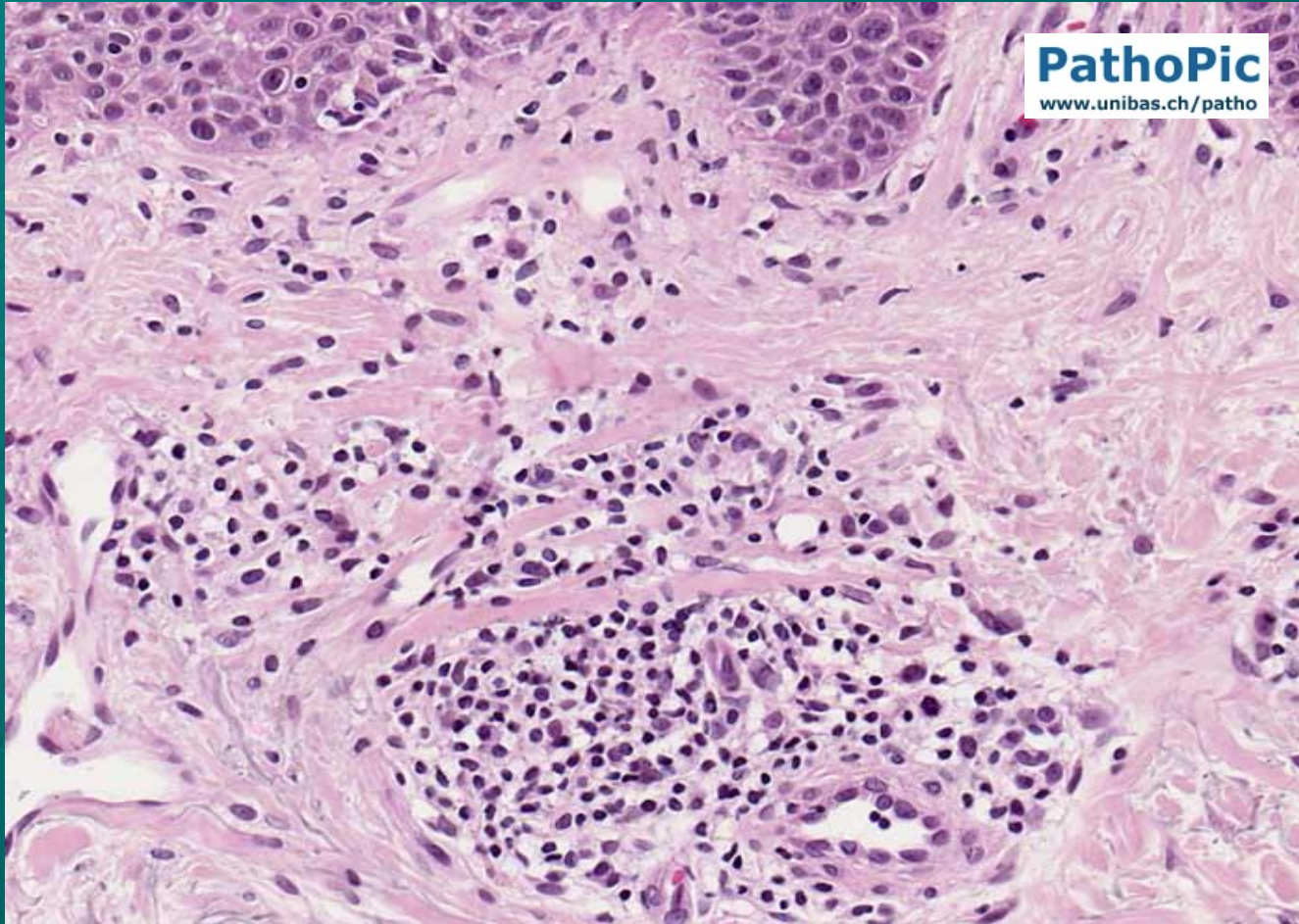


# INFLAMMATIA CRONICA



<http://alf3.urz.unibas.ch/pathopic/e/getpic-fra.cfm?id=7061>

Se poate dezvolta prin:

❑ **cronicizarea inflamatiei acute** ← raspuns inflamator incapabil sa elimine agentul nociv sau sa refaca tesuturile alterate.

Ex: - pneumonie – distructii tisulare extensive →  
cavitati cu persistenta inflamatiei → abces  
pulmonar cronic;

❑ **raspuns imun la un antigen strain**

**Celulele caracteristice inflamatiei cronice pot sa apara si in:**

- infectii virale
- boli autoimune
- infectii parazitare
- tumori maligne.



