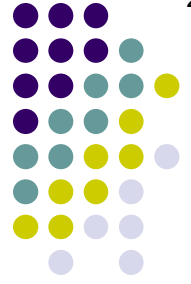
Enlarged lacrimal gland

*Two broad categories
in the differential*

*Hint: NOT 'benign' and 'malignant'—
think more broadly than that!*



Lacrimal Gland Enlargement

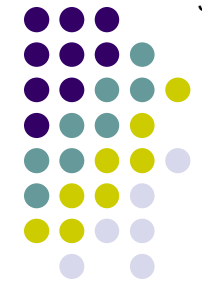


Enlarged
lacrimal gland

*Two broad categories
in the differential*

Neoplastic

Inflammatory



Lacrimal Gland Enlargement

Enlarged lacrimal gland

Two broad categories in the differential

Neoplastic

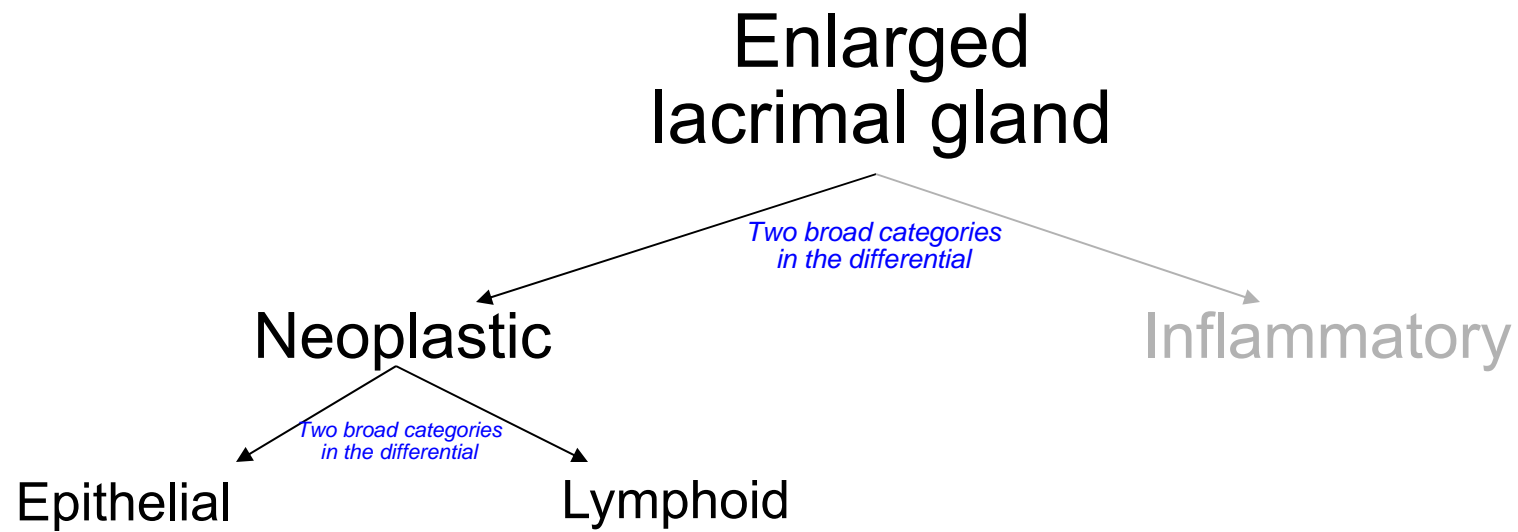
Inflammatory

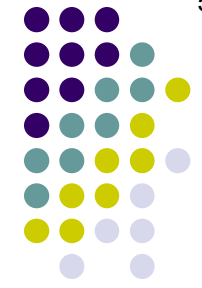
Two broad categories in the differential

NOT 'benign' and 'malignant'—
again, think more broadly than that!