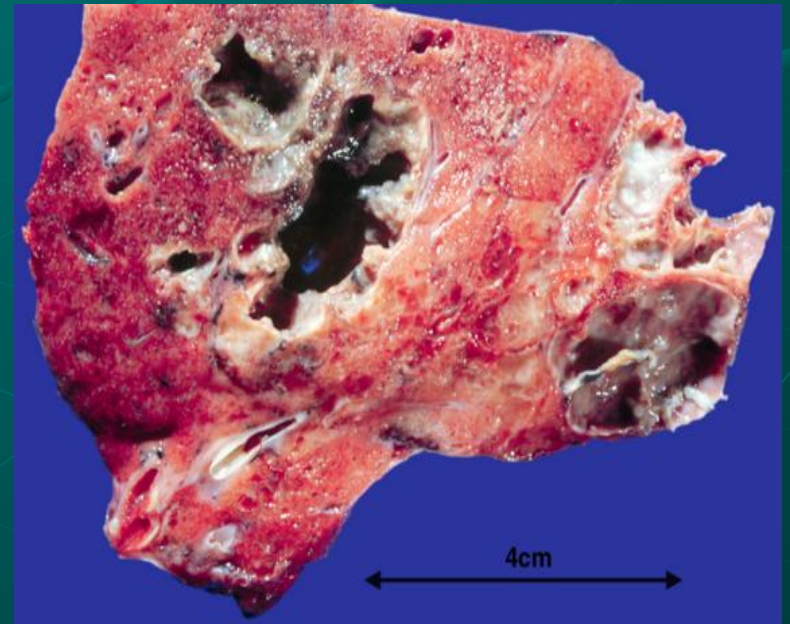
# INFLAMMATIA CRONICA

## ● Abces pulmonar cronic



PathoPic  
www.unibas.ch/patho

<http://alf3.urz.unibas.ch/pathopic/e/getpic-fra.cfm?id=9235>



[https://atlases.muni.cz/atlases/virtual\\_microscope/index.html?idx=71676+](https://atlases.muni.cz/atlases/virtual_microscope/index.html?idx=71676+)

# Cauzele inflamatiei cronice

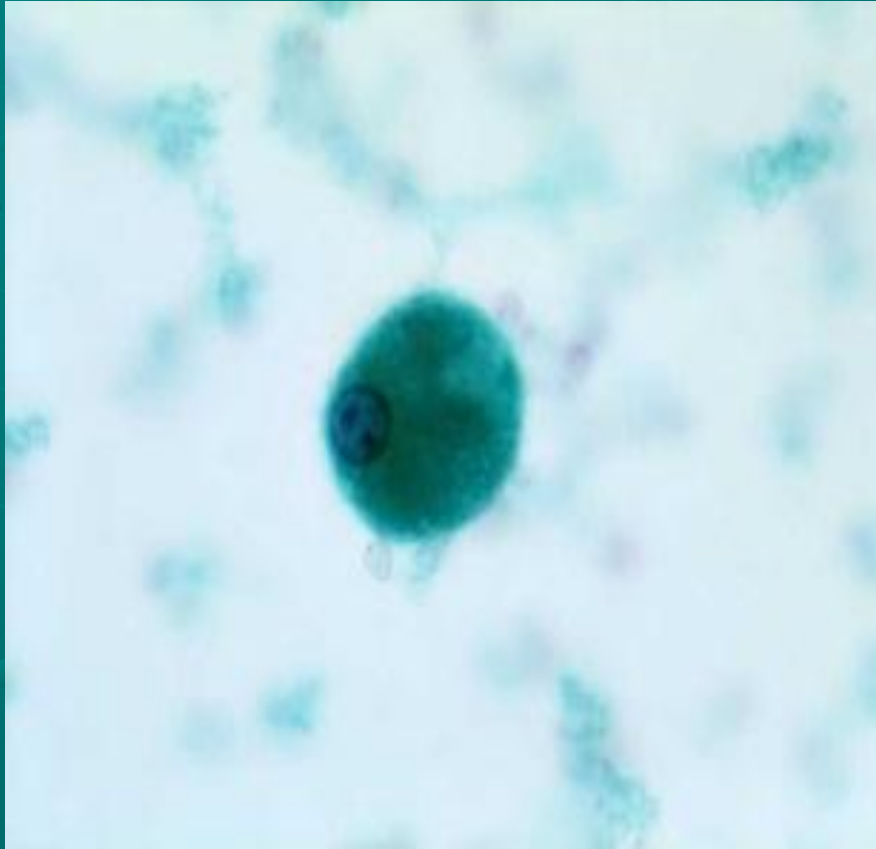
- **infectii persistente:** bacil tuberculos, *Treponema pallidum*, virusuri, fungi, paraziti;
- **expunere prelungita la substante toxice** exogene si endogene: silicoza, ateroscleroza;
- **reactii imune** dezvoltate impotriva propriilor tesuturi (mecanisme autoimune): artrita reumatoida, lupusul eritematos etc;



# Caracterele morfologice ale inflamatiei cronice

- reactii vasculo-exudative mai atenuate;
- proliferarea tesutului de granulat + fenomene **alterative - necroza**;
- celule componente:
  - macrofagele;
  - plasmocitele;
  - limfocitele;
  - eozinofilele;

# Macrofagele



<http://alf3.urz.unibas.ch/pathopic/e/getpic-fra.cfm?id=5539>

- migrarea si diferentierea in tesuturi a monocitelor sanguine circulante (stimuli chemotactici)
- proliferarea macrofagelor tisulare locale
  - produc mediatori inflamatori → leziuni + fibroza
  - regleaza raspunsul limfocitelor la antigeni
  - secreta mediatori → proliferarea si functia fibroblastelor si a celulelor endoteliale

# Limfocitele



<https://simple.wikipedia.org/wiki/Lymphocyte#/media/File:Lymphocyte2.jpg>

- functii vitale in reglarea raspunsului imun mediat umoral si celular:
  - reglarea activitatii macrofagelor;
  - atragerea macrofagelor prin secretia de limfokine;
  - moduleaza producerea de Ac. si citotoxicitatea celulara.