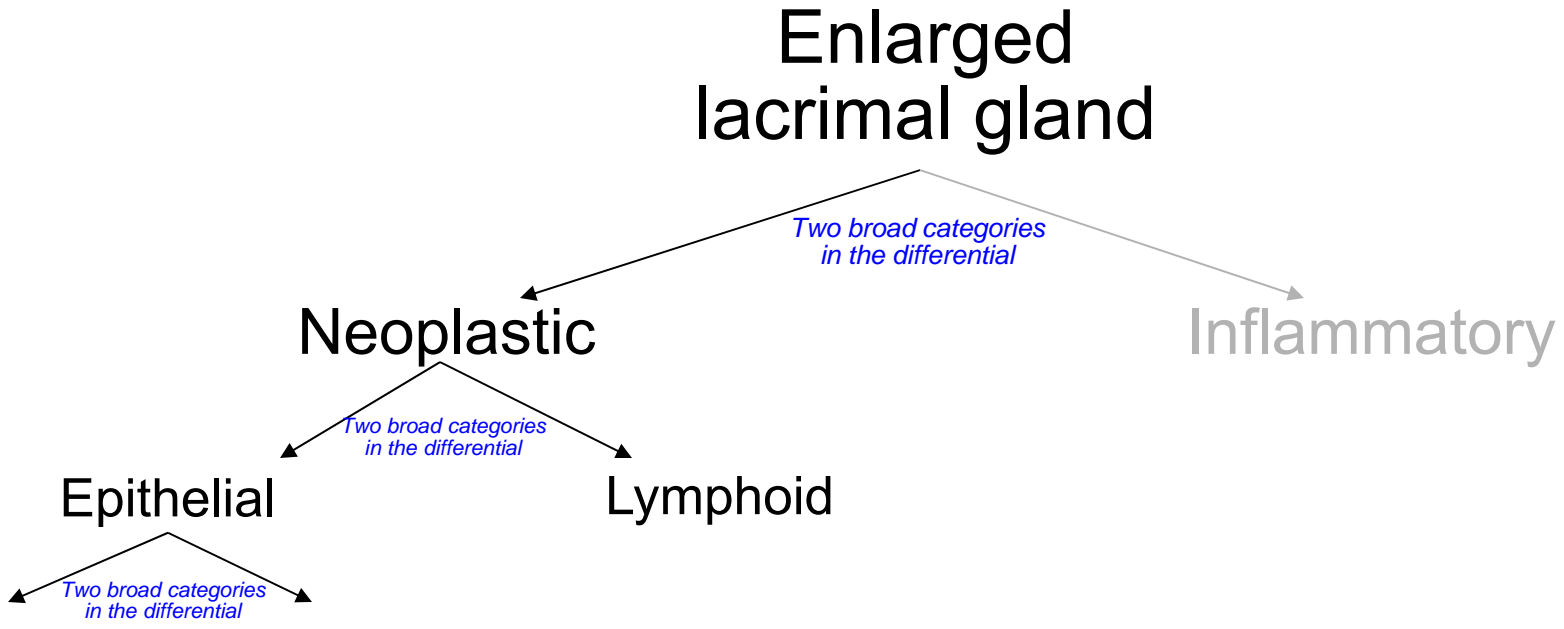


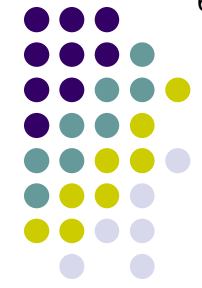
Lacrimal Gland Enlargement



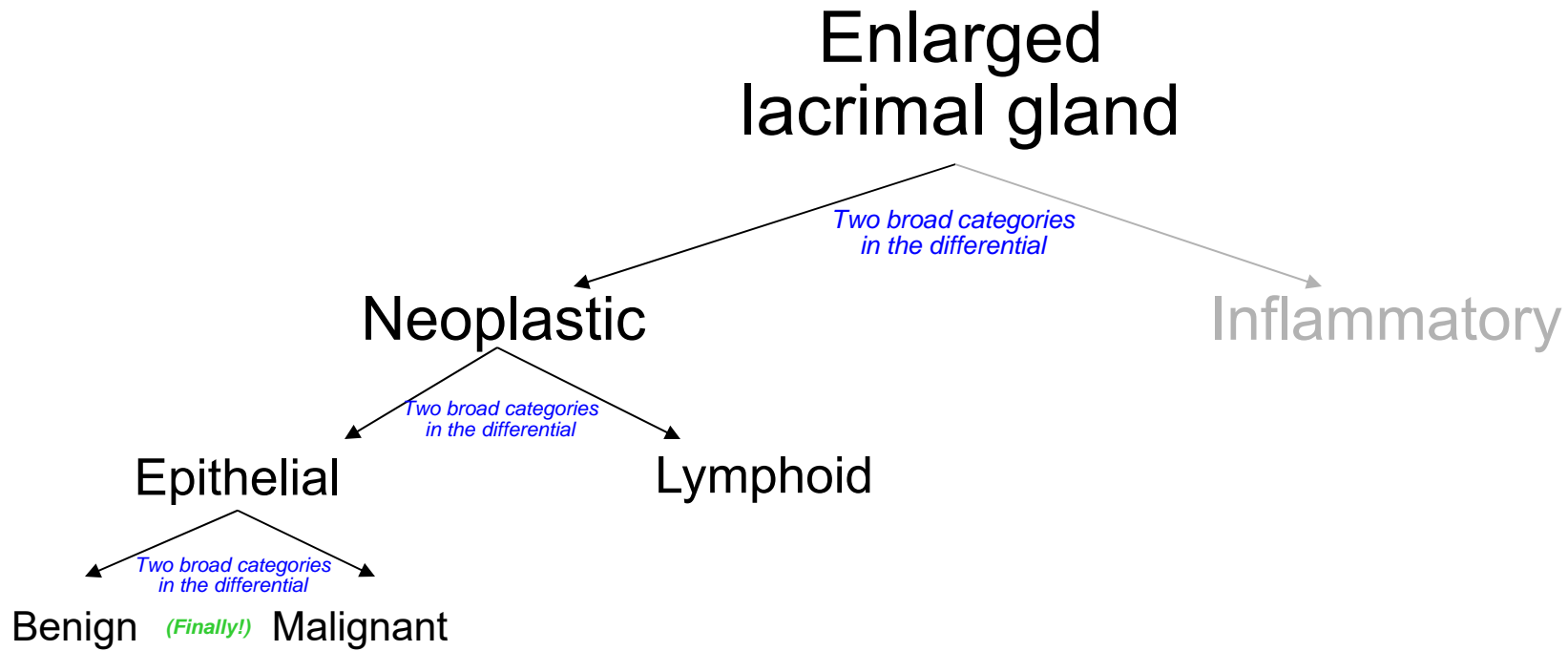


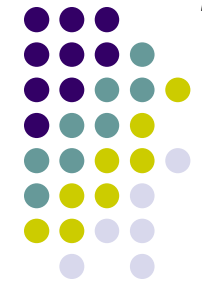
Lacrimal Gland Enlargement



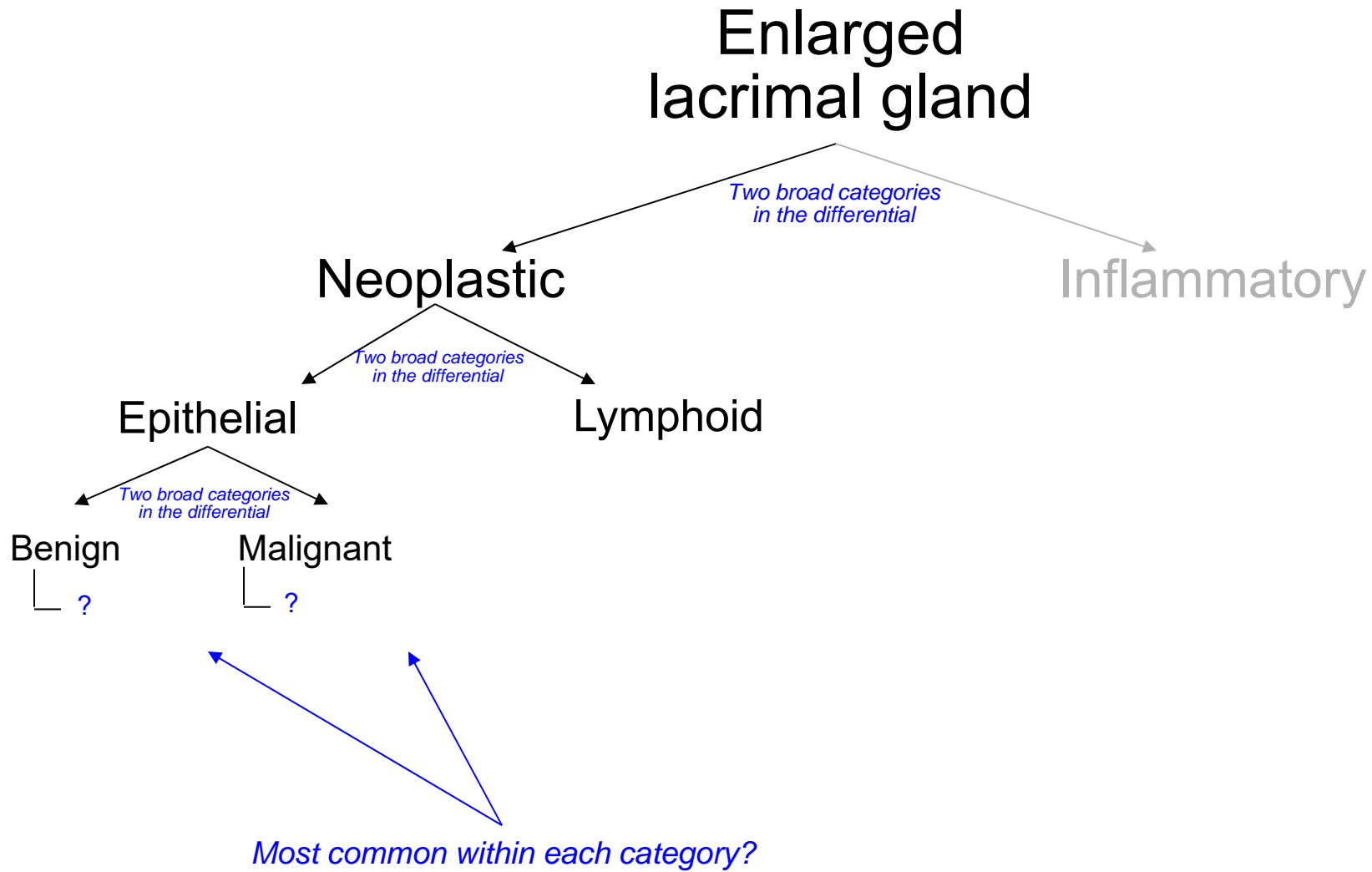


Lacrimal Gland Enlargement



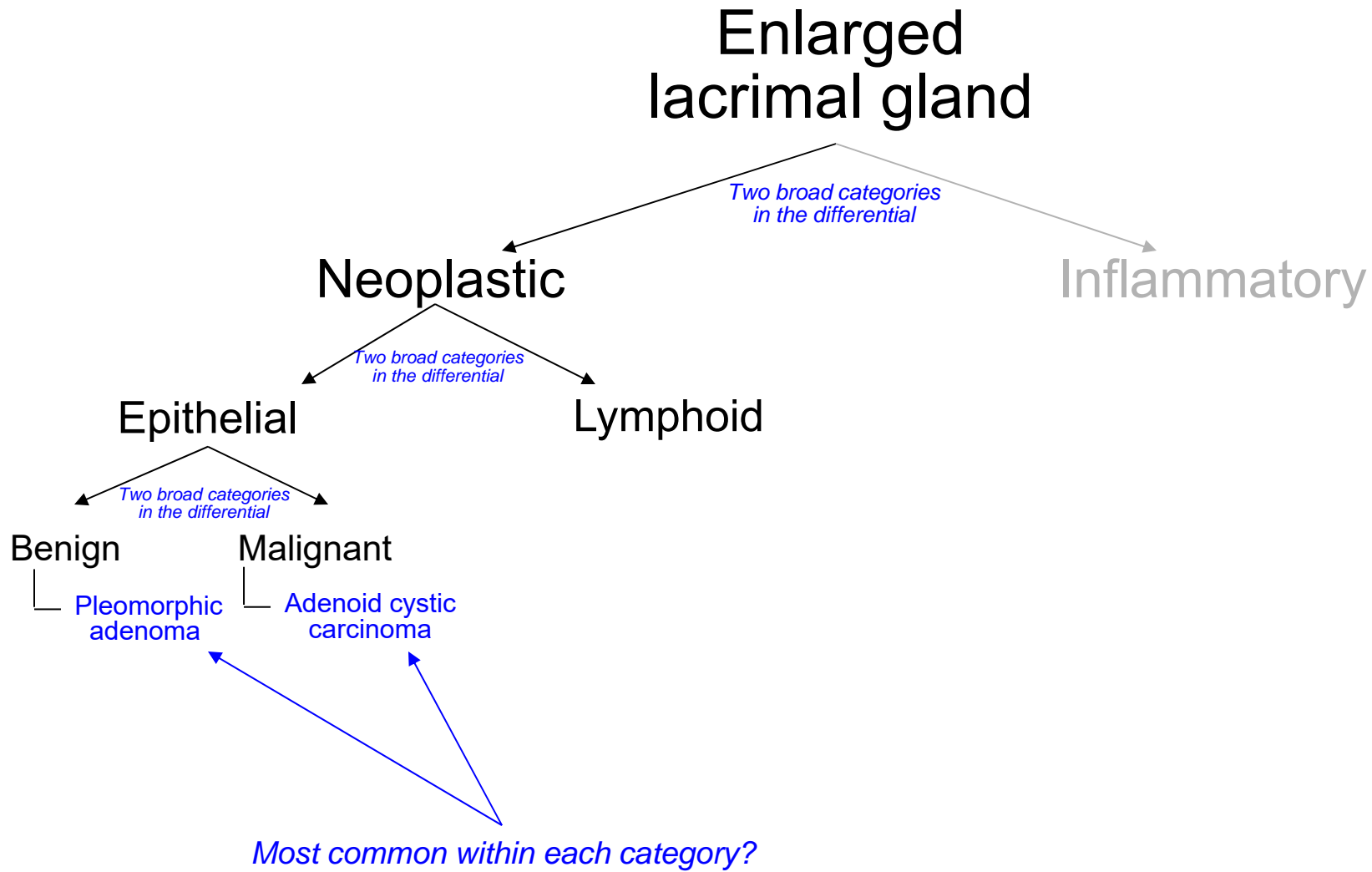


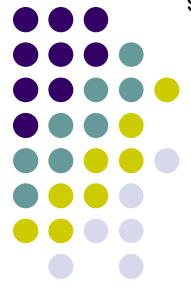
Lacrimal Gland Enlargement



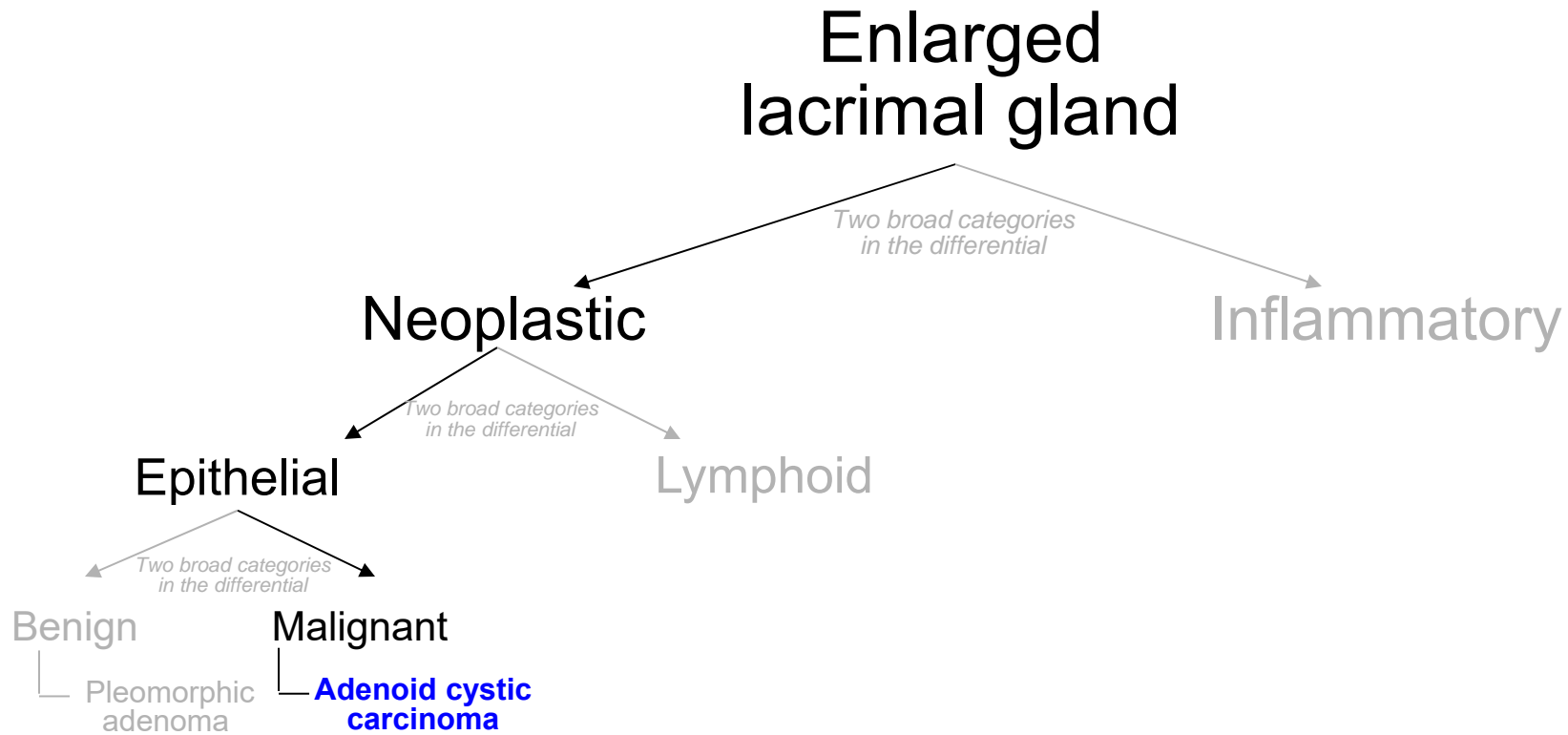


Lacrimal Gland Enlargement

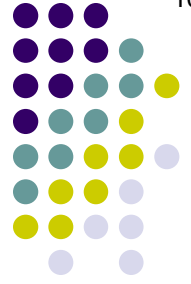




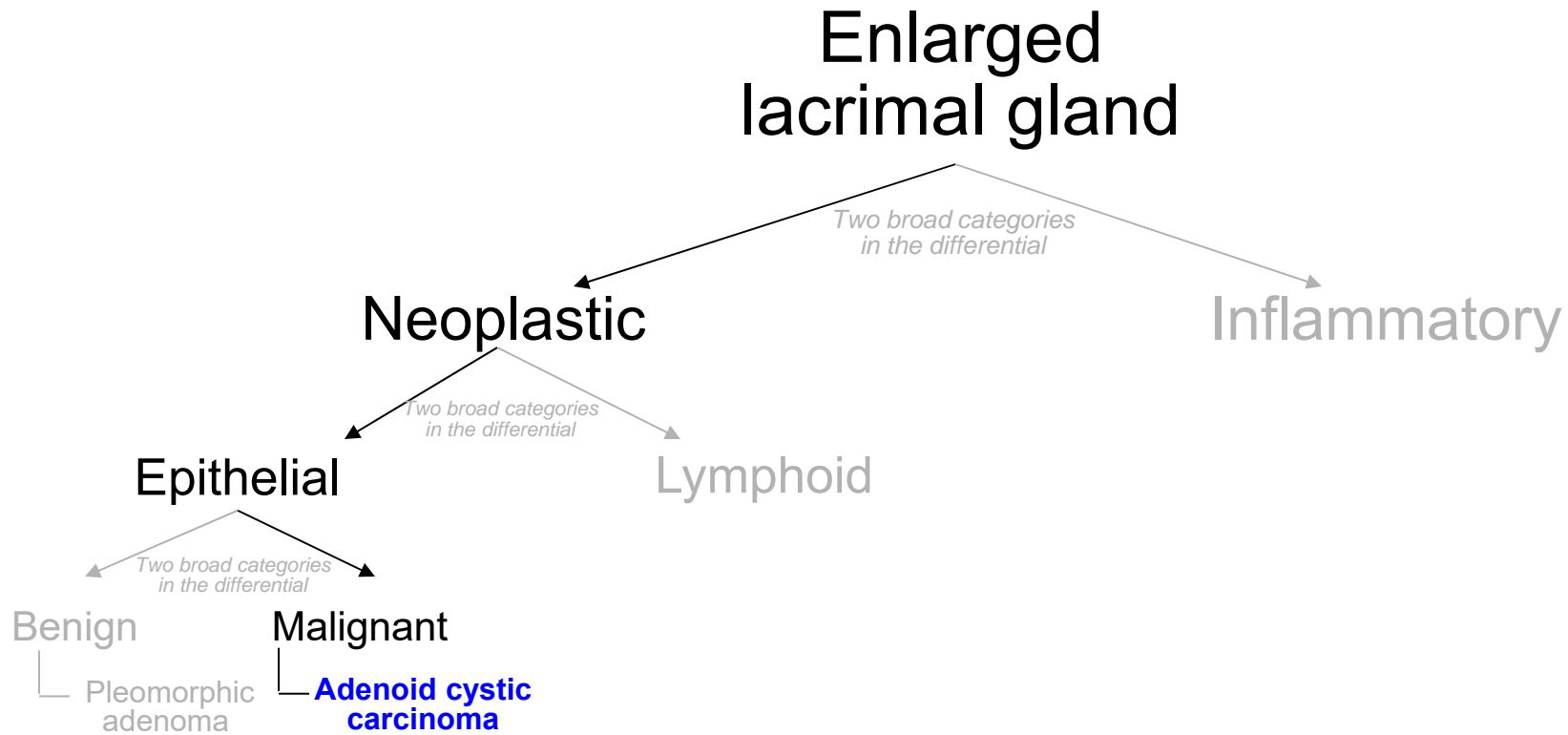
Lacrimal Gland Enlargement



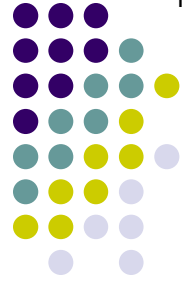
What is the classic pathologic description of adenoid cystic carcinoma?



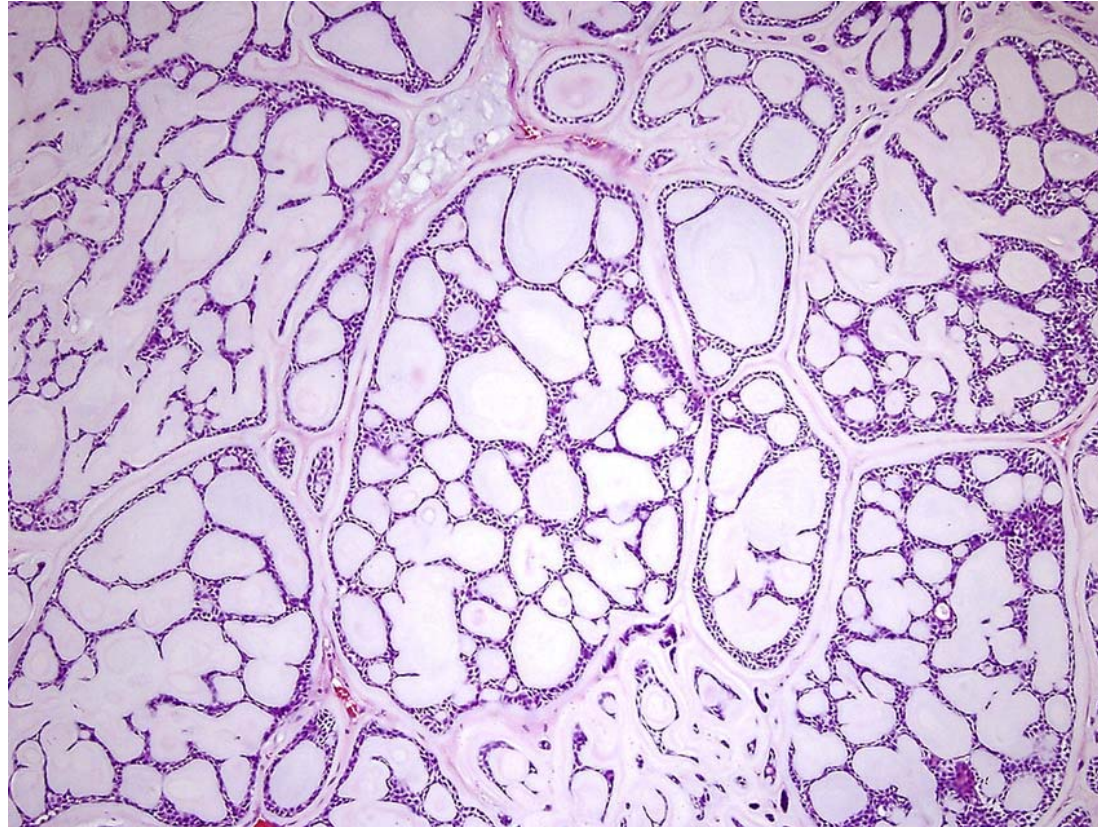
Lacrimal Gland Enlargement



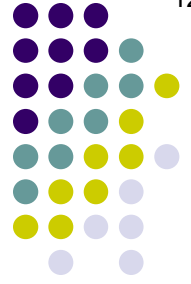
*What is the classic pathologic description of adenoid cystic carcinoma?
It looks like 'Swiss cheese' owing to its cystic nature*



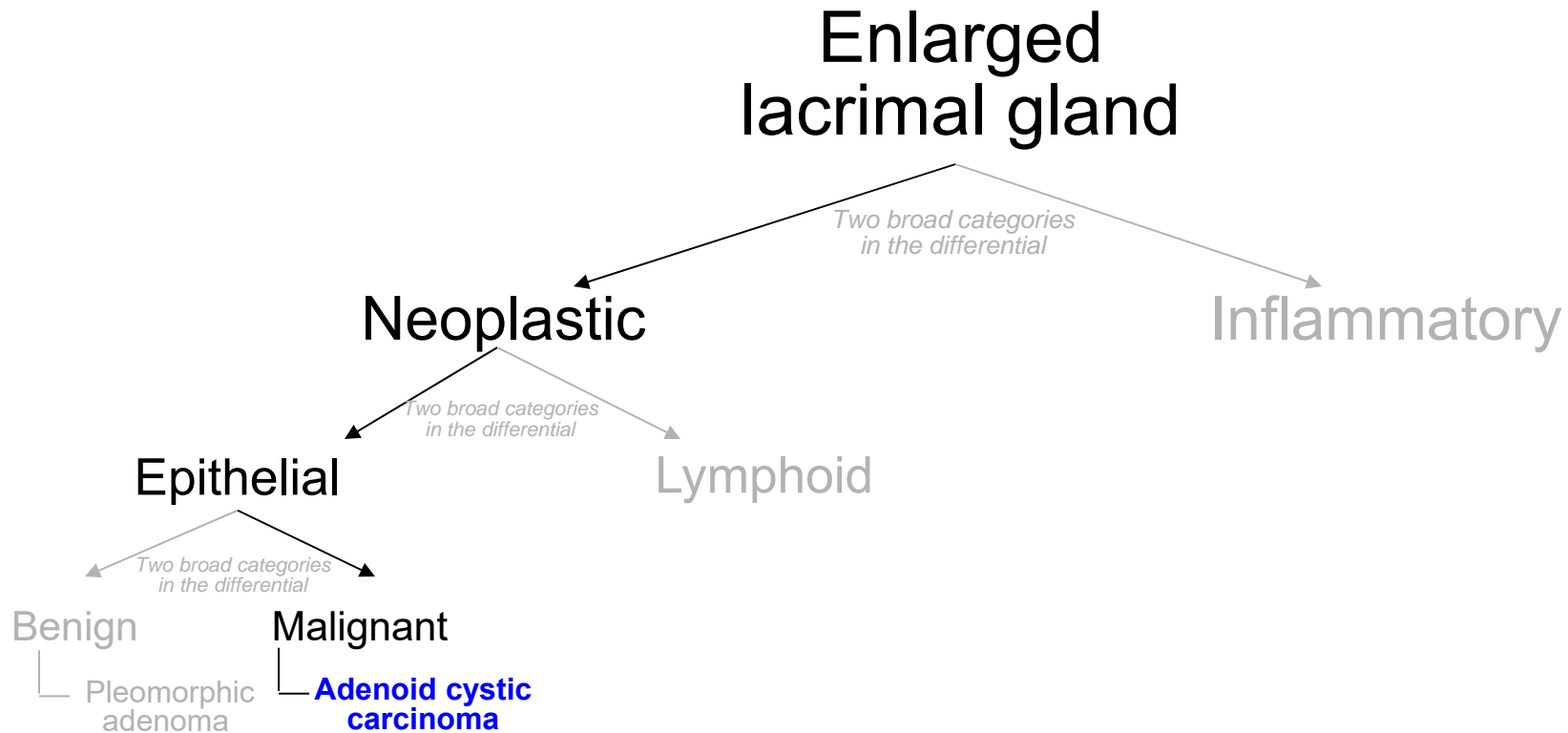
Lacrimal Gland Enlargement



Adenoid cystic carcinoma: Swiss cheese appearance

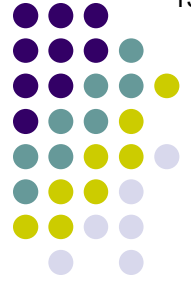


Lacrimal Gland Enlargement

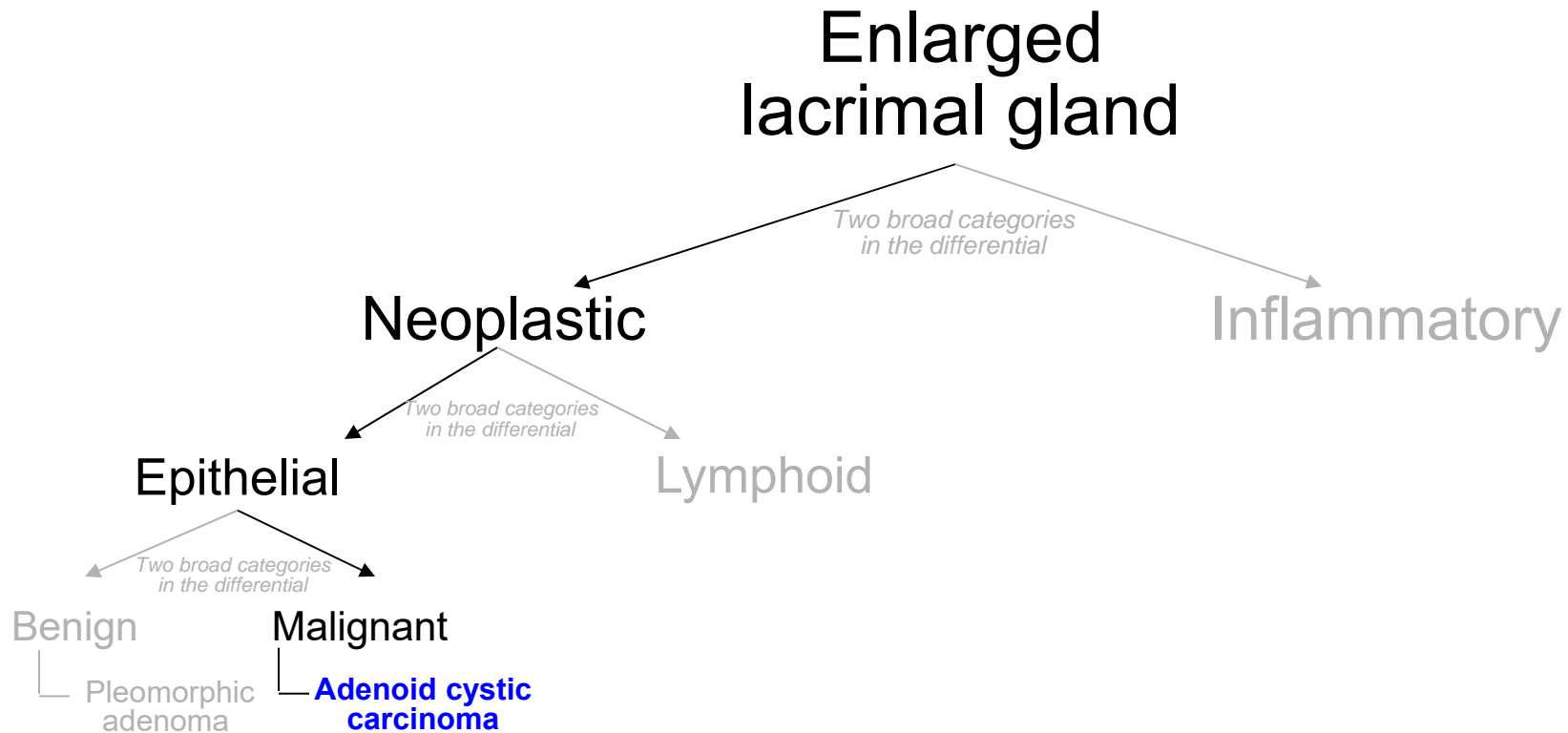


*What is the classic pathologic description of adenoid cystic carcinoma?
It looks like 'Swiss cheese' owing to its cystic nature*

How is the diagnosis confirmed?

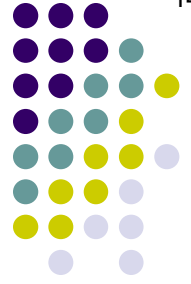


Lacrimal Gland Enlargement

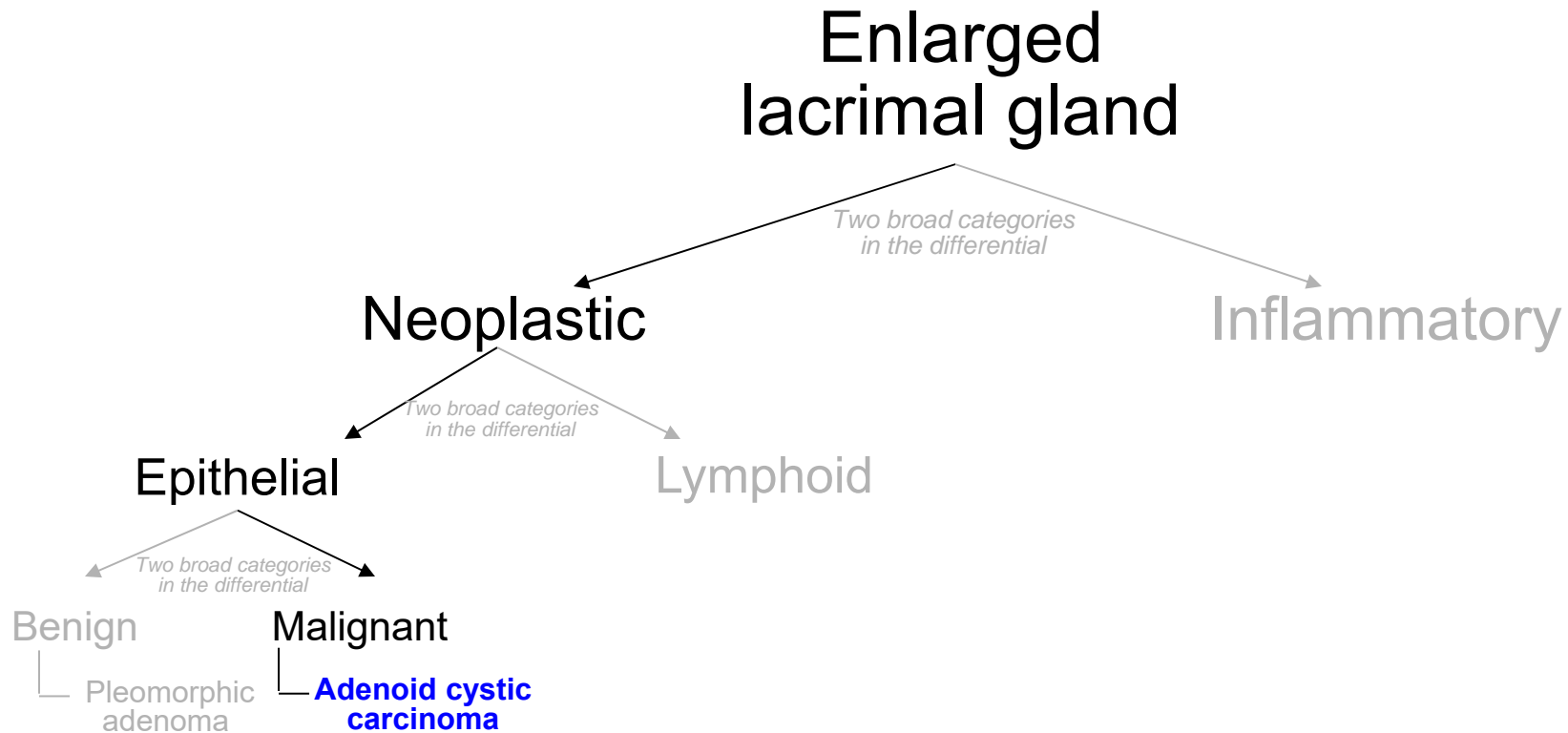


What is the classic pathologic description of adenoid cystic carcinoma?
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How is the diagnosis confirmed?
Via incisional biopsy



Lacrimal Gland Enlargement



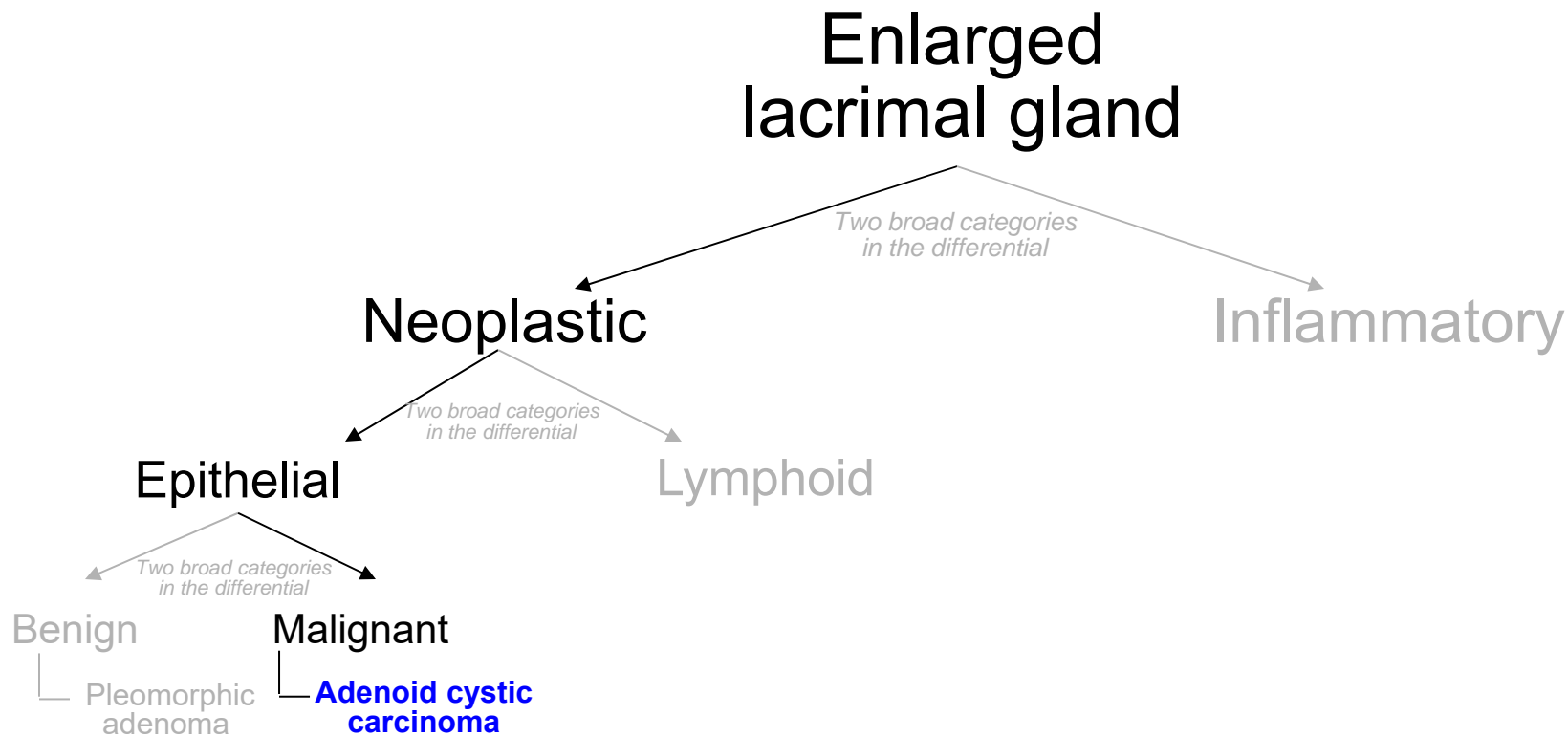
What is the classic pathologic description of adenoid cystic carcinoma?
It looks like 'Swiss cheese' owing to its cystic nature

How is the diagnosis confirmed?
Via incisional biopsy

*There are five subtypes based on histology. All are bad, but which conveys the **worst** prognosis?*



Lacrimal Gland Enlargement



What is the classic pathologic description of adenoid cystic carcinoma?

It looks like 'Swiss cheese' owing to its cystic nature

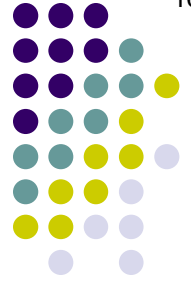
How is the diagnosis confirmed?

Via incisional biopsy

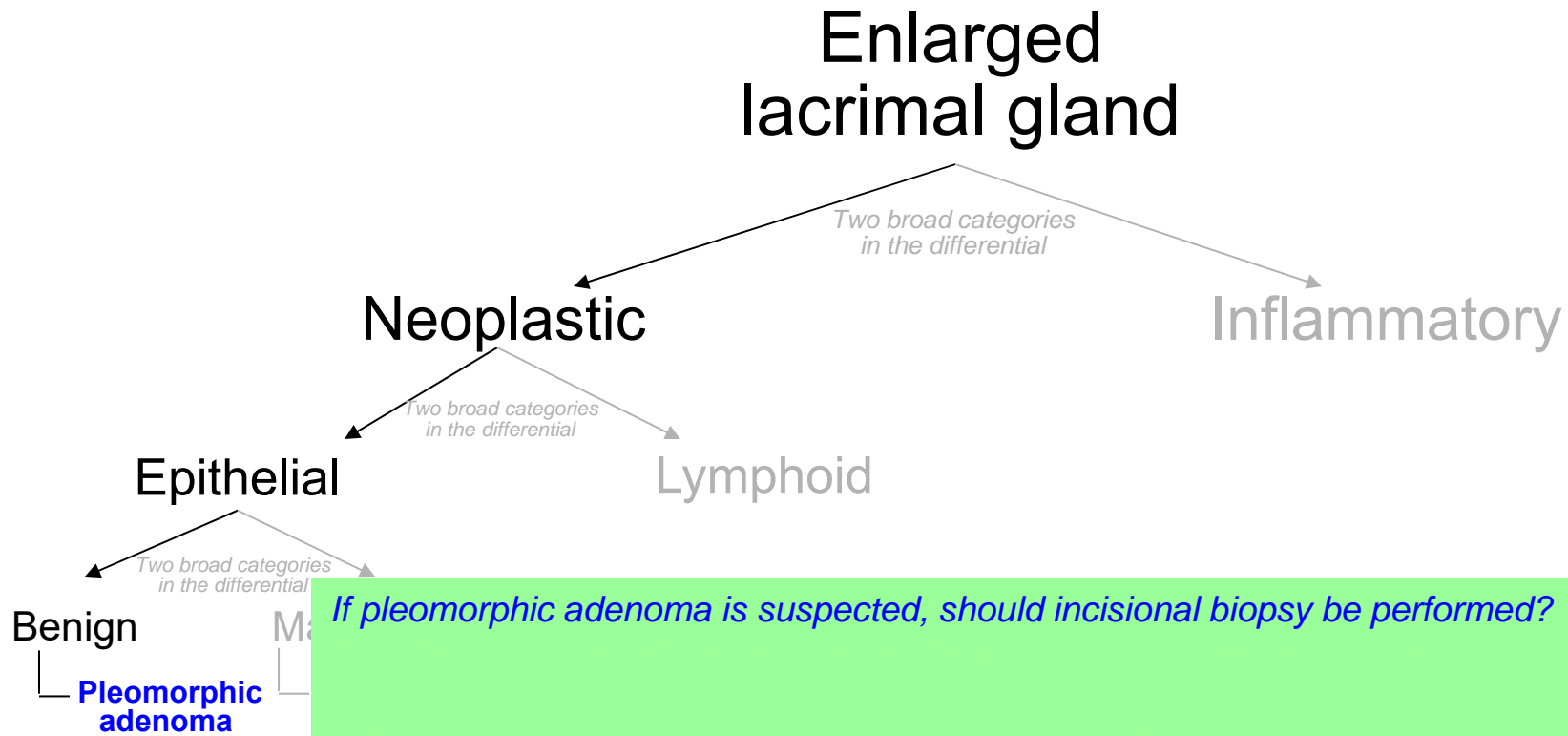
Basaloid
ad

*There are five subtypes based on histology. All are bad, but which conveys the **worst** prognosis?*

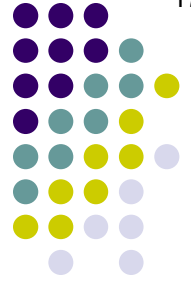
Basaloid



Lacrimal Gland Enlargement



If pleomorphic adenoma is suspected, should incisional biopsy be performed?



Lacrimal Gland Enlargement

Enlarged lacrimal gland

Two broad categories in the differential

Neoplastic

Inflammatory

Two broad categories in the differential

Epithelial

Lymphoid

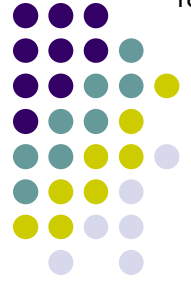
Two broad categories in the differential

Benign

Malignant

Pleomorphic adenoma

*If pleomorphic adenoma is suspected, should incisional biopsy be performed?
No! The tumor should be removed en bloque, without violating its pseudocapsule*



Lacrimal Gland Enlargement

Enlarged lacrimal gland

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Two broad categories in the differential

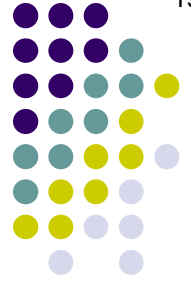
Benign

Malignant

Pleomorphic adenoma

*If pleomorphic adenoma is suspected, should incisional biopsy be performed?
No! The tumor should be removed en bloque, without violating its pseudocapsule*

Why must a pleomorphic adenoma be managed in this way?



Lacrimal Gland Enlargement

Enlarged lacrimal gland

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Pleomorphic adenoma

*If pleomorphic adenoma is suspected, should incisional biopsy be performed?
No! The tumor should be removed en bloque, without violating its pseudocapsule*

*Why must a pleomorphic adenoma be managed in this way?
Incomplete excision increases the risk of recurrence, which can be malignant (a process known as two words)*



Lacrimal Gland Enlargement

Enlarged lacrimal gland

Two broad categories in the differential

Neoplastic

Inflammatory

Two broad categories in the differential

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Lymphoid

Two broad categories in the differential

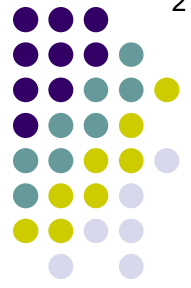
Benign

Malignant

Pleomorphic adenoma

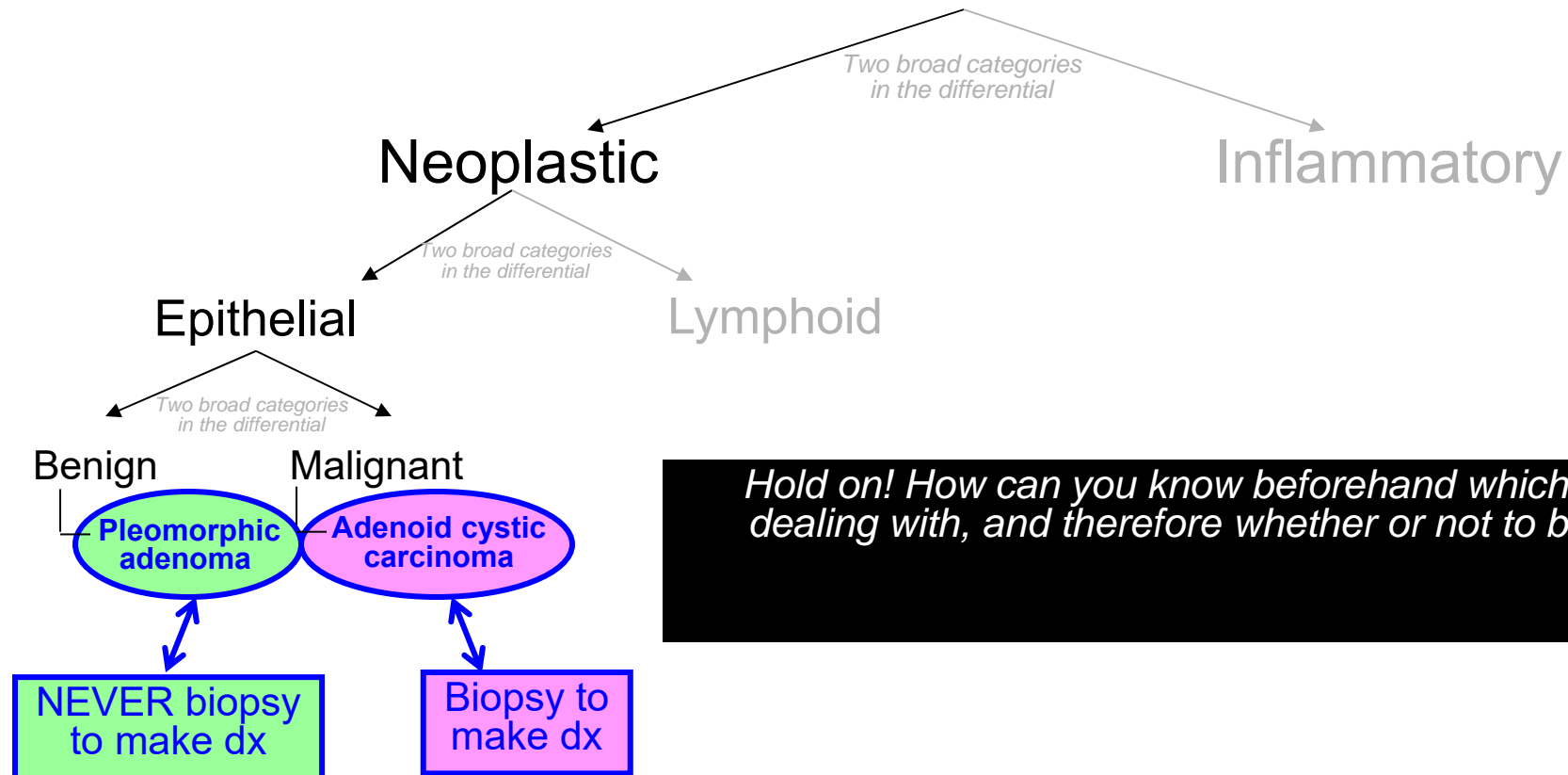
If pleomorphic adenoma is suspected, should incisional biopsy be performed?
No! The tumor should be removed en bloque, without violating its pseudocapsule

Why must a pleomorphic adenoma be managed in this way?
Incomplete excision increases the risk of recurrence, which can be malignant (a process known as **malignant transformation**)

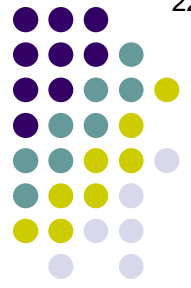


Lacrimal Gland Enlargement

Enlarged lacrimal gland

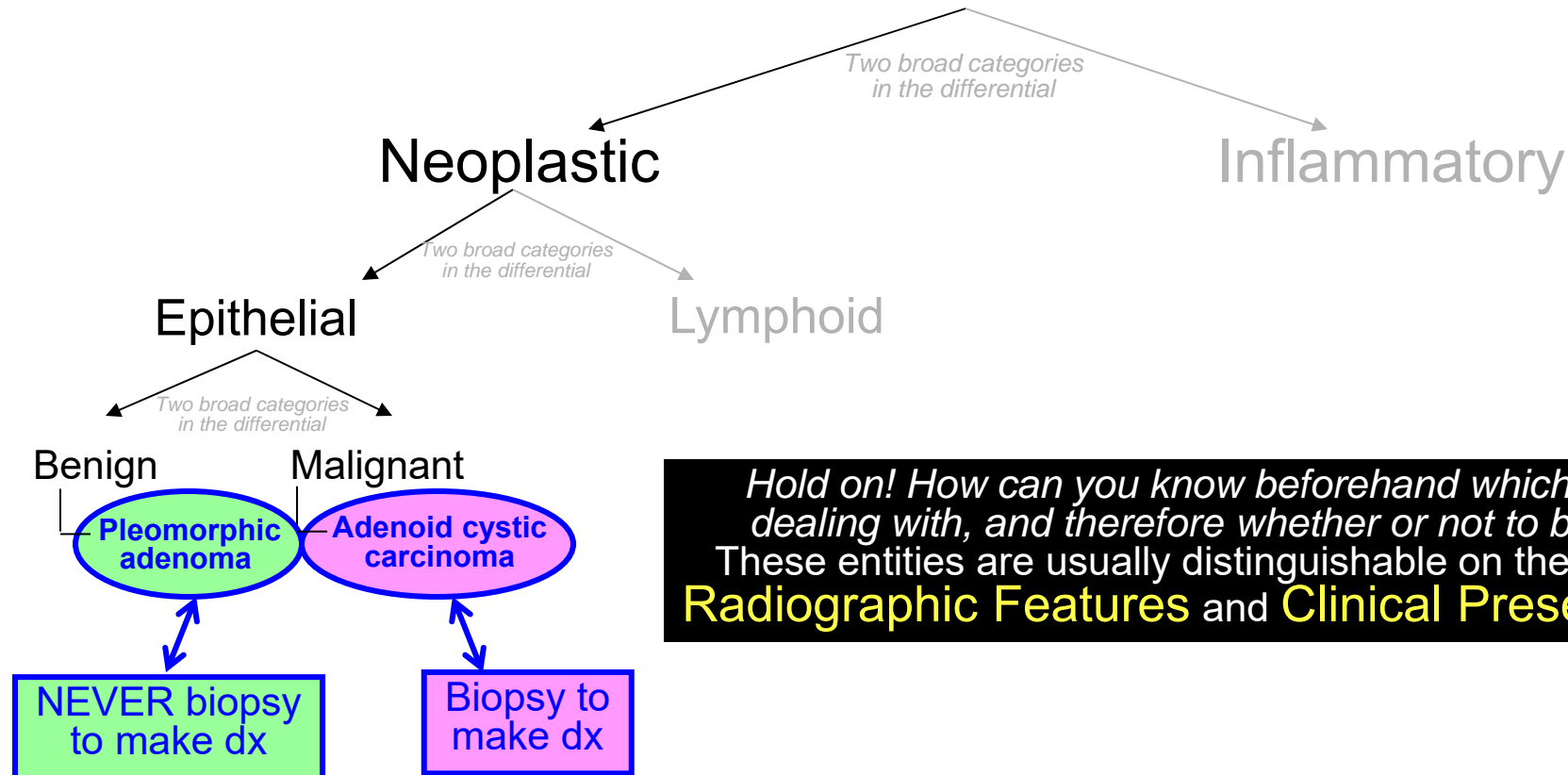


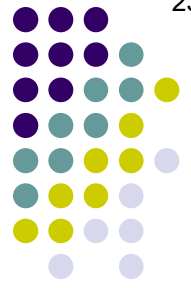
Hold on! How can you know beforehand which you're dealing with, and therefore whether or not to biopsy?



Lacrimal Gland Enlargement

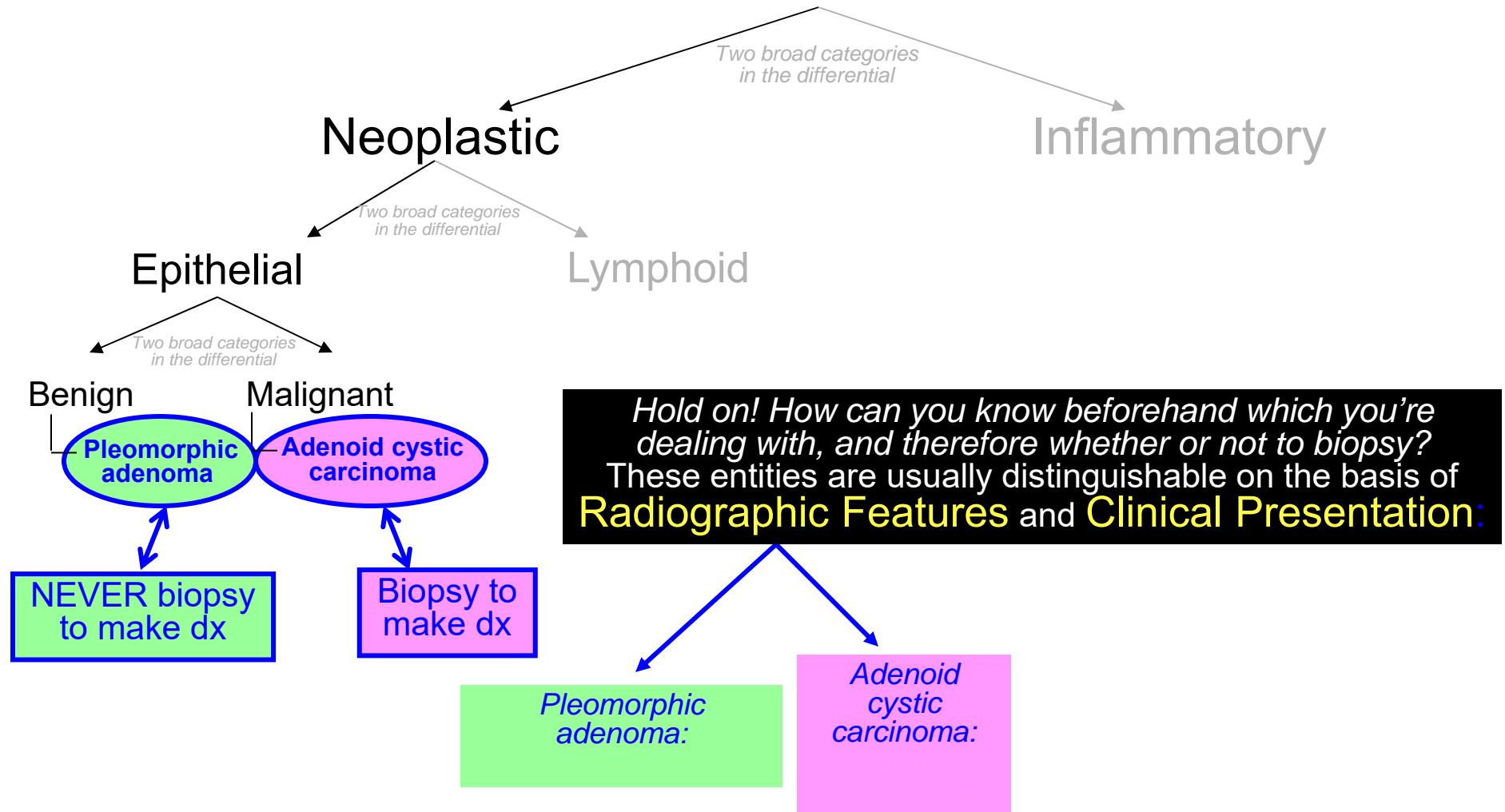
Enlarged lacrimal gland





Lacrimal Gland Enlargement

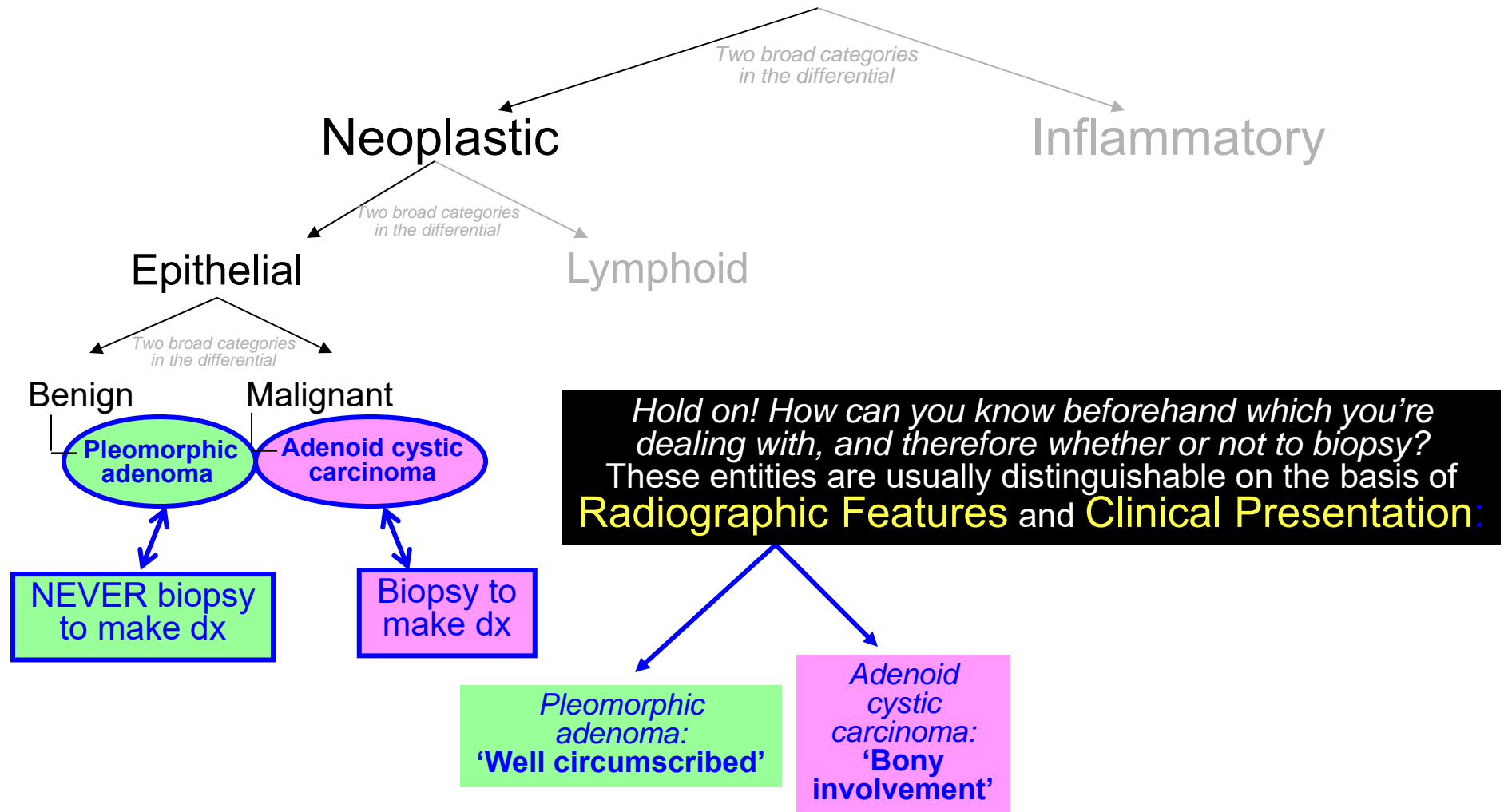
Enlarged lacrimal gland



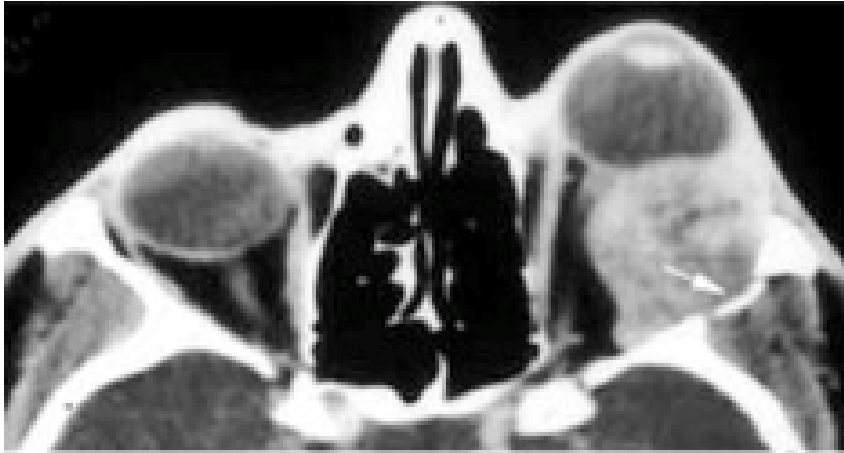
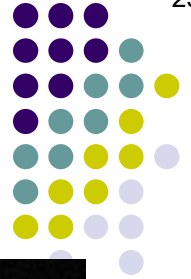