# Plasmocitele

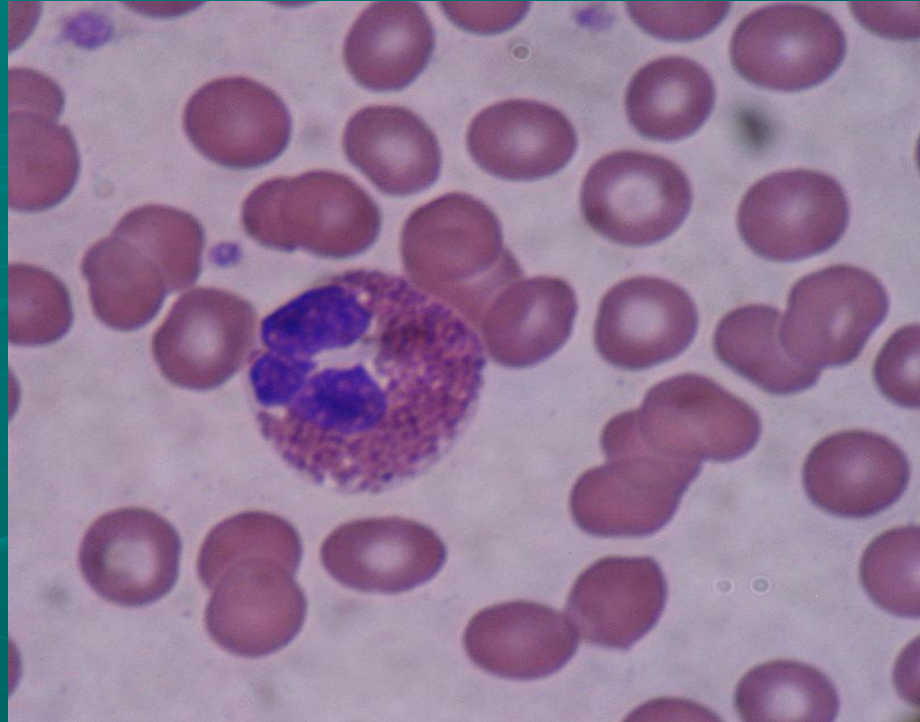


Sursa primara de Ac:

- neutralizarea Ag;
- eliminarea Ag si a particulelor straine;
- citotoxicitatea celulara Ac-dependenta;

<https://fr.wikipedia.org/wiki/Plasmocyte#/media/File:Plasmacell.jpg>

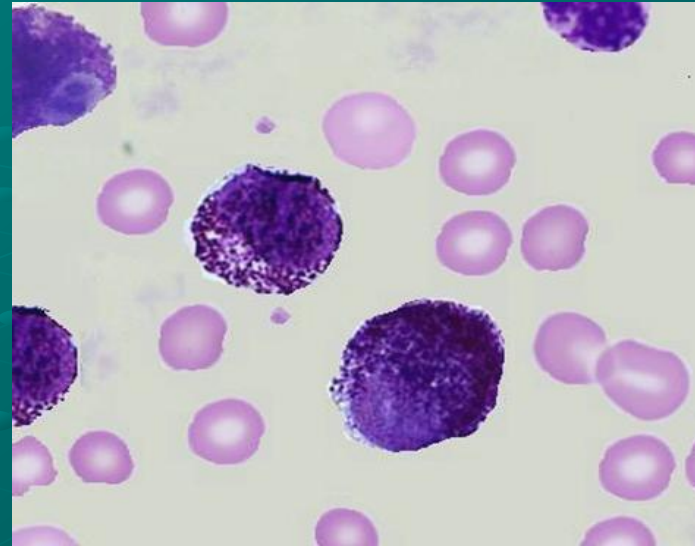
# Eozinofilele



[https://en.wikipedia.org/wiki/Eosinophil\\_granulocyte#/media/File:Eosinophil\\_blood\\_smear.JPG](https://en.wikipedia.org/wiki/Eosinophil_granulocyte#/media/File:Eosinophil_blood_smear.JPG)

- prezente doar ocazional in raspunsul inflamator cronic;
- reactii de tip alergic si in infectii parazitare;

# Mastocitele



[https://en.wikipedia.org/wiki/Mast\\_cell\\_leukemia#/media/File:Mast\\_cell\\_leukemia.jpg](https://en.wikipedia.org/wiki/Mast_cell_leukemia#/media/File:Mast_cell_leukemia.jpg)