Lacrimal Gland Enlargement

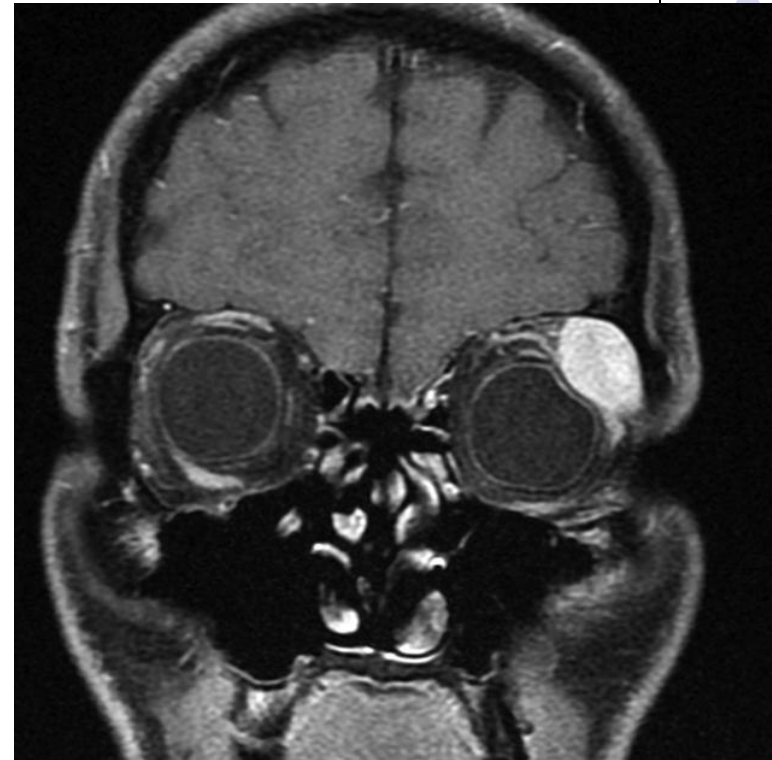
Enlarged lacrimal gland



Lacrimal Gland Enlargement

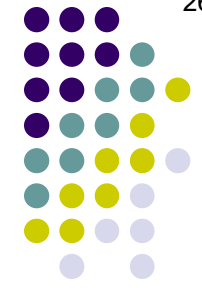


Adenoid cystic: Bony involvement
(invading the orbital wall, arrow)



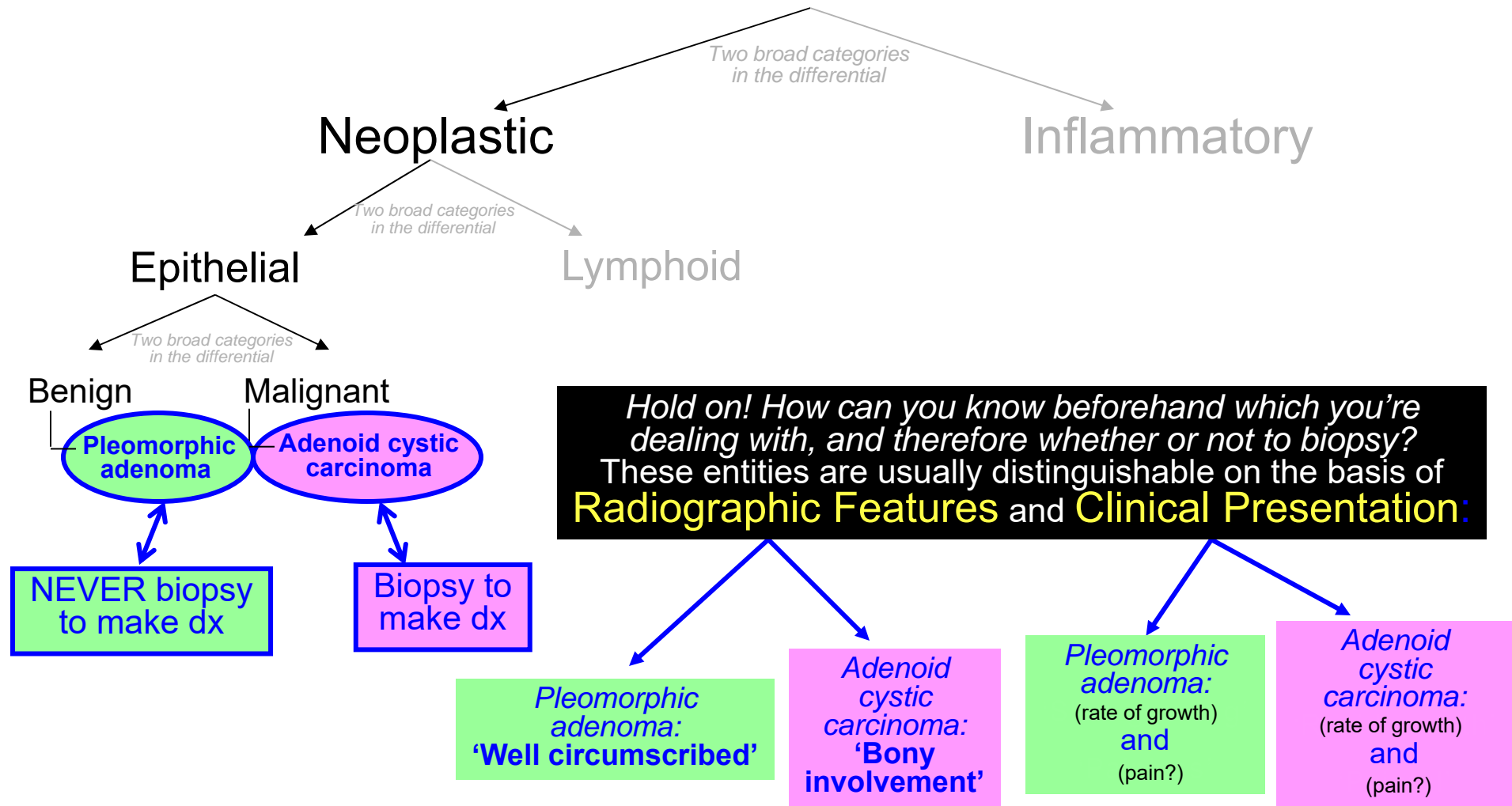
Pleomorphic adenoma: Well-circumscribed

Adenoid cystic carcinoma vs pleomorphic adenoma: Imaging



Lacrimal Gland Enlargement

Enlarged lacrimal gland



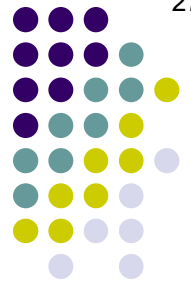
*Hold on! How can you know beforehand which you're dealing with, and therefore whether or not to biopsy? These entities are usually distinguishable on the basis of **Radiographic Features** and **Clinical Presentation**:*

Pleomorphic adenoma: 'Well circumscribed'

Adenoid cystic carcinoma: 'Bony involvement'

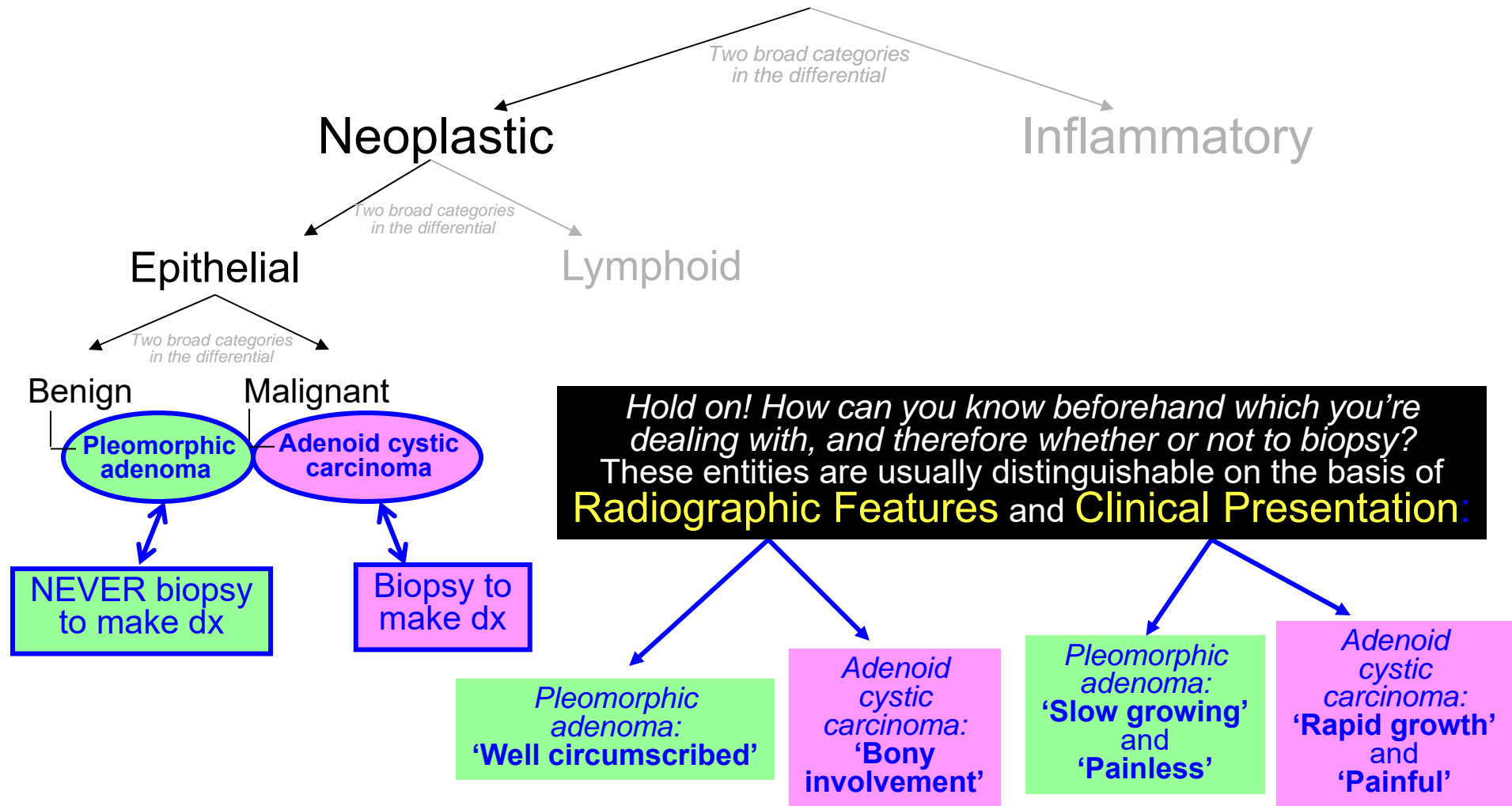
Pleomorphic adenoma: (rate of growth) and (pain?)

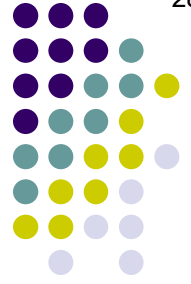
Adenoid cystic carcinoma: (rate of growth) and (pain?)