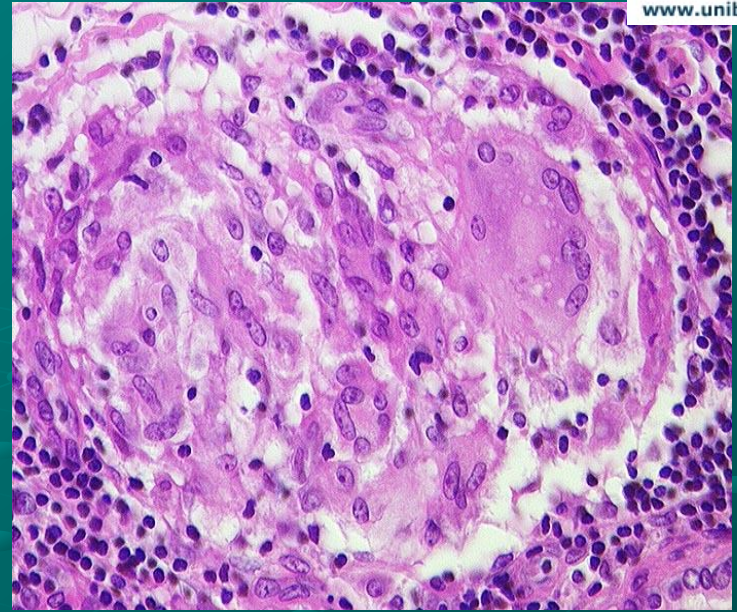
- larg raspandite in tesuturile conjunctive
  - reactii inflamatorii acute
  - reactii inflamatorii cronice → produc citokine care contribuie la aparitia fibrozei.



● **inflamati**a **granulomatoasa** ← aglomerarea macrofagelor in mici noduli;

- granulocitele esueaza in incercarea de a fagocita si digera agentul nociv inflamator;
- macrofagele stocheaza agentul nociv indefinit;
- materialul fagociat si stocat nu poate fi digerat → acumularea macrofagelor in zona respectiva +/- → **celule epitelioid**e

- celulele epitelioid
- celule gigante multinucleate



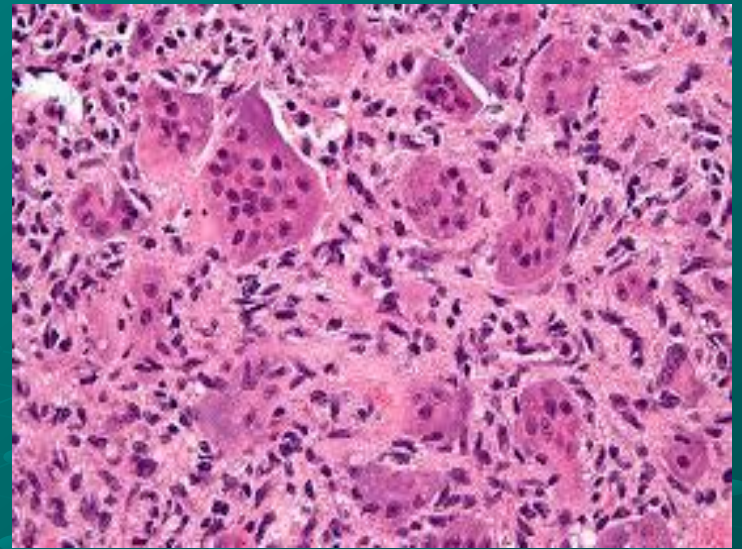
<http://alf3.urz.unibas.ch/pathopic/e/getpic-fra.cfm?id=000706>

- citoplasma mult mai palida decat monocitele si macrofagele tisulare
- ~ celulele epiteliale
- aglomerare de celule epitelioid inconjurate adesea de o coroana de limfocite = **granulom epitelioid**
- celule gigante multinucleate (>50 nuclei separati) ← fuzionarea macrofagelor
- **celula giganta Langhans** - nuclei dispusi in “potcoava”, “coroana” sub forma literei H

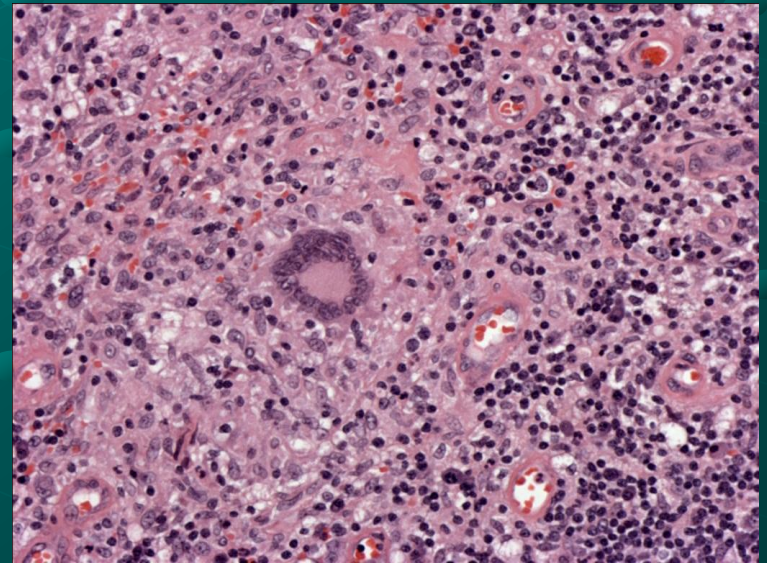


# Celulele gigante multinucleate

- celule inactive functional
- +/- materiale strain nedigerabile/greu digerabile in citoplasma → celule gigante de corp strain (pulberi minerale, fire de sutura, uleiuri etc)



[https://en.wikipedia.org/wiki/Giant-cell\\_tumour\\_of\\_bone#/media/File:Giant\\_cell\\_tumour\\_of\\_bone\\_-\\_very\\_high\\_mag.jpg](https://en.wikipedia.org/wiki/Giant-cell_tumour_of_bone#/media/File:Giant_cell_tumour_of_bone_-_very_high_mag.jpg)



[https://en.wikipedia.org/wiki/Langhans\\_giant\\_cell#/media/File:Granulation\\_tissue\\_containing\\_a\\_poorly\\_formed\\_granuloma\\_with\\_a\\_Langhans\\_giant\\_cell.jpg](https://en.wikipedia.org/wiki/Langhans_giant_cell#/media/File:Granulation_tissue_containing_a_poorly_formed_granuloma_with_a_Langhans_giant_cell.jpg)



# CLASIFICAREA INFLAMATIILOR CRONICE

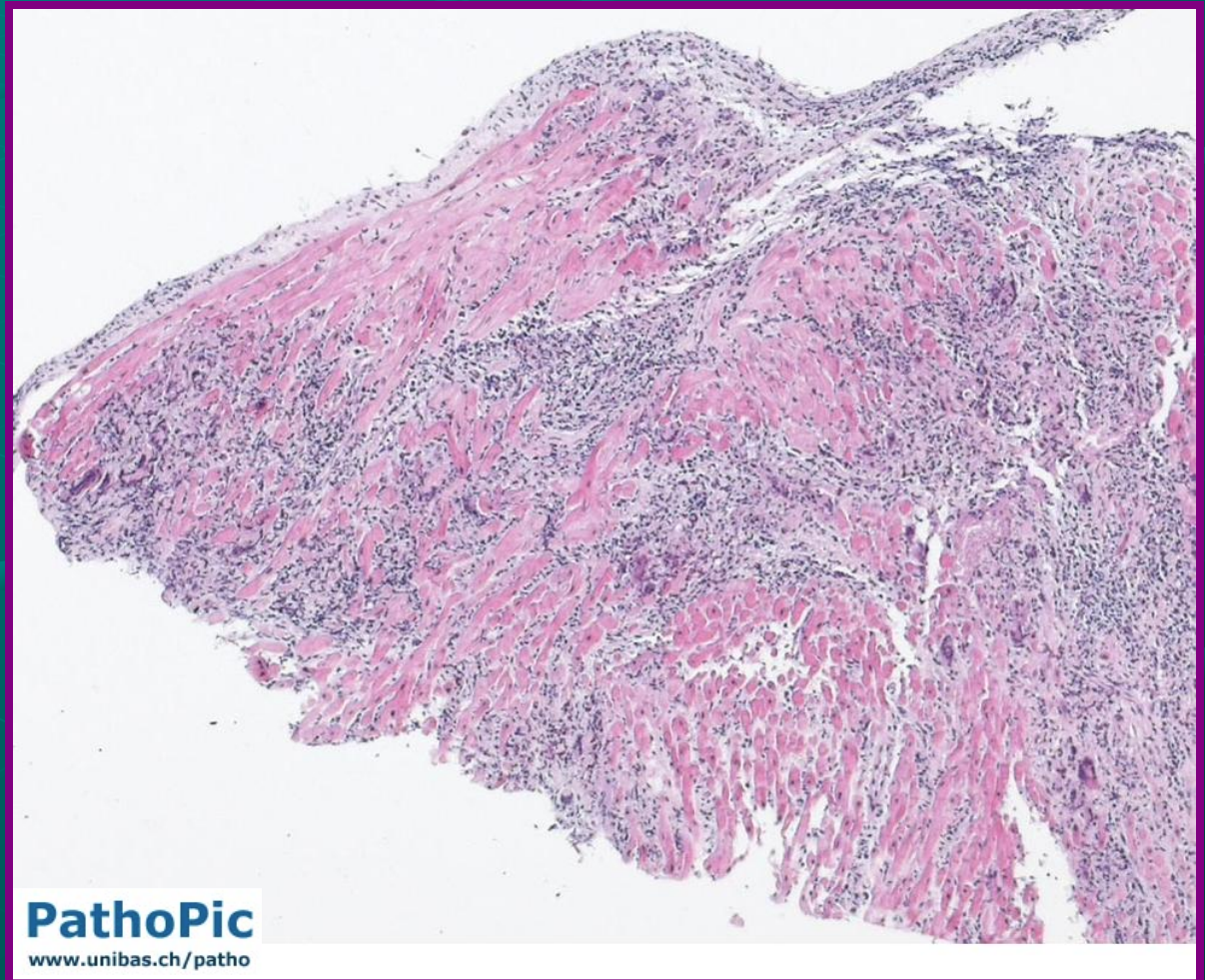
- inflamatii proliferative nespecifice
- inflamatii granulomatoase nespecifice sau cu specificitate discutabila
- inflamatii granulomatoase de corp strain
- inflamatii granulomatoase specifice

# Inflamatiile proliferative nespecifice

- etiologie variata
- tesut de granulatie + reactii alterative si exudative limitate
- evolueaza de obicei spre scleroza cicatriciala
- Ex.:
  - nefrite interstitiale
  - miocardite interstitiale
  - hepatite cronice.