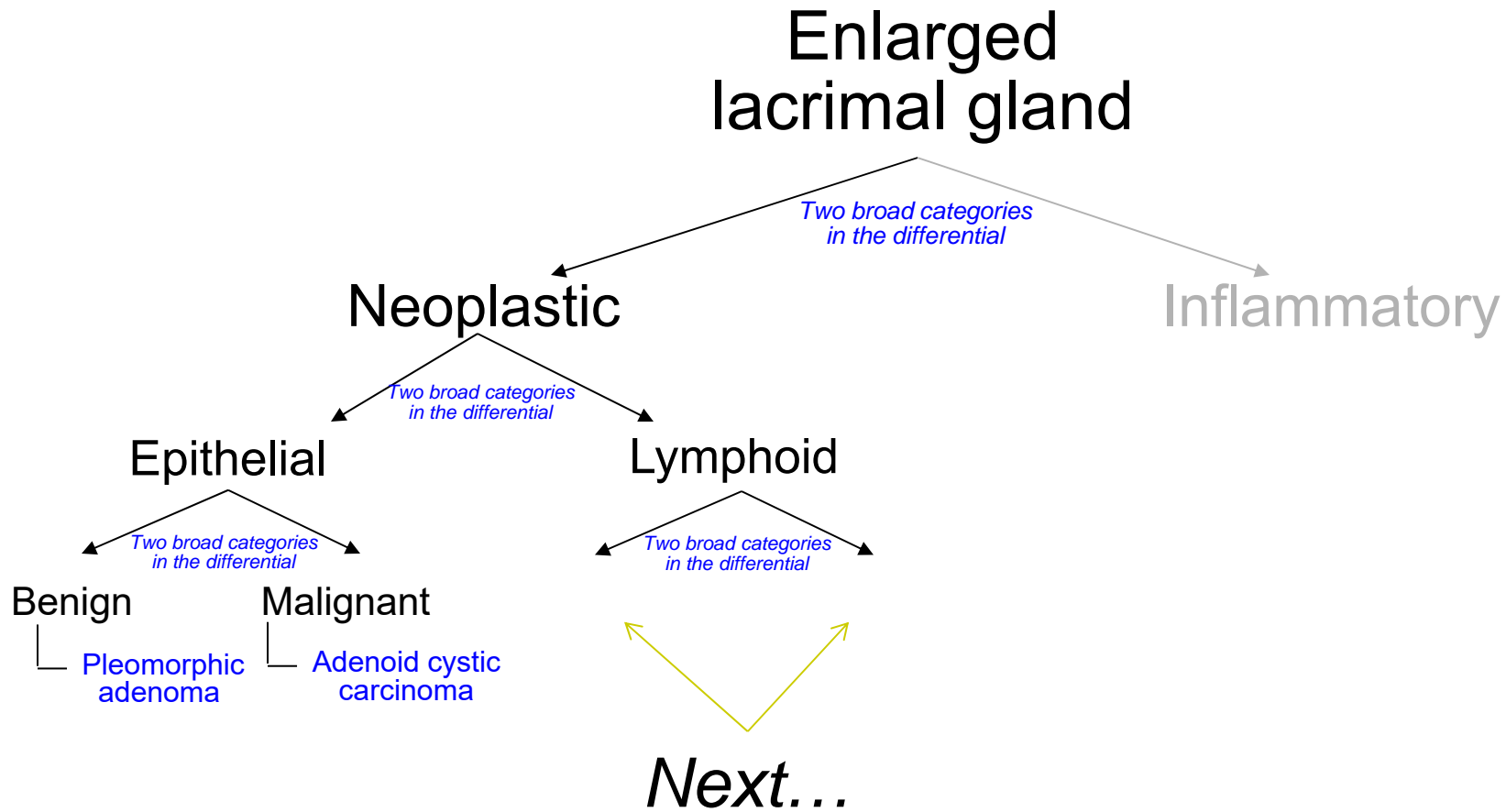
Lacrimal Gland Enlargement

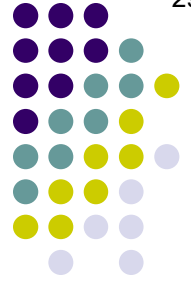
Enlarged lacrimal gland



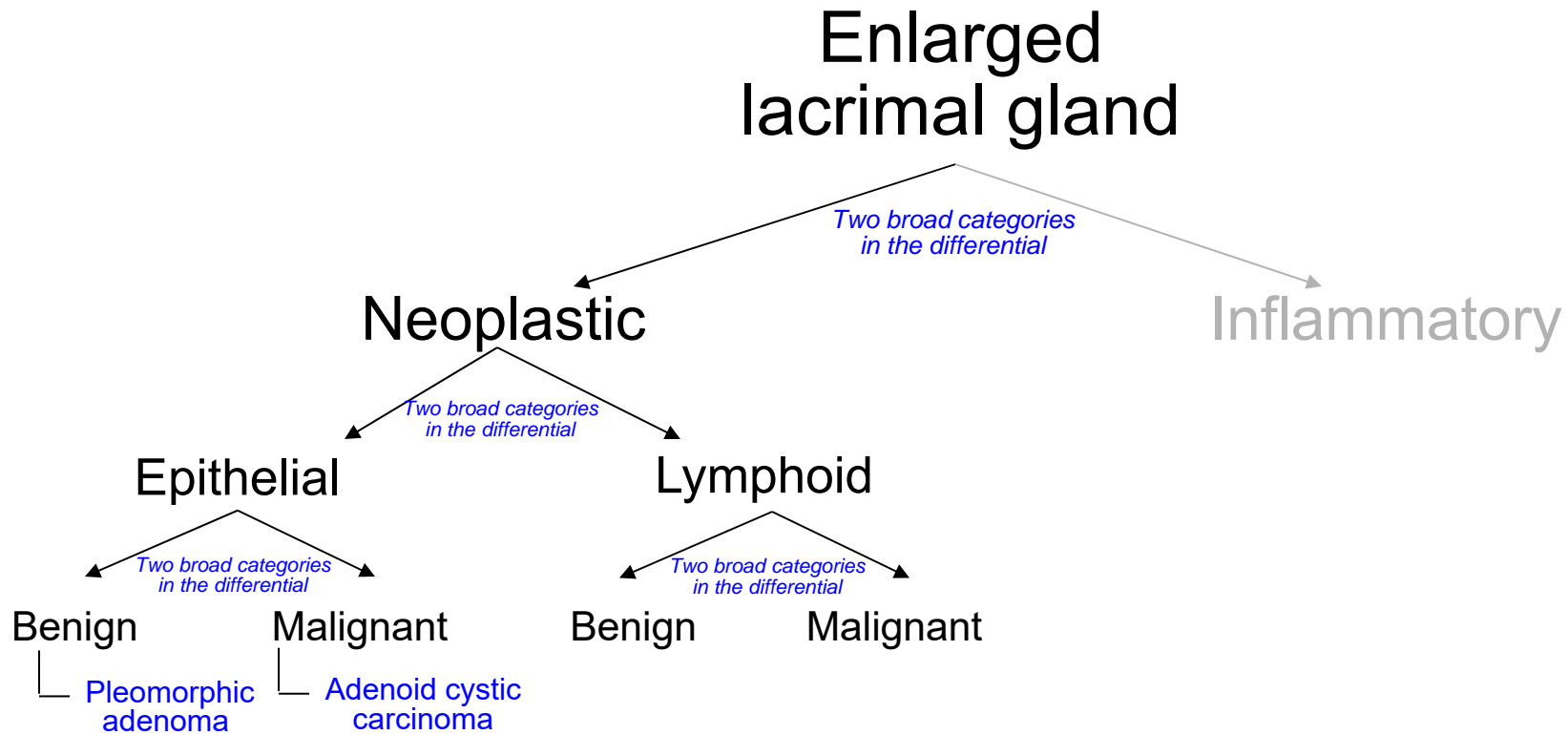


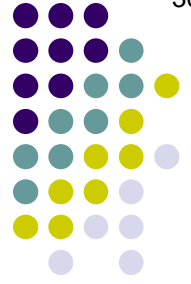
Lacrimal Gland Enlargement



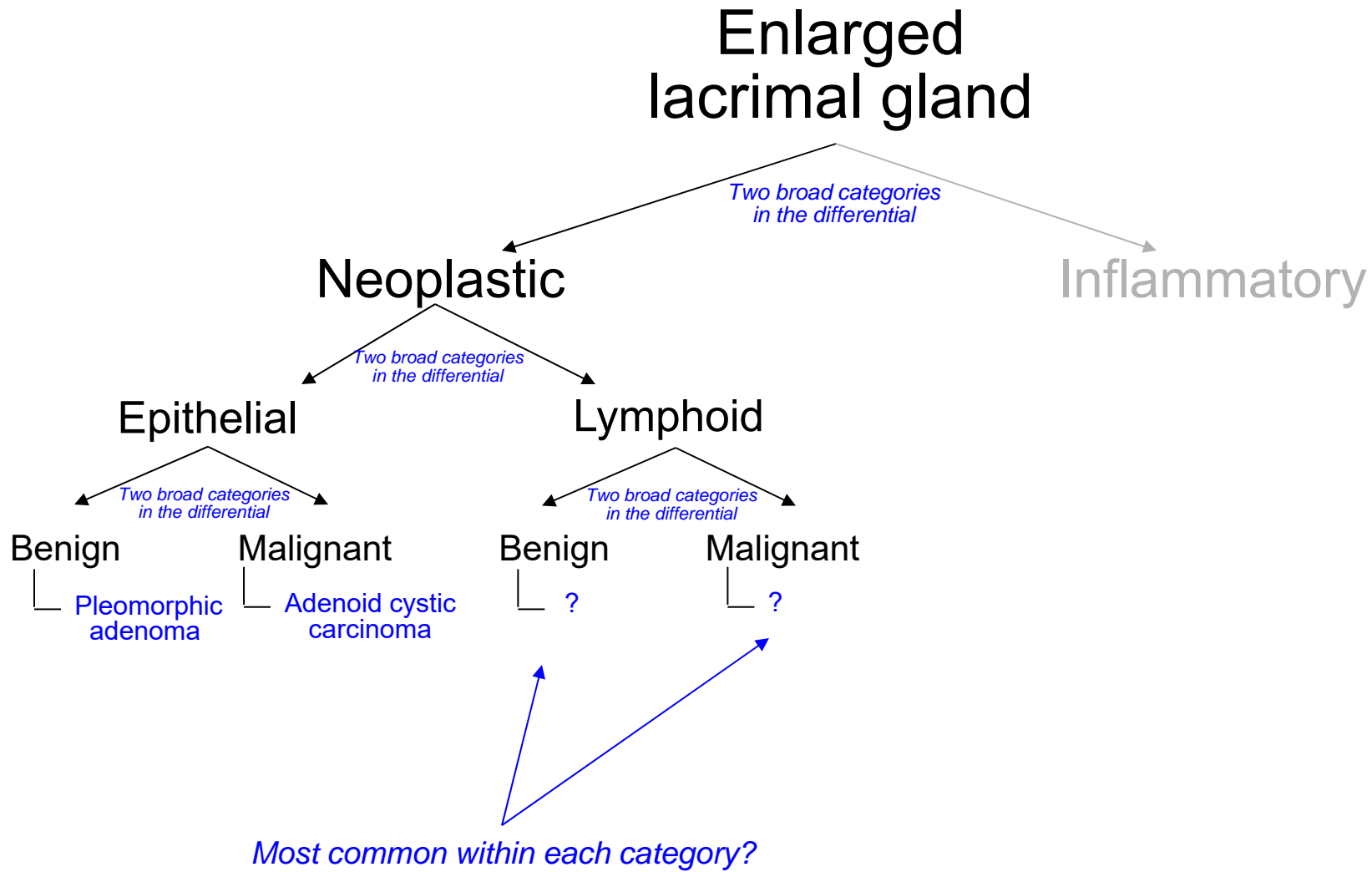


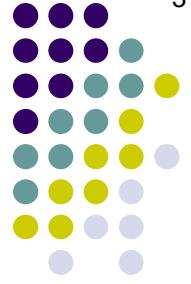
Lacrimal Gland Enlargement



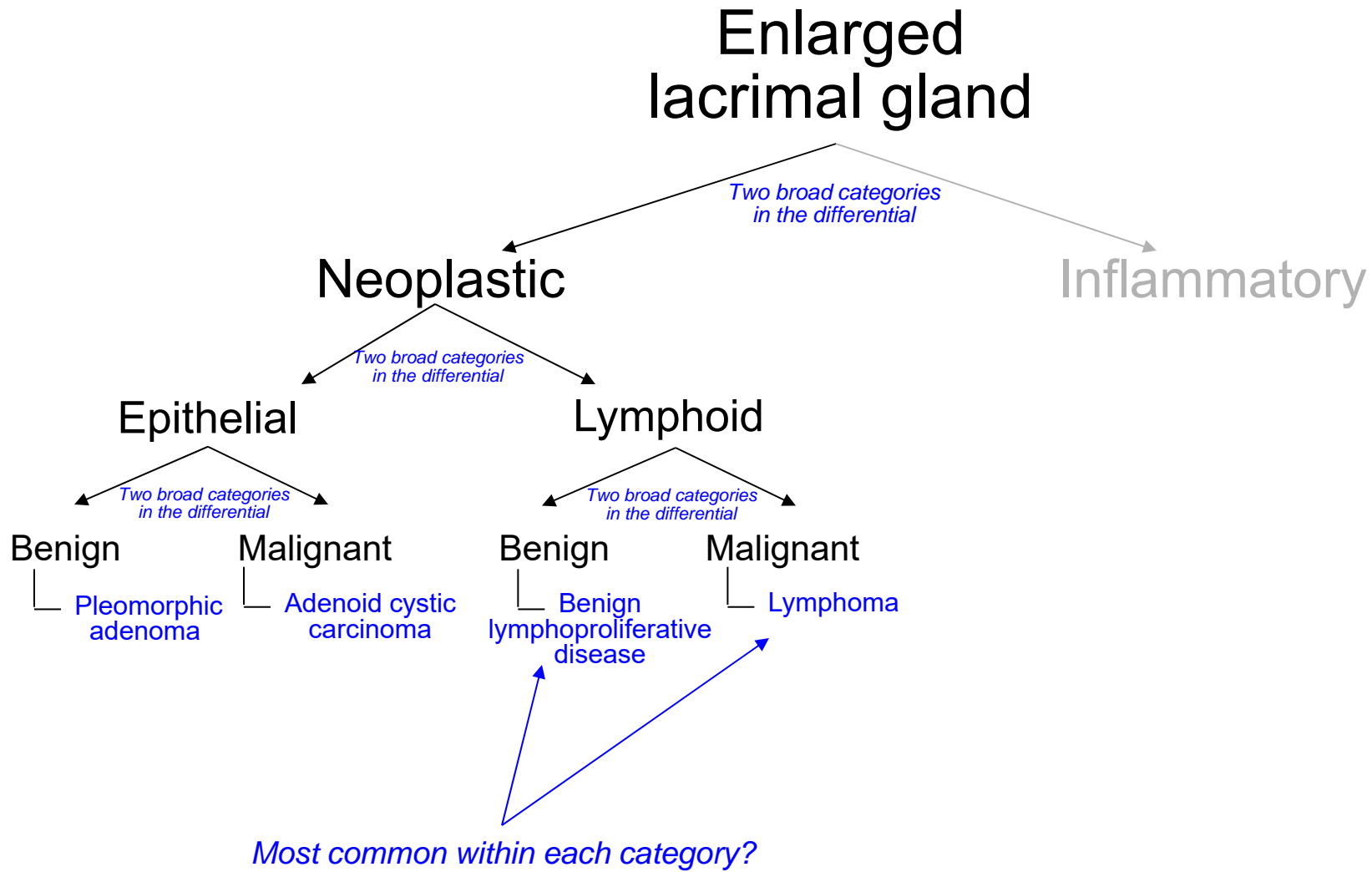


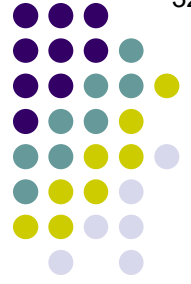
Lacrimal Gland Enlargement



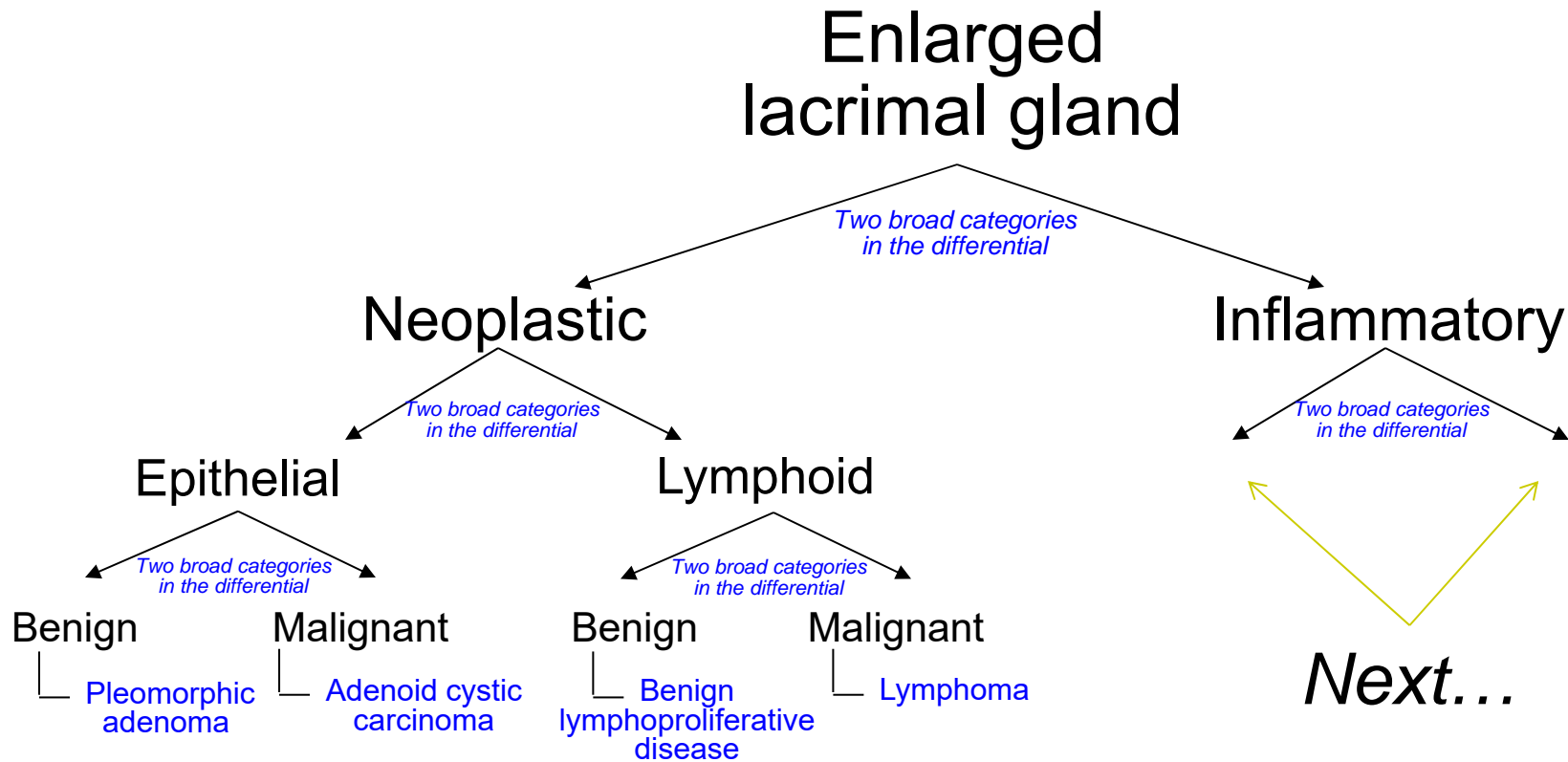


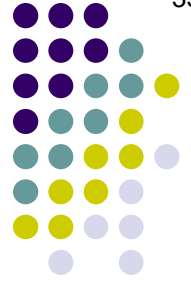
Lacrimal Gland Enlargement



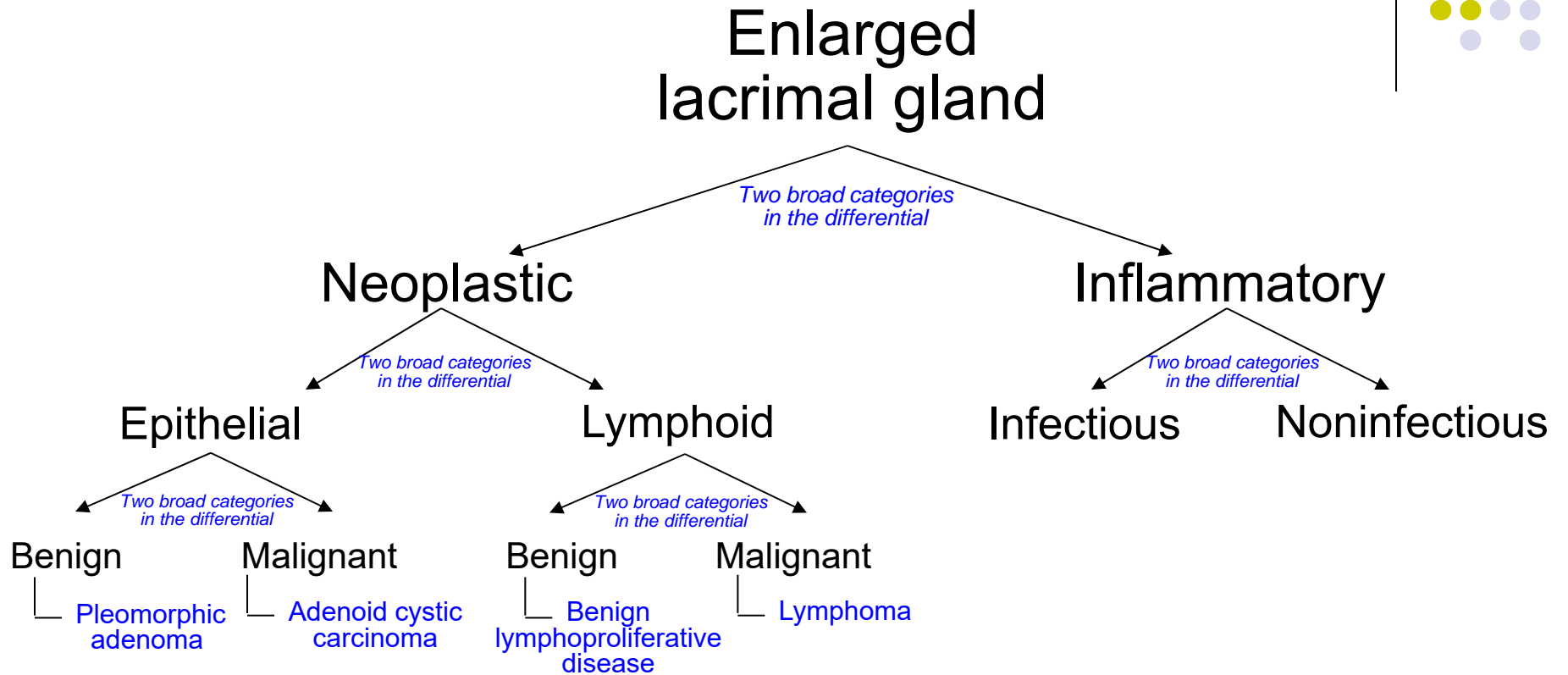


Lacrimal Gland Enlargement





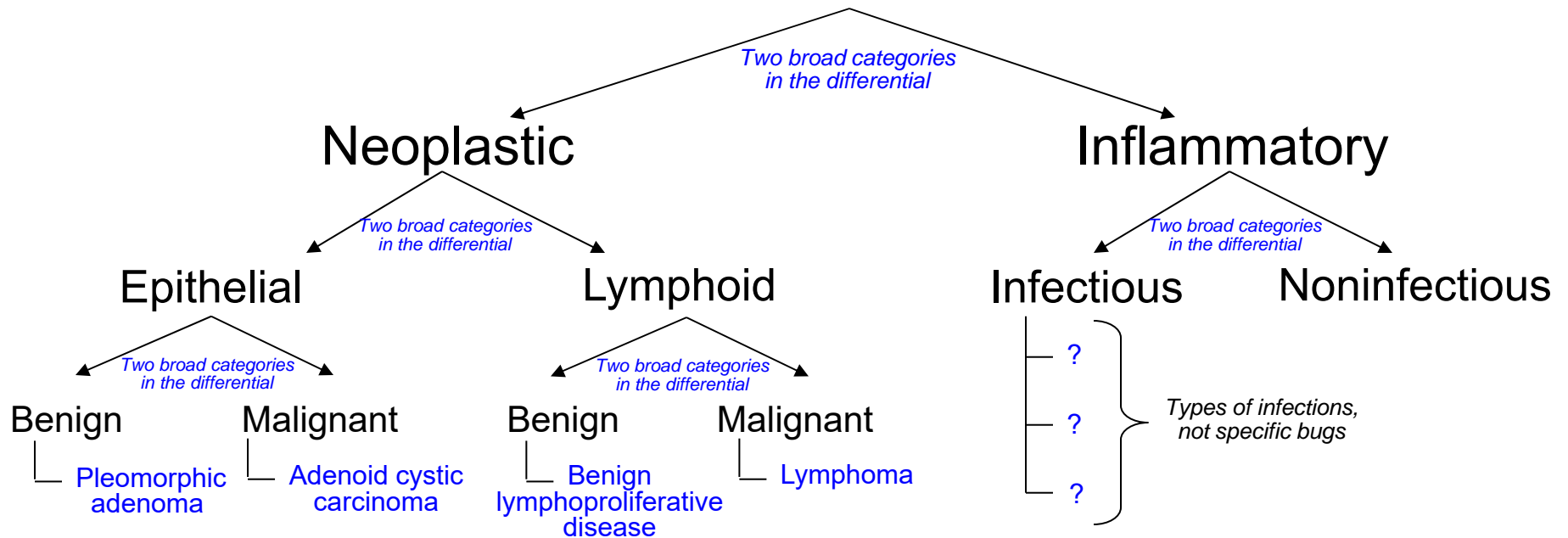
Lacrimal Gland Enlargement

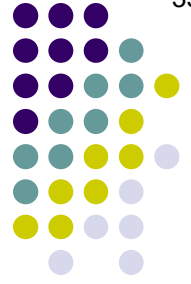




Lacrimal Gland Enlargement

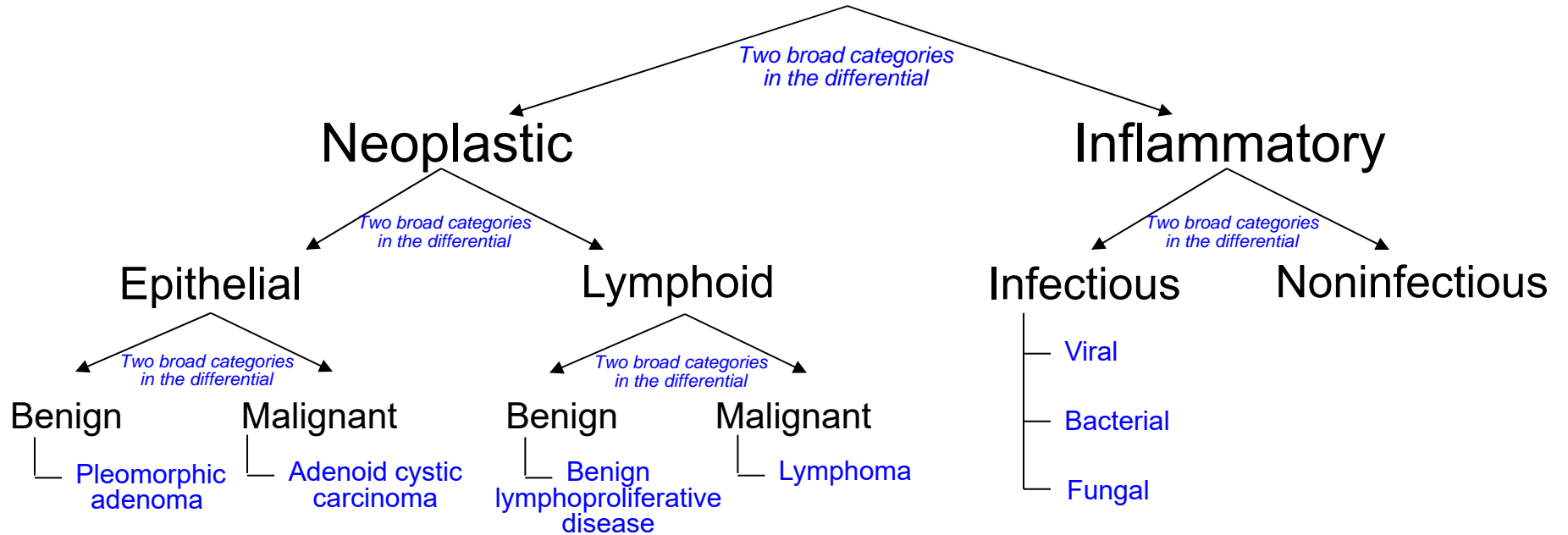
Enlarged lacrimal gland

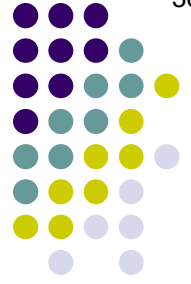




Lacrimal Gland Enlargement

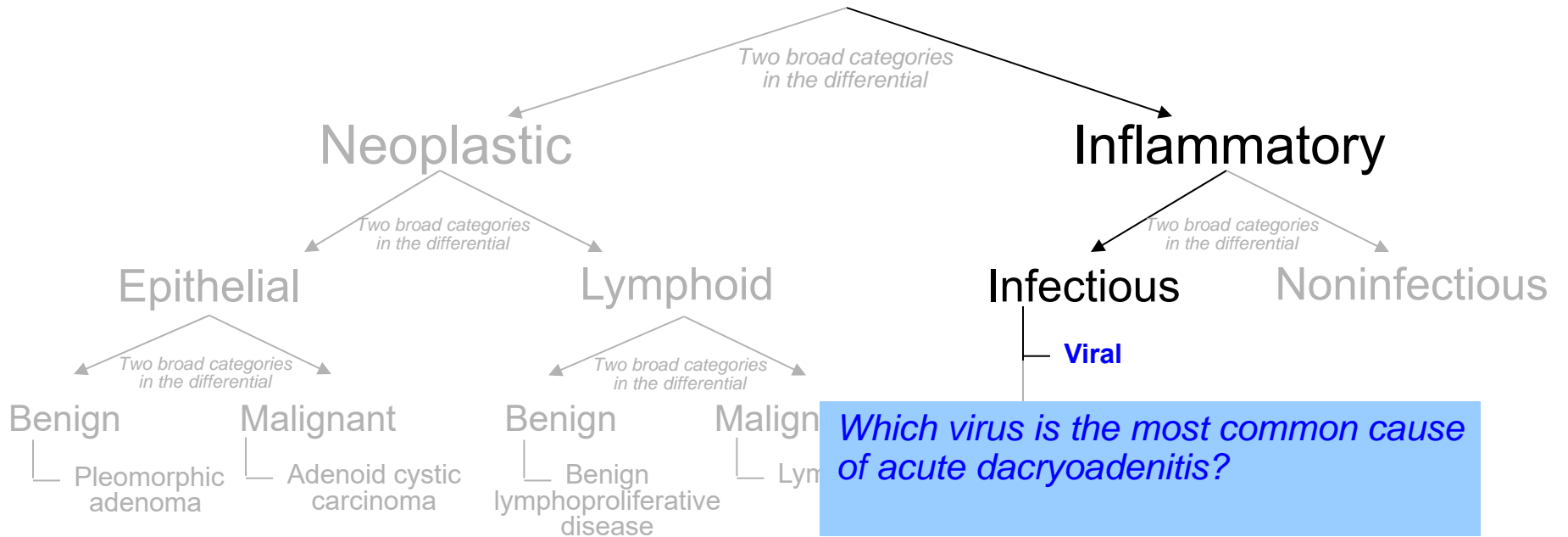
Enlarged lacrimal gland

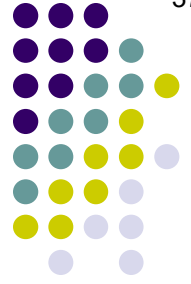




Lacrimal Gland Enlargement

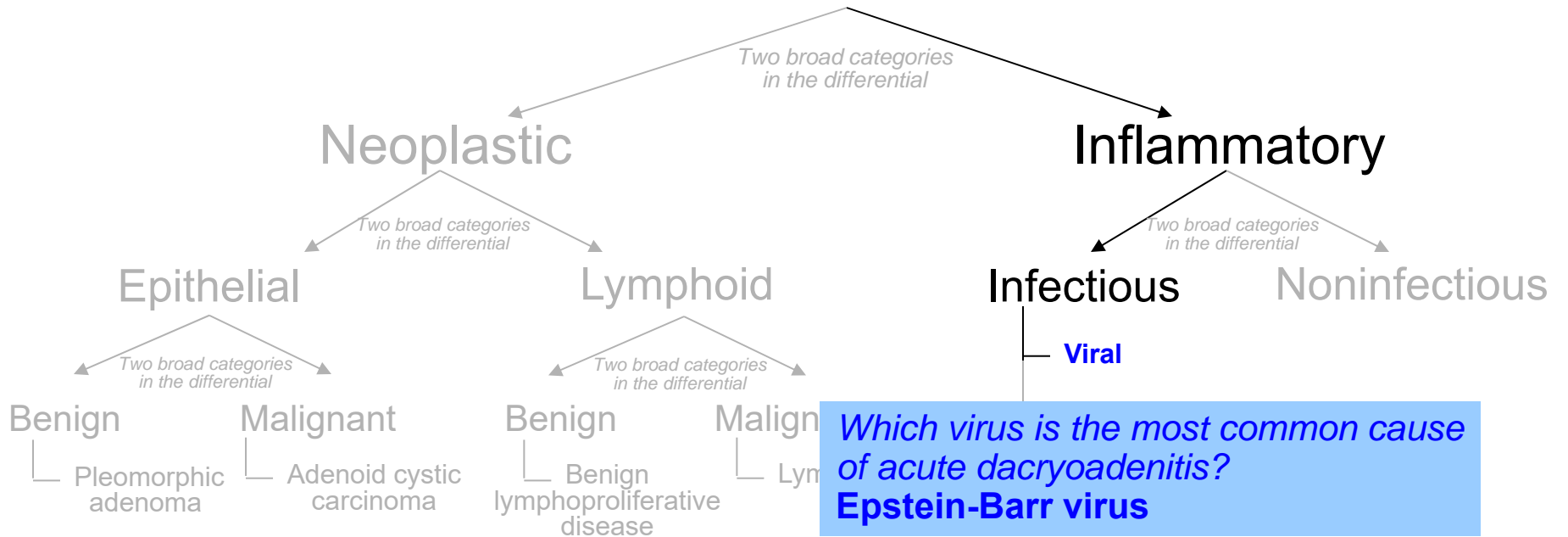
Enlarged lacrimal gland

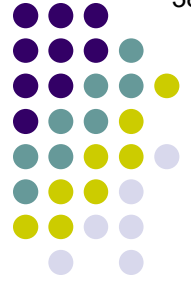




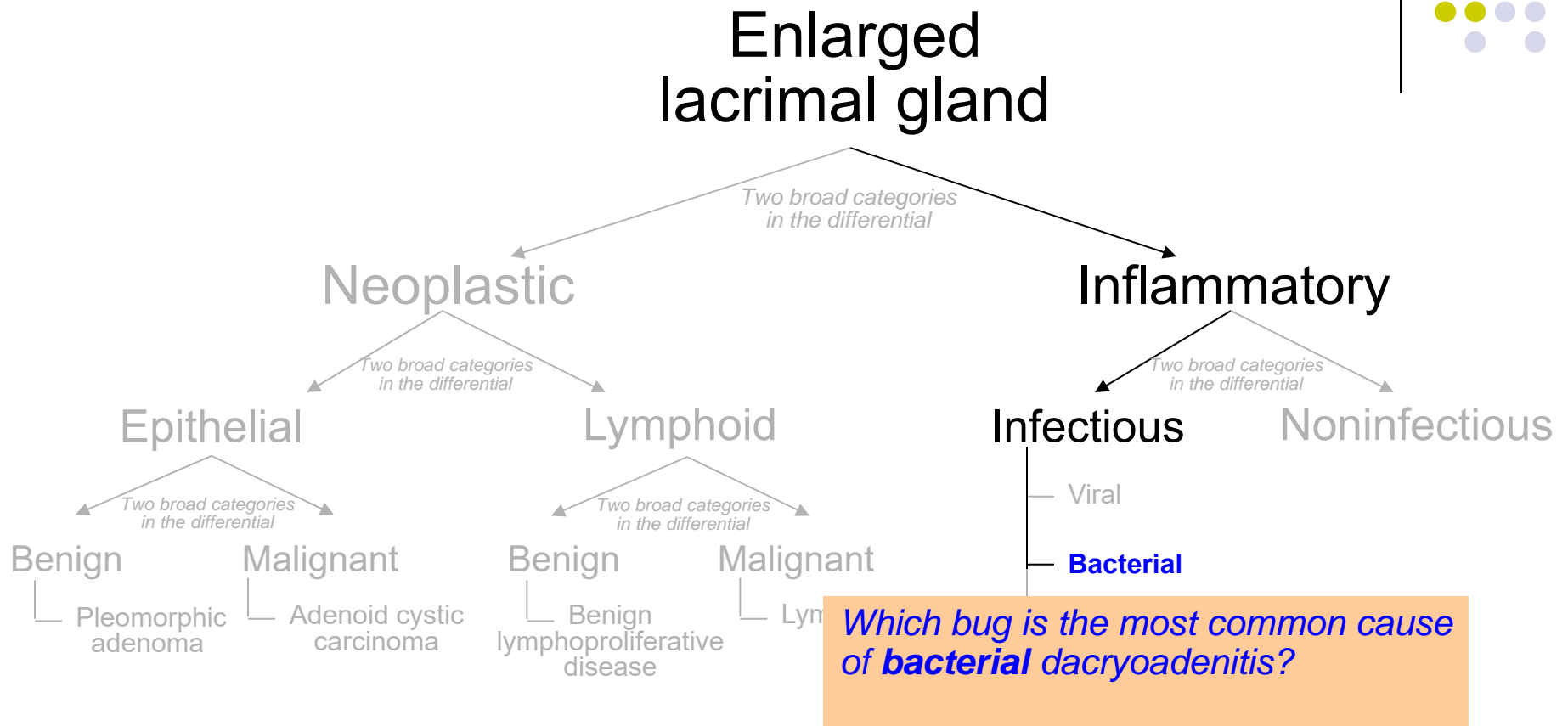
Lacrimal Gland Enlargement

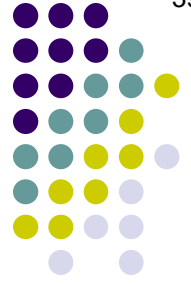
Enlarged lacrimal gland





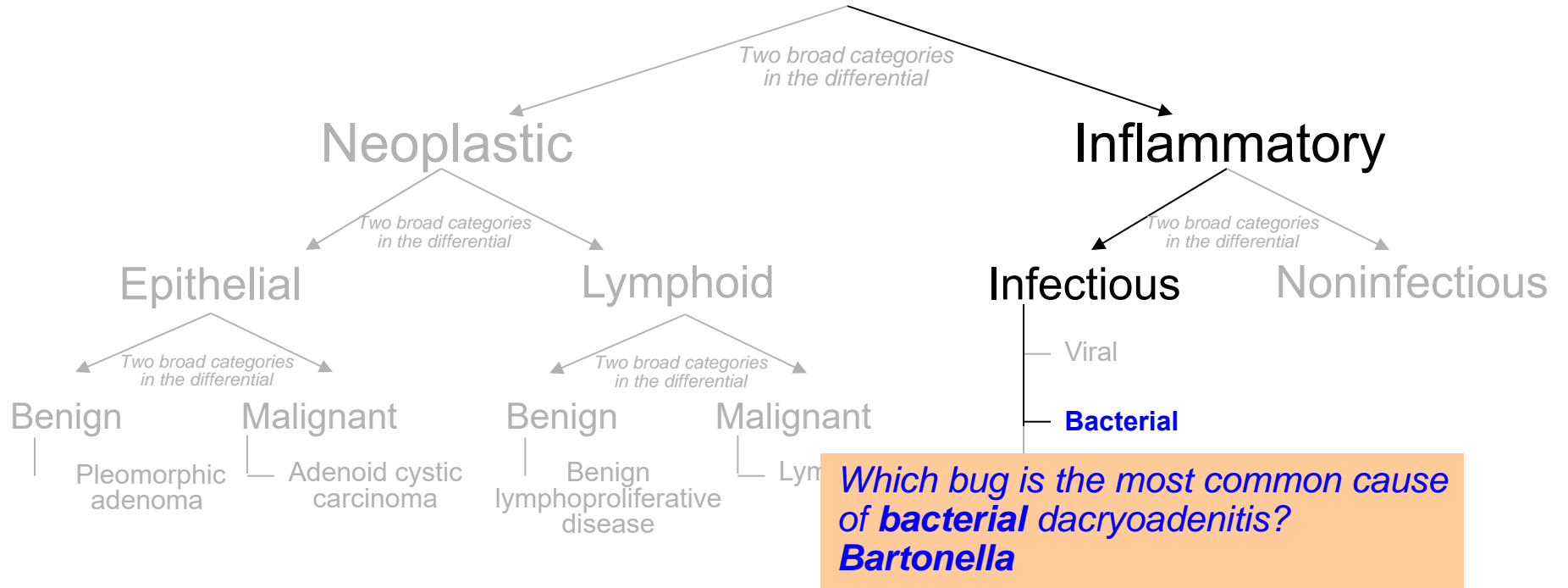
Lacrimal Gland Enlargement

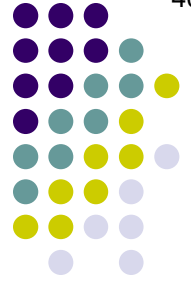




Lacrimal Gland Enlargement

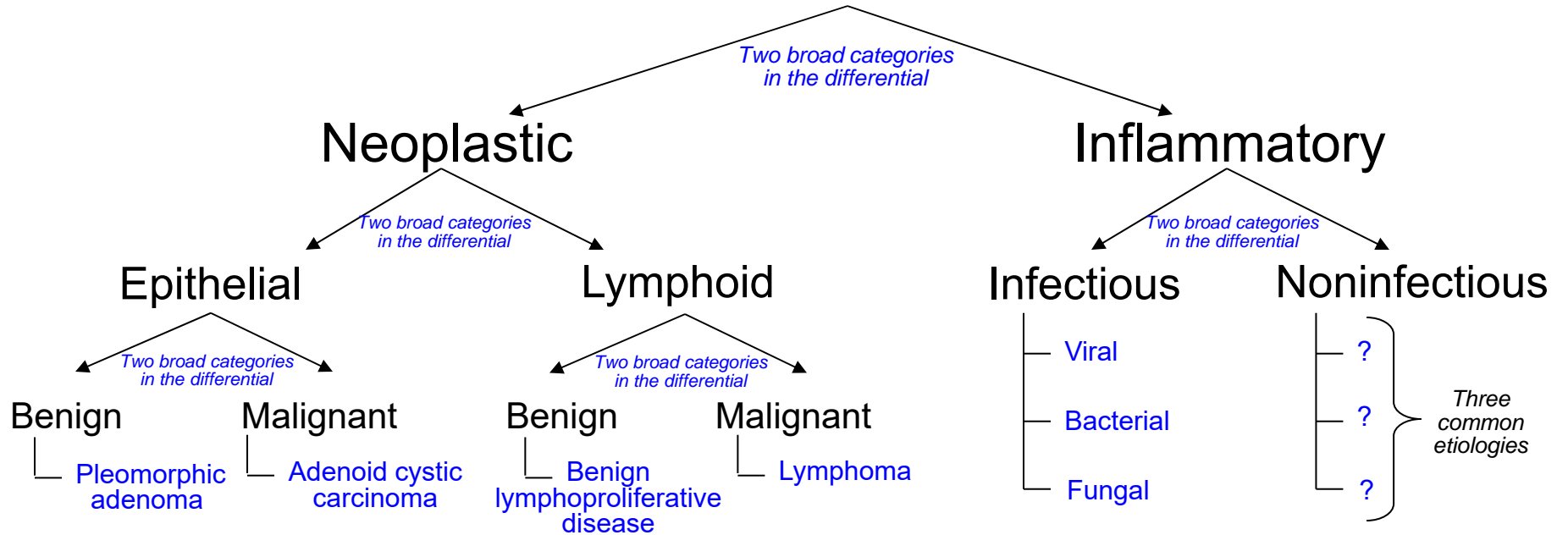
Enlarged lacrimal gland

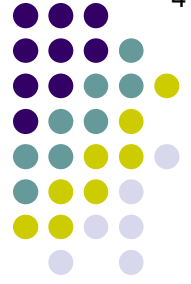




Lacrimal Gland Enlargement

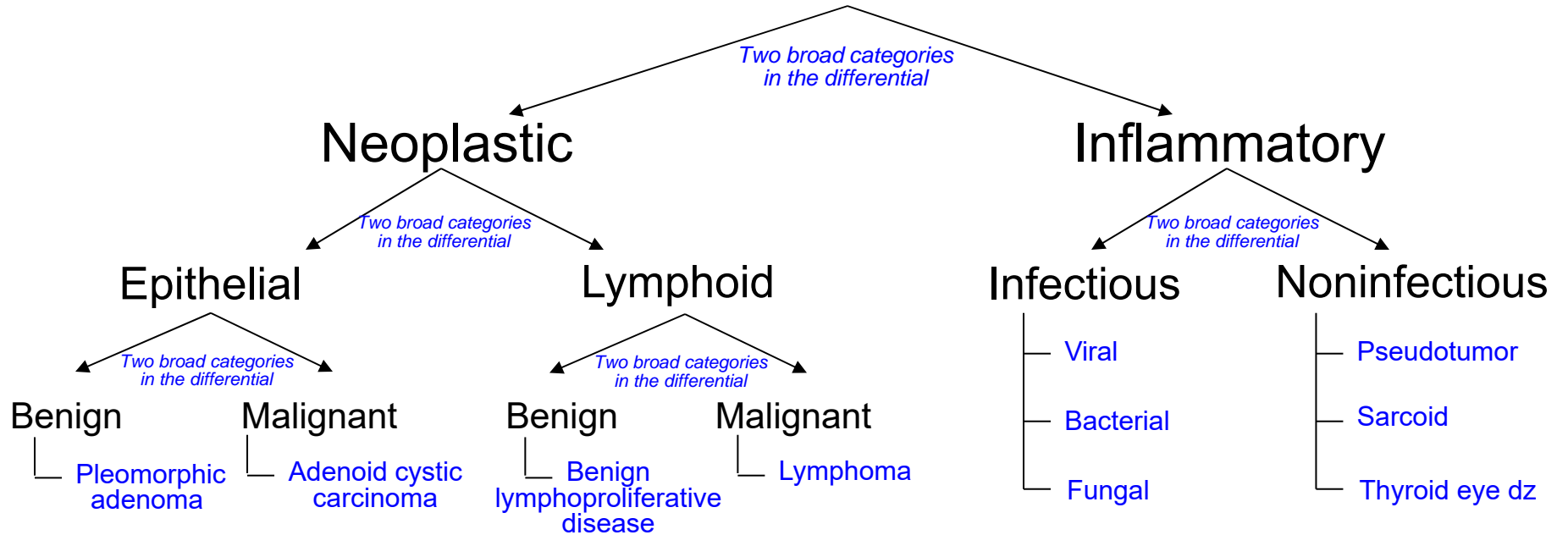
Enlarged lacrimal gland

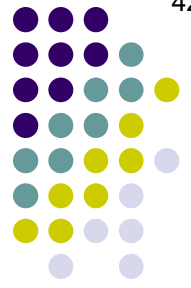




Lacrimal Gland Enlargement

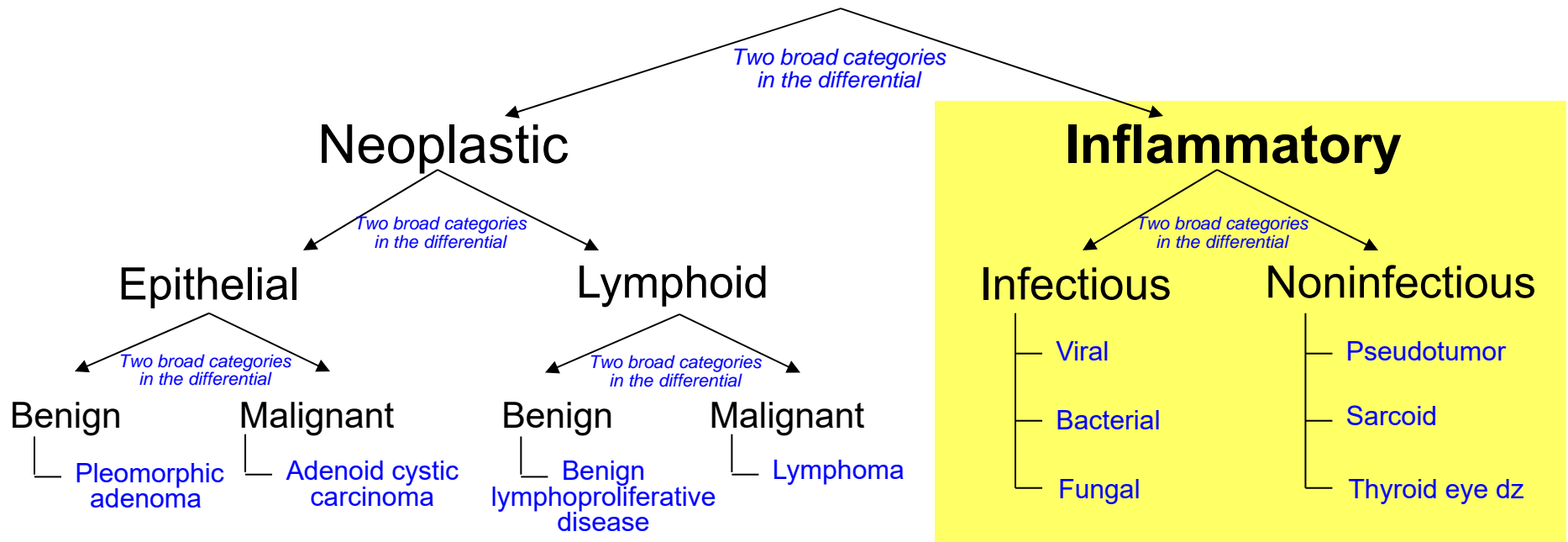
Enlarged lacrimal gland





Lacrimal Gland Enlargement

Enlarged lacrimal gland

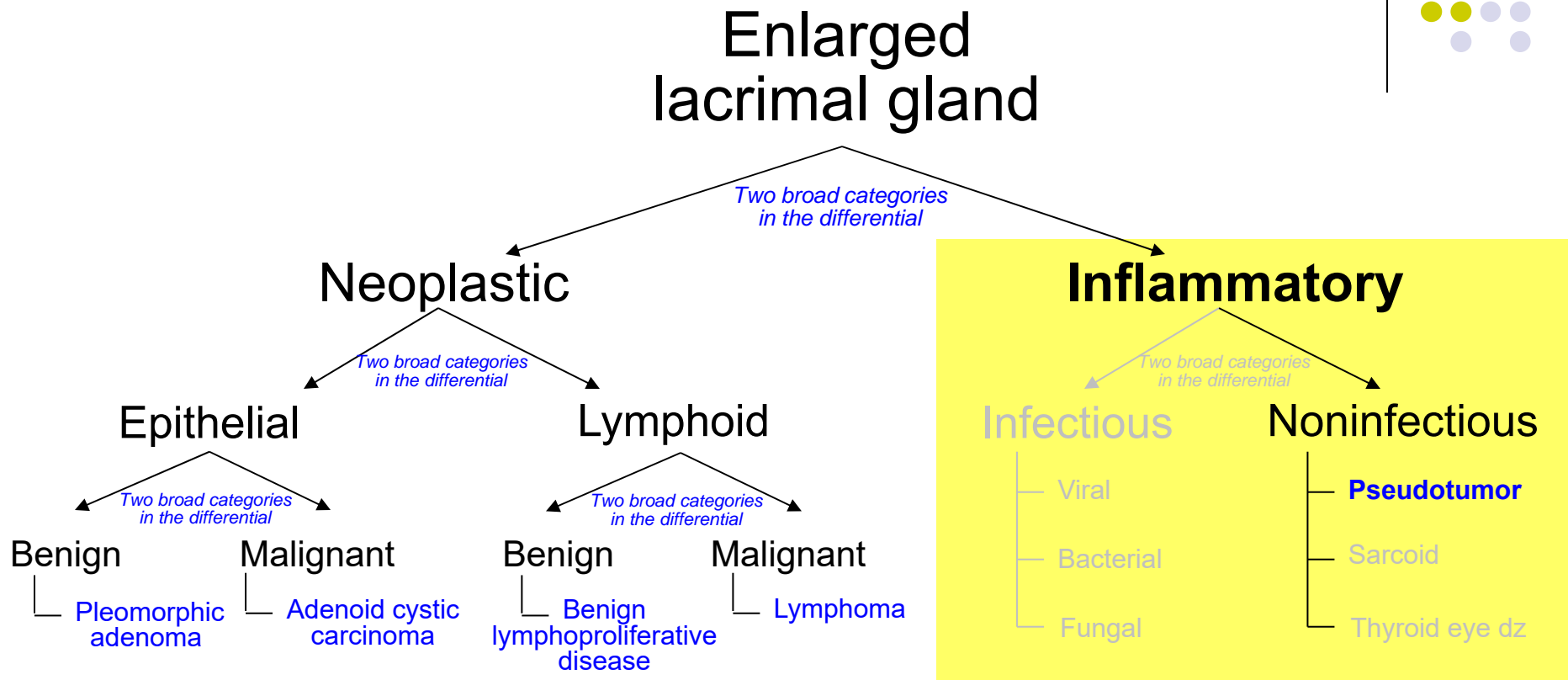


Regarding lacrimal gland enlargement, the *very general rule of thumb* is this:

--If the enlargement occurs in an **inflammatory** context, think two words first.