# Inflammatia proliferativa nespecifica

## ● Miocardita interstitiala

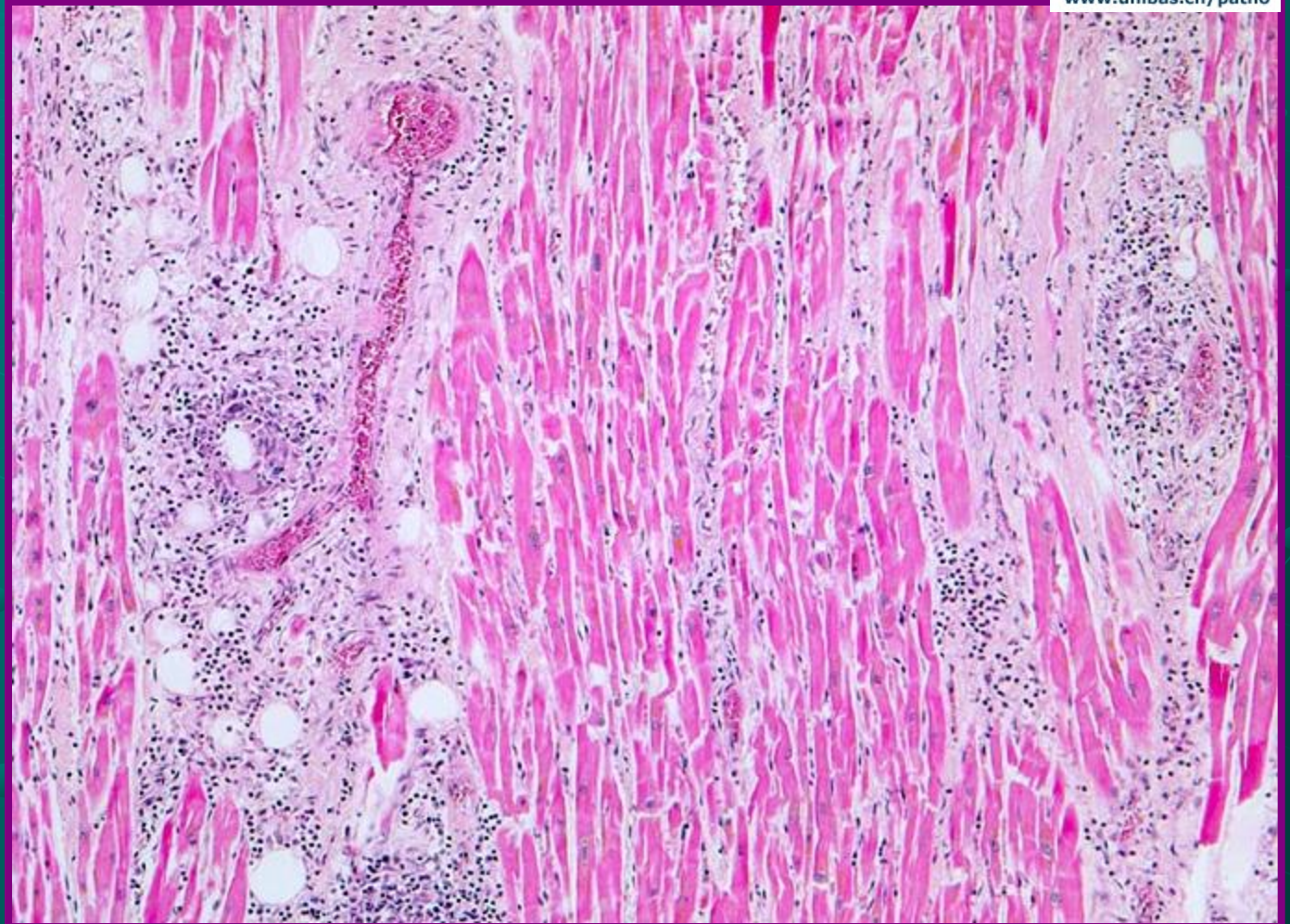




# Inflammatia proliferativa nespecifica

## ● Miocardita interstitialia

PathoPic  
www.unibas.ch/patho

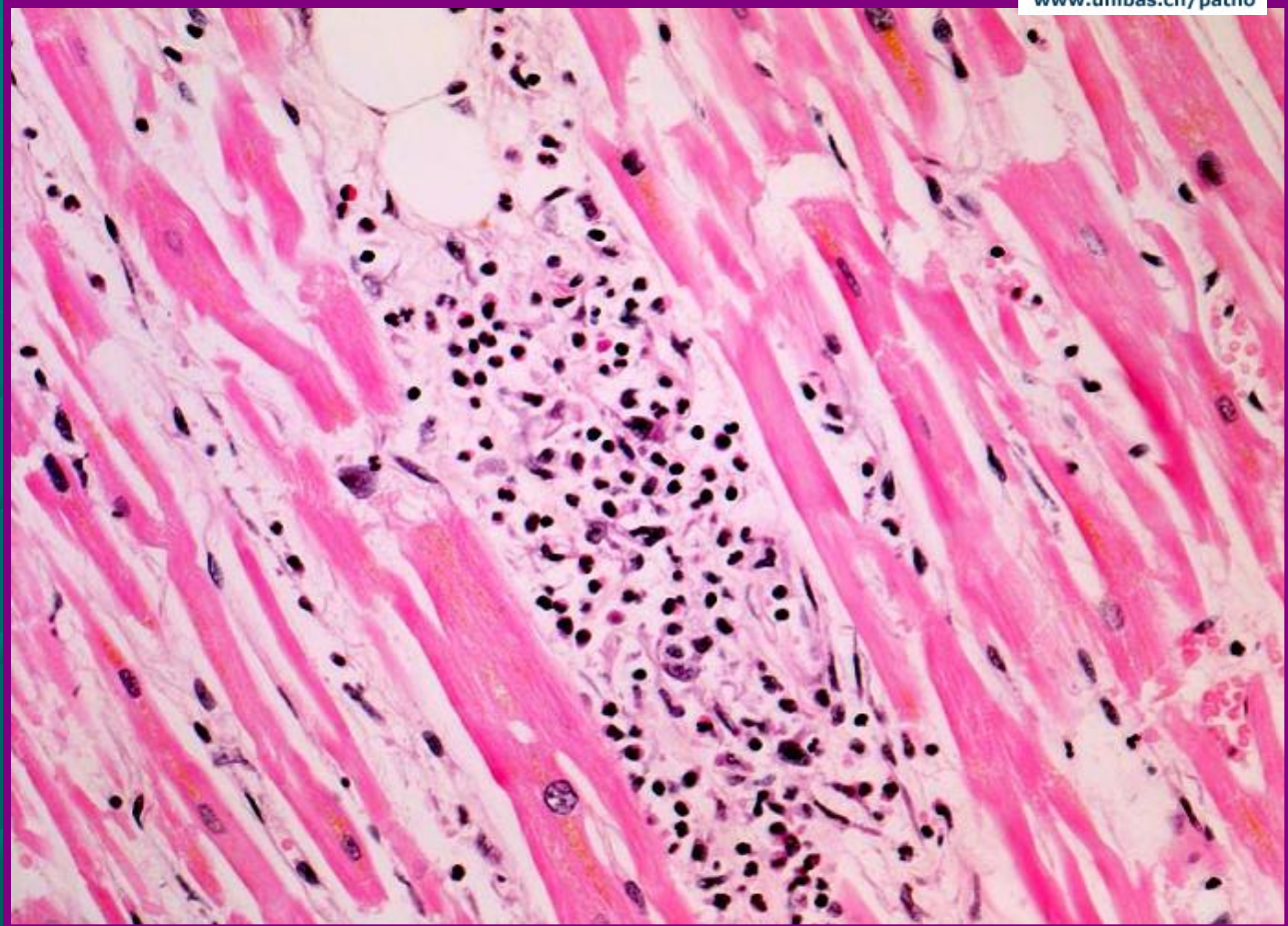




# Inflammatia proliferativa nespecifica

## ● Miocardita interstitialia

PathoPic  
www.unibas.ch/patho

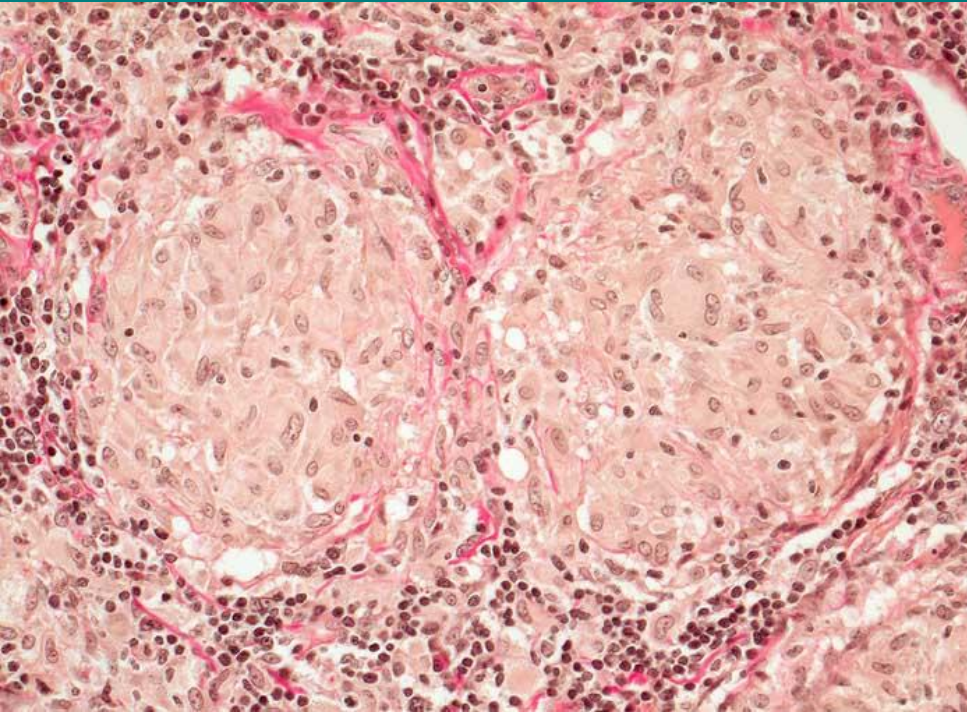


# Inflamatiile granulomatoase nespecifice sau cu specificitate discutabila

- aparitia, in numar mare, in focarul inflamator, a macrofagelor care, prin morfologia si modul lor de agregare **pot sugera** uneori etiologia, **fara a oferi insa certitudinea** diagnosticului;
- Ex. :
  - infectii microbiene (febra tifoida, tifosul exantematic, bruceloza, tularemia);
  - inflamatii virale (poliomielita, rabia);
  - granuloame din boli de colagen (nodulul Aschoff – reumatismul articular acut, leziunile din LES, dermatomiozita);
  - granuloame de cauza necunoscuta - boala Besnier-Boeck - Schaumann (sarcoidoza)