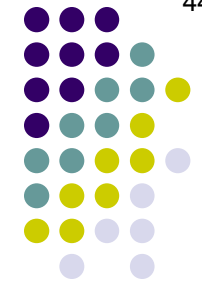


Lacrimal Gland Enlargement



Regarding lacrimal gland enlargement, the *very general rule of thumb* is this:

--If the enlargement occurs in an **inflammatory** context, think **orbital pseudotumor** first.



Lacrimal Gland Enlargement

Enlarged lacrimal gland

Two broad categories in the differential

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Two broad categories in the differential

Epithelial

Two broad categories in the differential

Benign

Pleomorphic adenoma

Malignant

Adenoid cystic carcinoma

Lymphoid

Two broad categories in the differential

Benign

Benign lymphoproliferative disease

Malignant

Lymphoma

Inflammatory

Two broad categories in the differential

Infectious

Viral

Bacterial

Fungal

Noninfectious

Pseudotumor

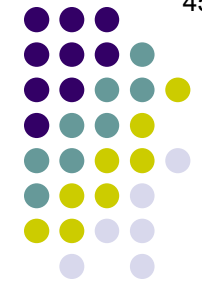
Sarcoid

Thyroid eye dz

Regarding lacrimal gland enlargement, the *very general rule of thumb* is this:

--If the enlargement occurs in an **inflammatory** context, think **orbital pseudotumor** first.

--If the enlargement occurs in a **noninflammatory** context, think two other words first.



Lacrimal Gland Enlargement

Enlarged lacrimal gland

Two broad categories in the differential

Neoplastic

Two broad categories in the differential

Epithelial

Two broad categories in the differential

Benign

Pleomorphic adenoma

Malignant

Adenoid cystic carcinoma

Lymphoid

Two broad categories in the differential

Benign

Benign lymphoproliferative disease

Malignant

Lymphoma

Inflammatory

Two broad categories in the differential

Infectious

Viral

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Fungal

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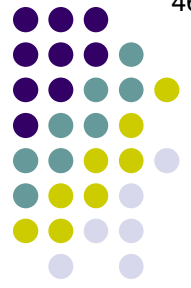
Sarcoid

Thyroid eye dz

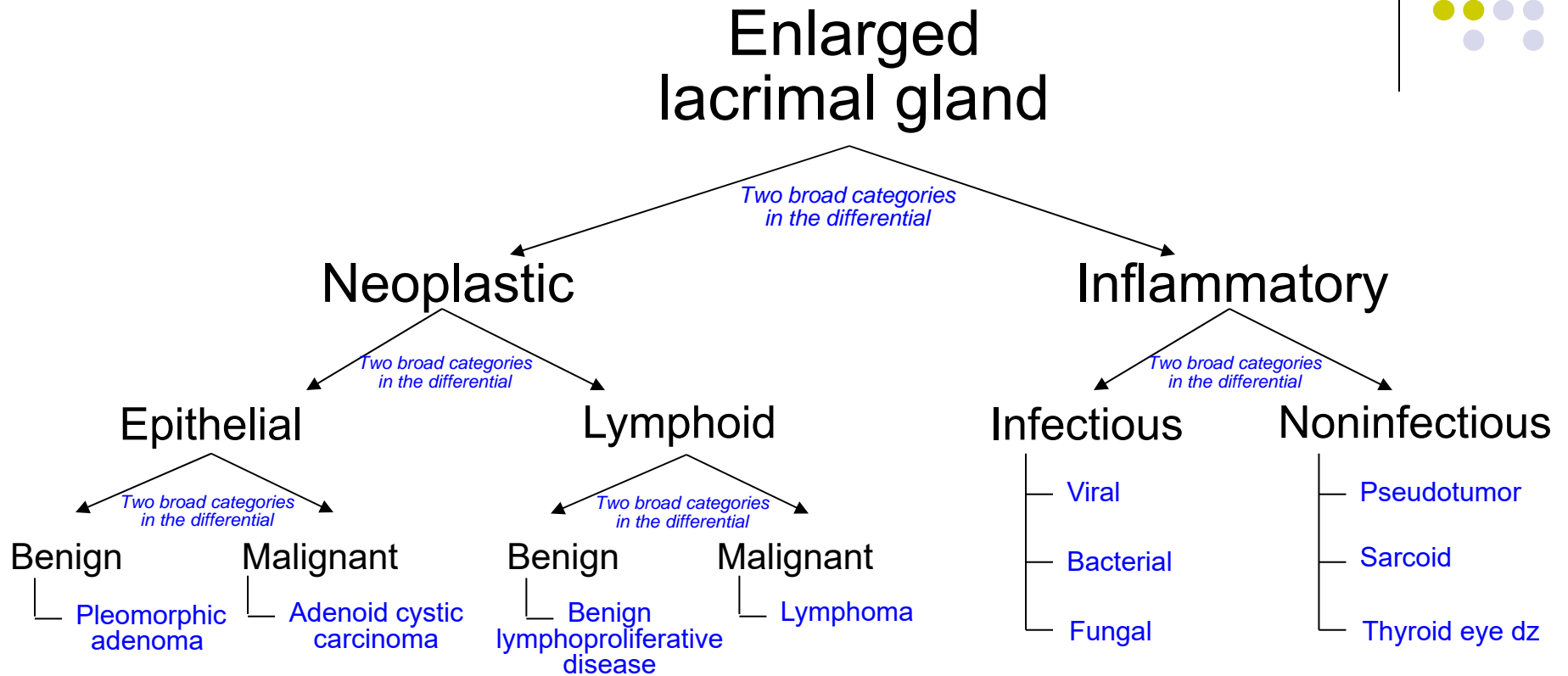
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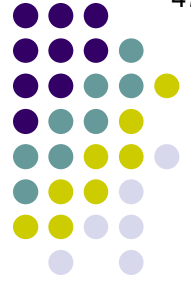
--If the enlargement occurs in a **noninflammatory** context, think **lymphoproliferative disease** first.



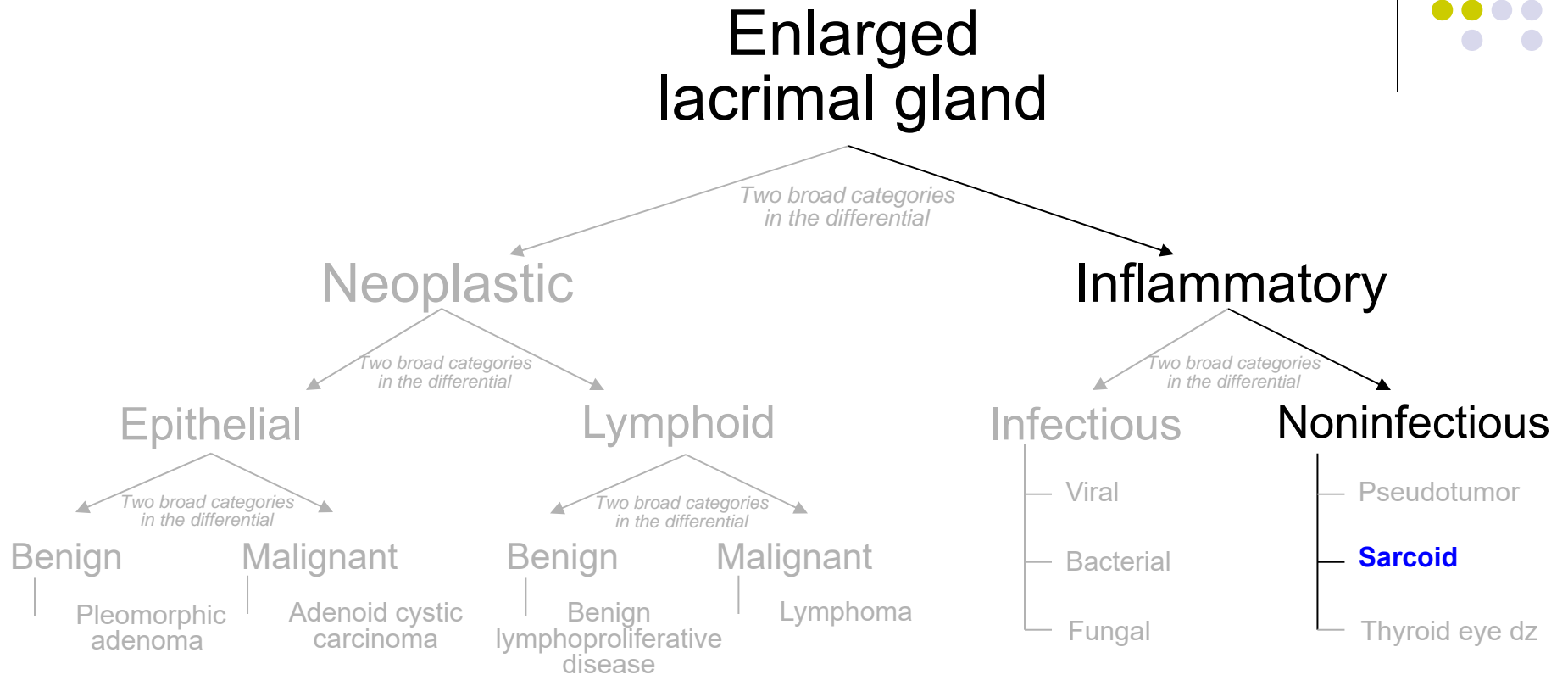
Lacrimal Gland Enlargement



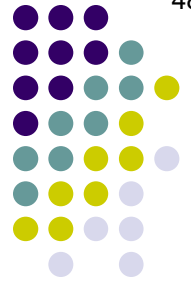
*If a pt presents with **bilateral and symmetrical** lacrimal gland enlargement, which condition is the most likely cause?*



Lacrimal Gland Enlargement



*If a pt presents with **bilateral and symmetrical** lacrimal gland enlargement, which condition is the most likely cause? **Sarcoid***



Lacrimal Gland Enlargement

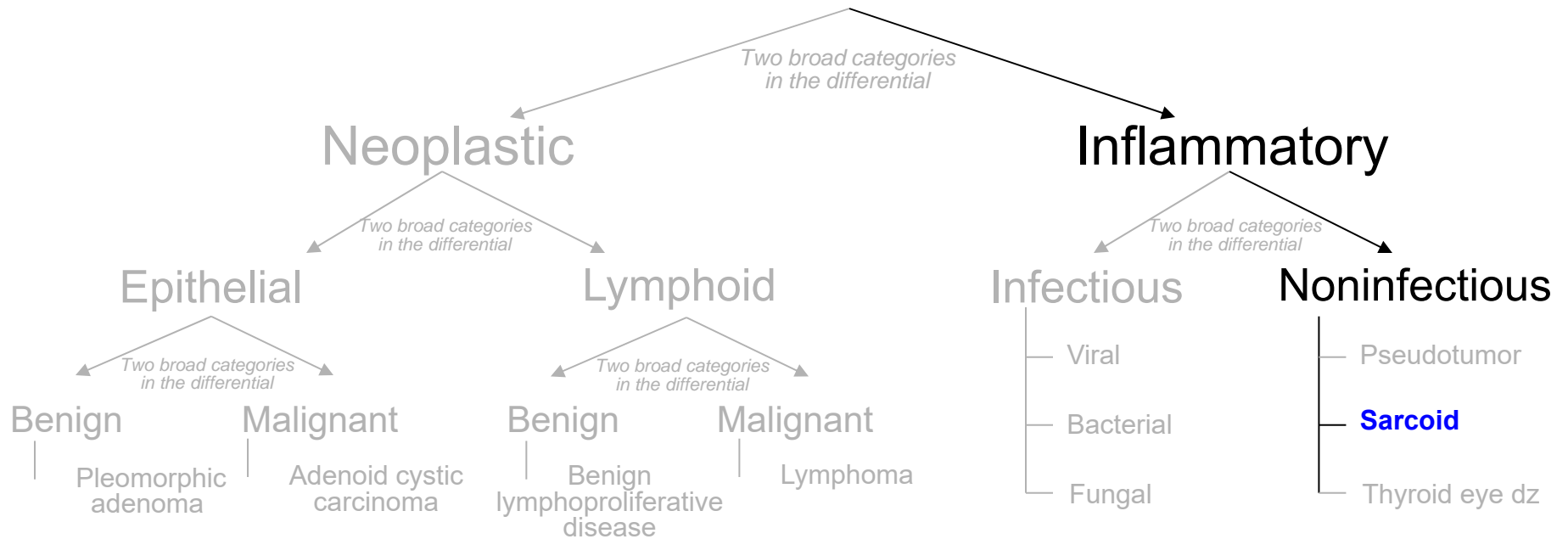


Bilateral lacrimal gland enlargement in sarcoid



Lacrimal Gland Enlargement

Enlarged lacrimal gland



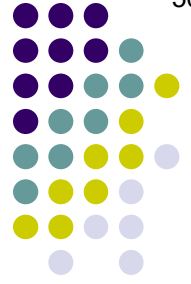
*If a pt presents with **bilateral and symmetrical** lacrimal gland enlargement, which condition is the most likely cause? **Sarcoid***



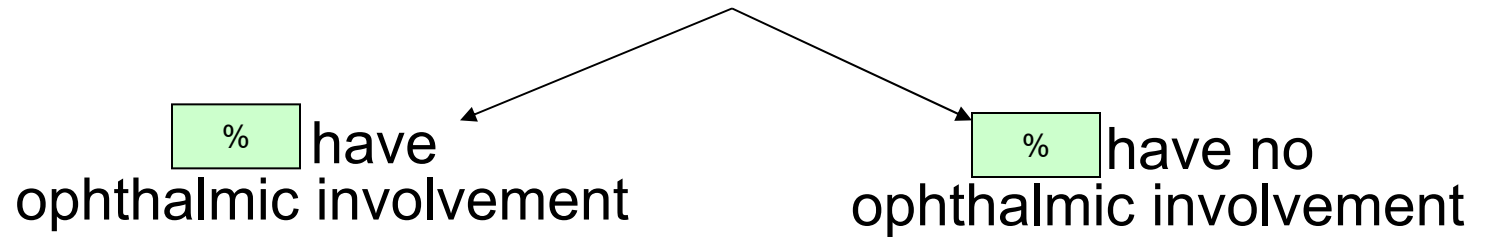
(Sarcoid-induced lac gland enlargement gets its own set of slides...)

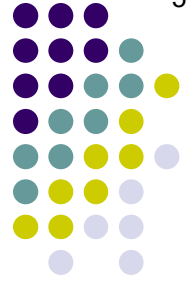


Q

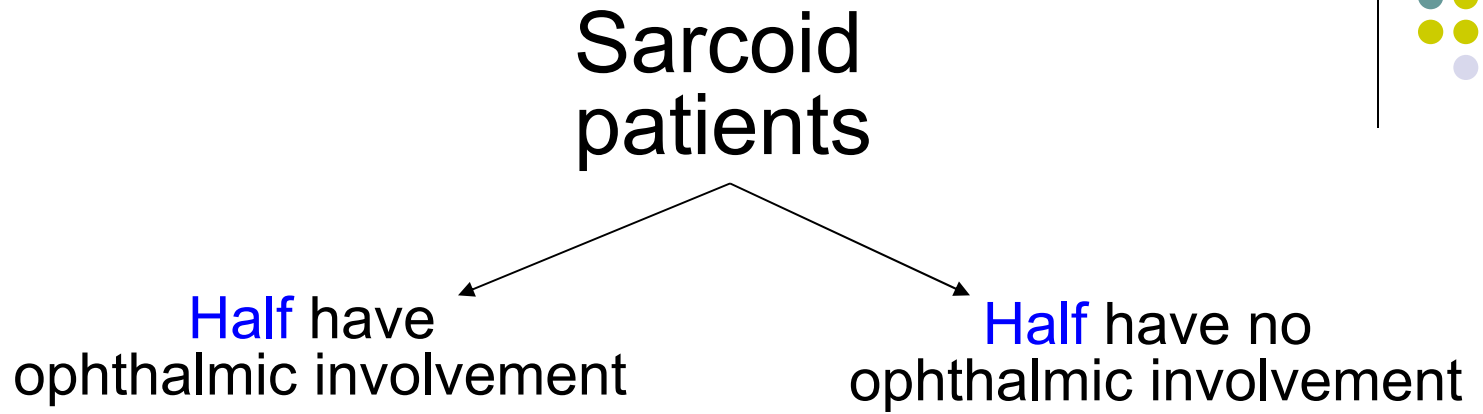


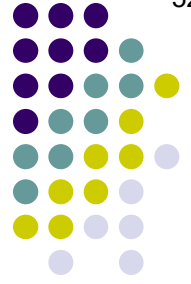
Sarcoid patients



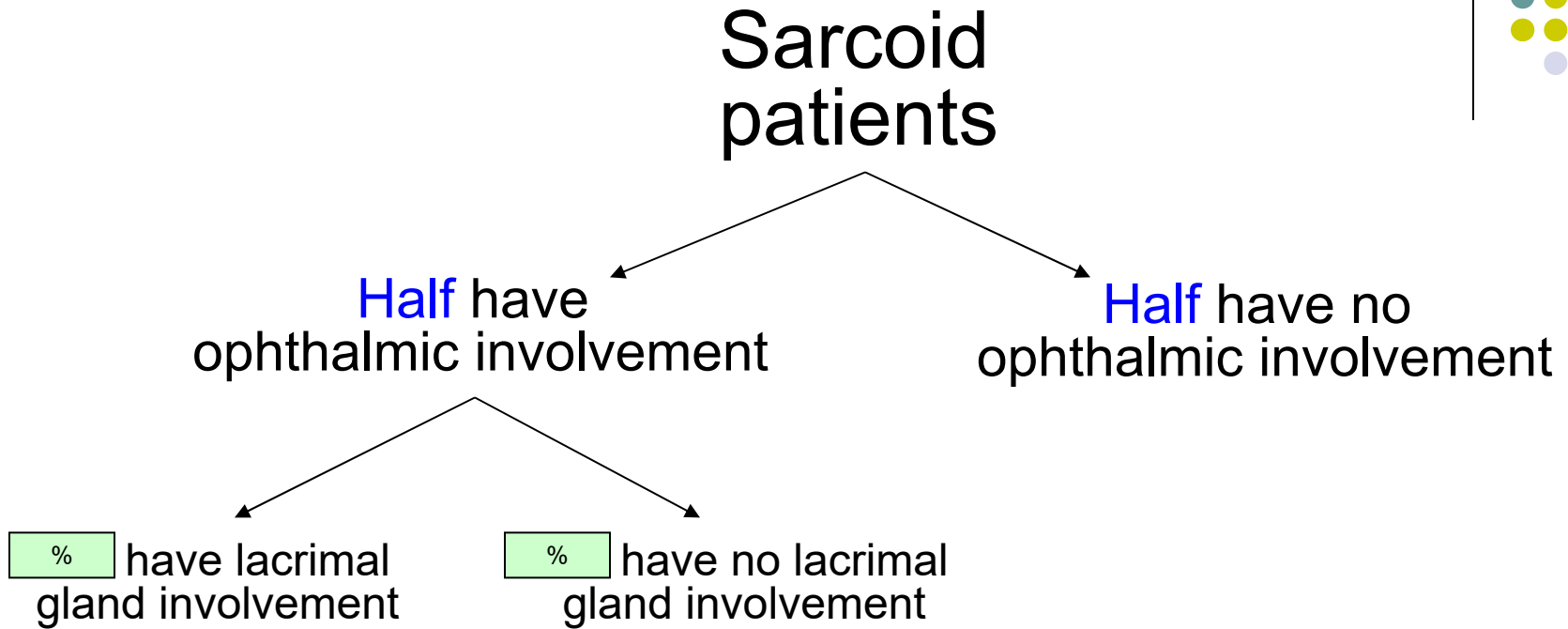


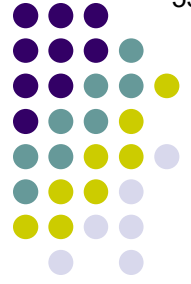
A



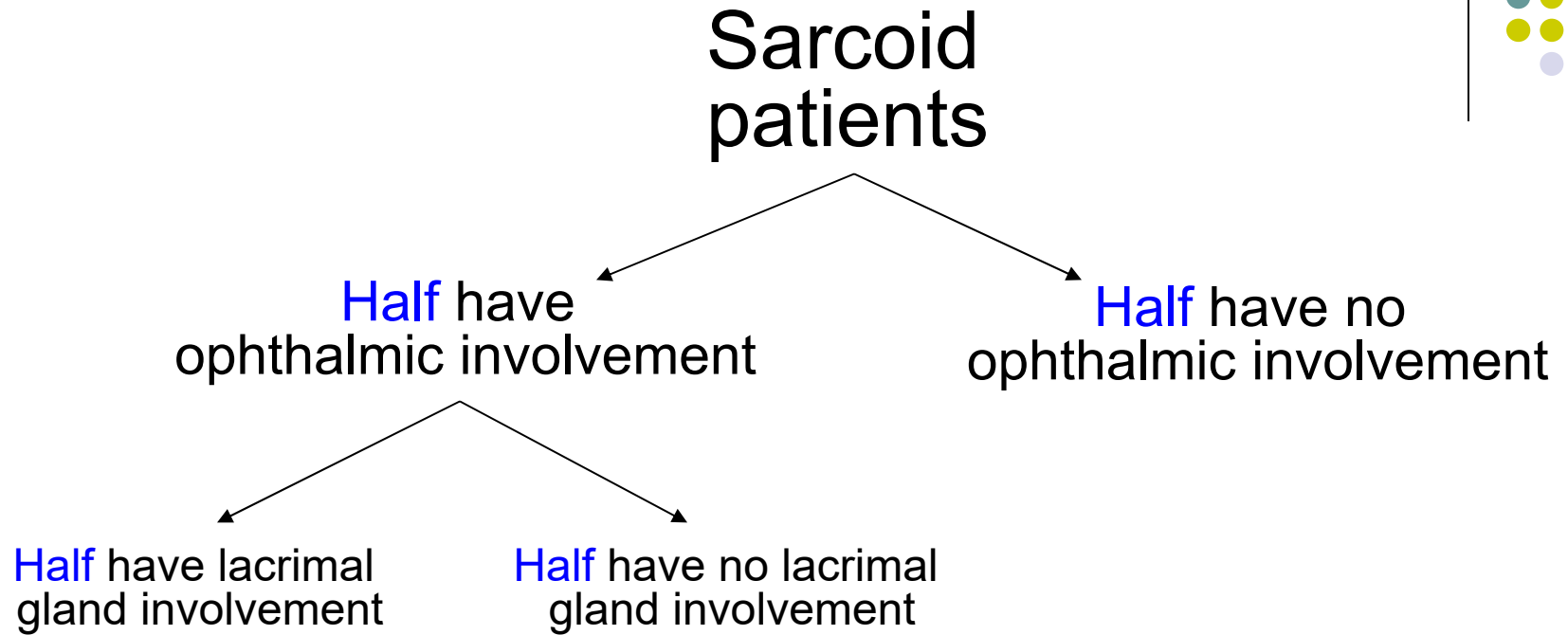


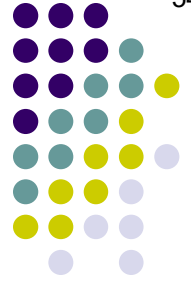
Q



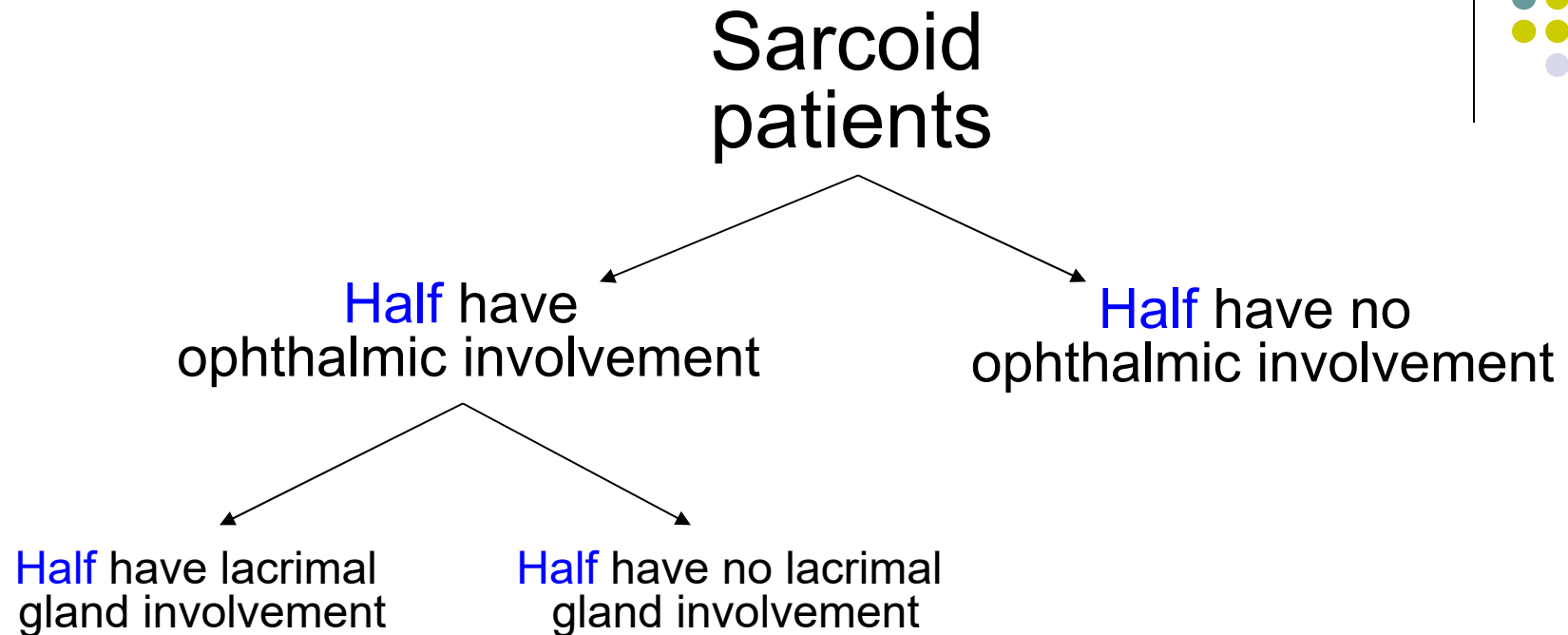


A

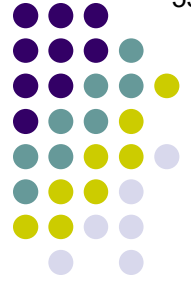
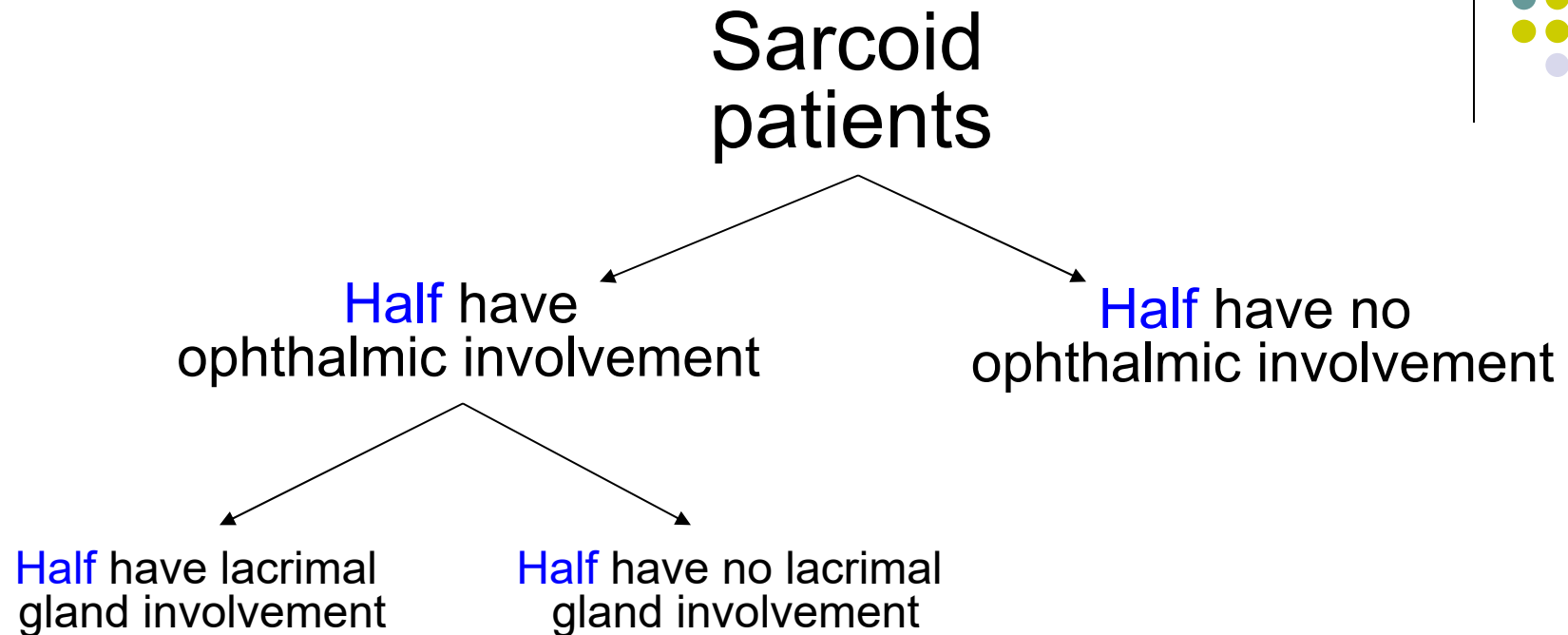




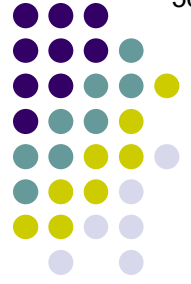
Q



Enlargement of the lacrimal and salivary glands + keratoconjunctivitis sicca = eponym **syndrome**

**A**

Enlargement of the lacrimal and salivary glands + keratoconjunctivitis sicca = **Mikulicz syndrome**



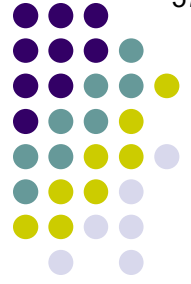
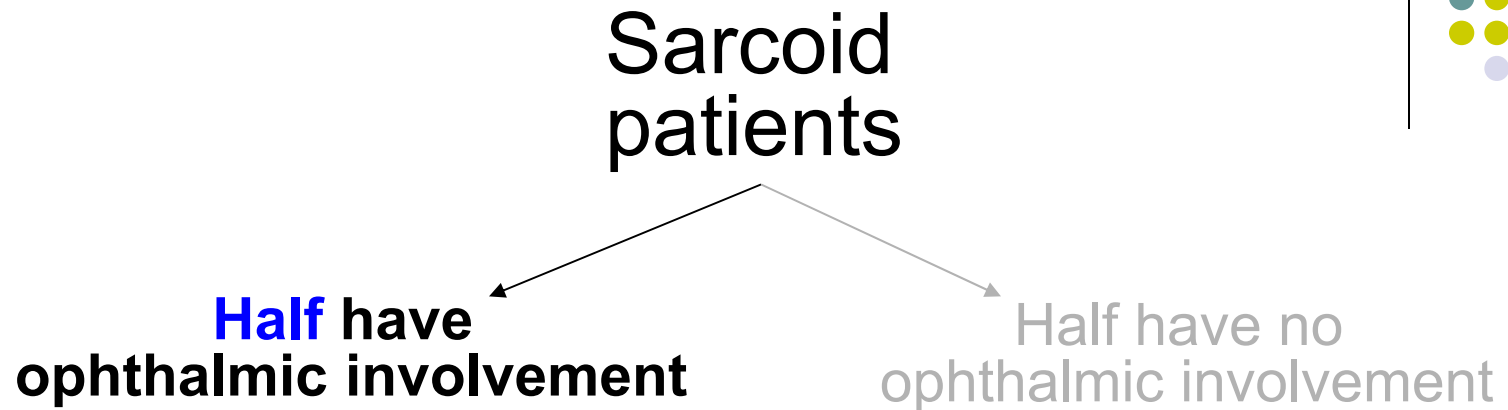
Q

Sarcoid patients

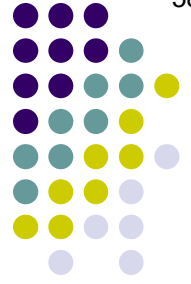
Half have
ophthalmic involvement

Half have no
ophthalmic involvement

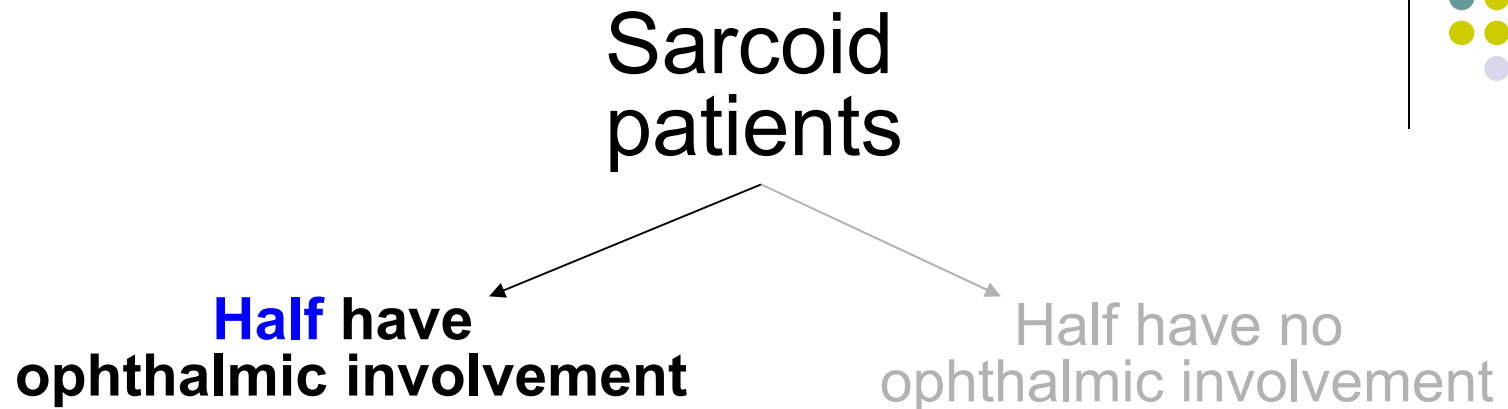
For what population is the incidence of ophthalmic involvement far higher--around 90%?

**A**

*For what population is the incidence of ophthalmic involvement far higher--around 90%? Very young (<4 years old) children, in whom it is known as **early-onset sarcoid**.*



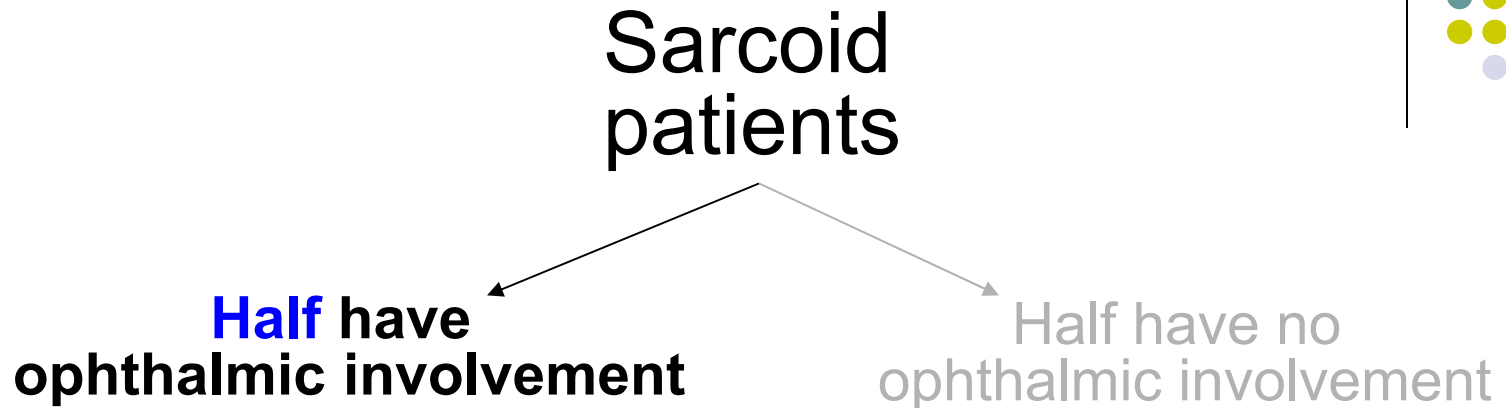
Q



*For what population is the incidence of ophthalmic involvement far higher--around 90%? Very young (<4 years old) children, in whom it is known as **early-onset sarcoid**.*

Early-onset sarcoid presents classically with a triad of signs/symptoms—what are they?

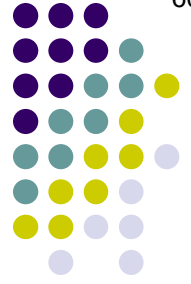
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**A**

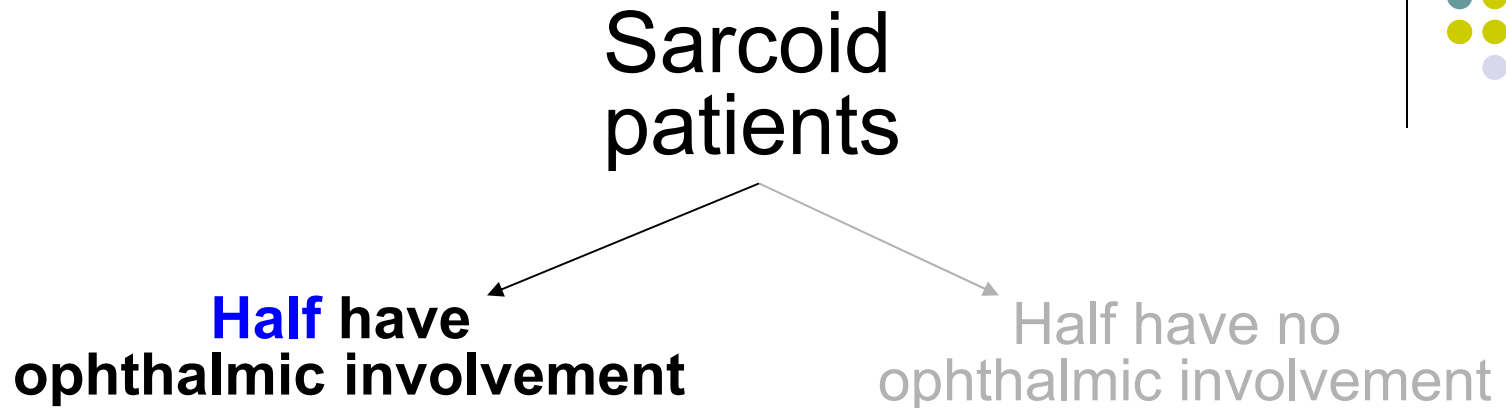
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- Uveitis**
- Arthritis**
- Rash**



Q

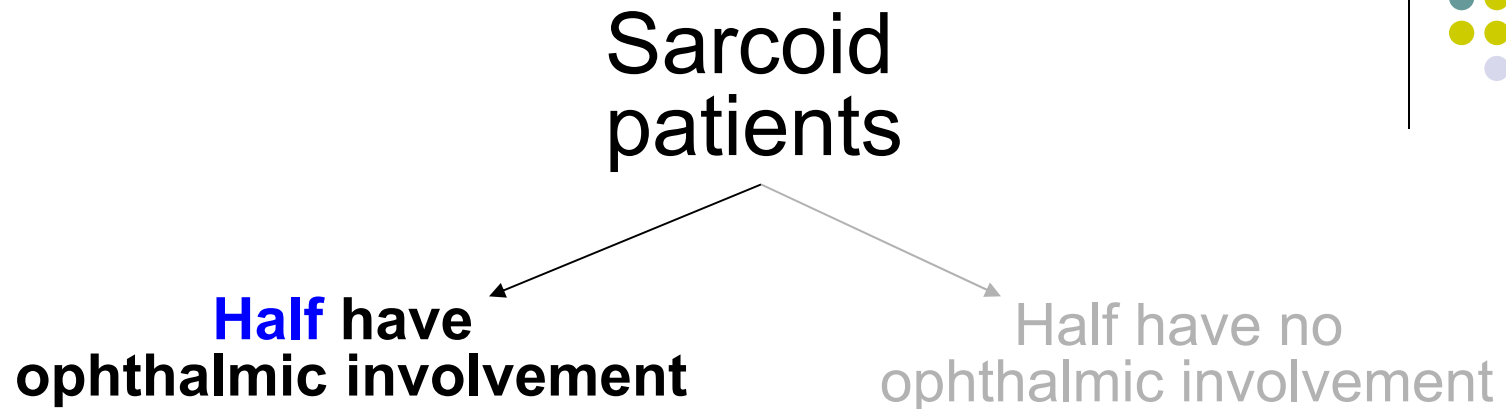


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Early-onset sarcoid is difficult to distinguish from what other immunologic dz of childhood?

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Early-onset sarcoid presents classically with a triad of signs/symptoms—what are they?
--**Uveitis**
--**Arthritis**
--**Rash**

*Early-onset sarcoid is difficult to distinguish from what other immunologic dz of childhood?
JRA--juvenile rheumatoid arthritis (aka juvenile idiopathic arthritis, JIA)*