# Sarcoidoza – granuloame epitelioid



**Sarcoidoza** - celula giganta multinucleata continand un corp asteroid in citoplasma

<http://alf3.urz.unibas.ch/pathopic/e/getpic-fra.cfm?id=5448>



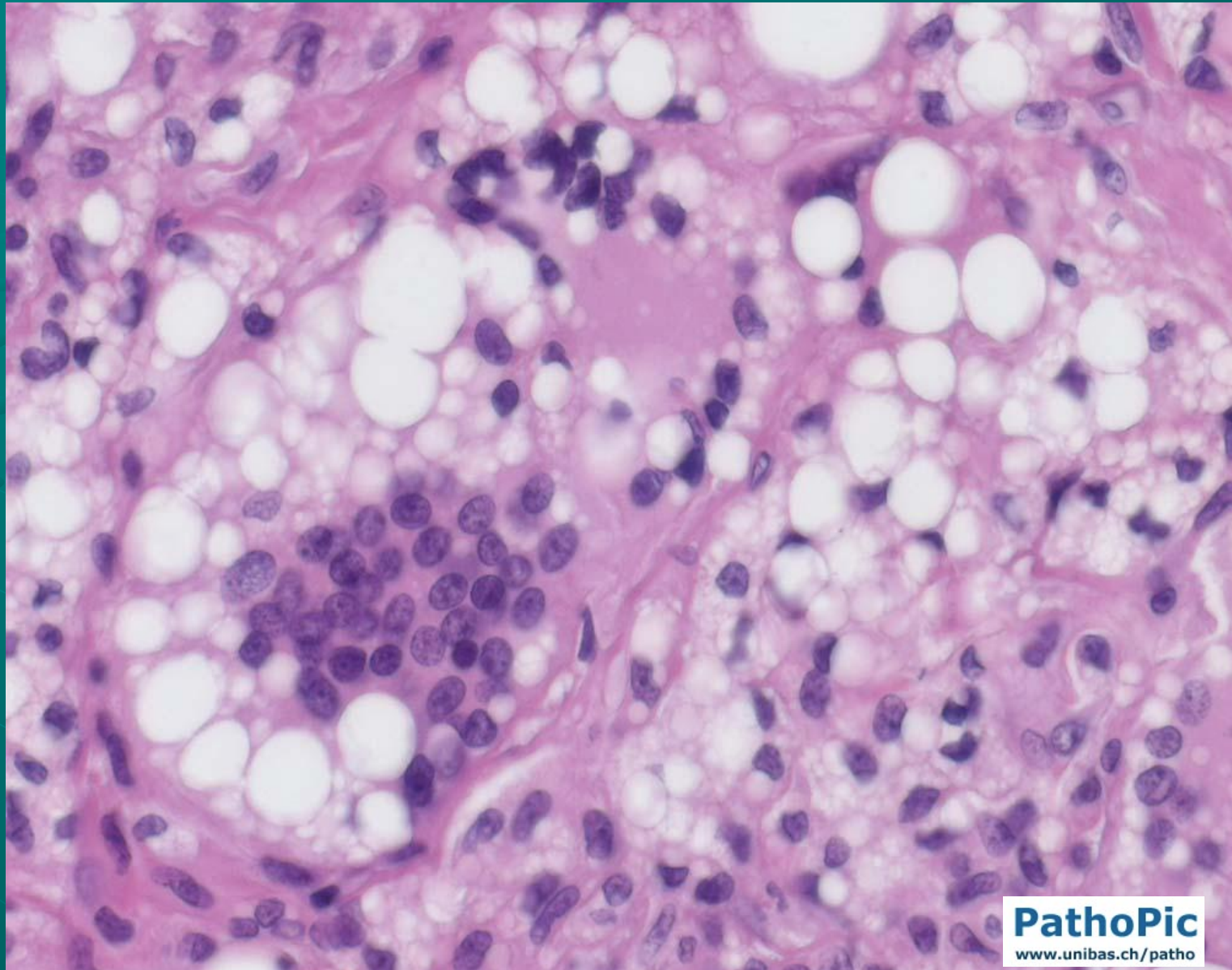
# Inflamatiile granulomatoase de corp strain

## Corpi straini:

- **origine exogena:** fire de sutura, pulberi de talc, substante uleioase injectabile, pulberi de siliciu, azbest, beriliu;
- **origine endogena:** grasimi ← necroza adipocitelor (granulomul lipofagic), cristale de urati (toful gutos), colesterol, saruri biliare, coloid tiroidian, chieratina (reactiile granulomatoase din chisturile epidermale).

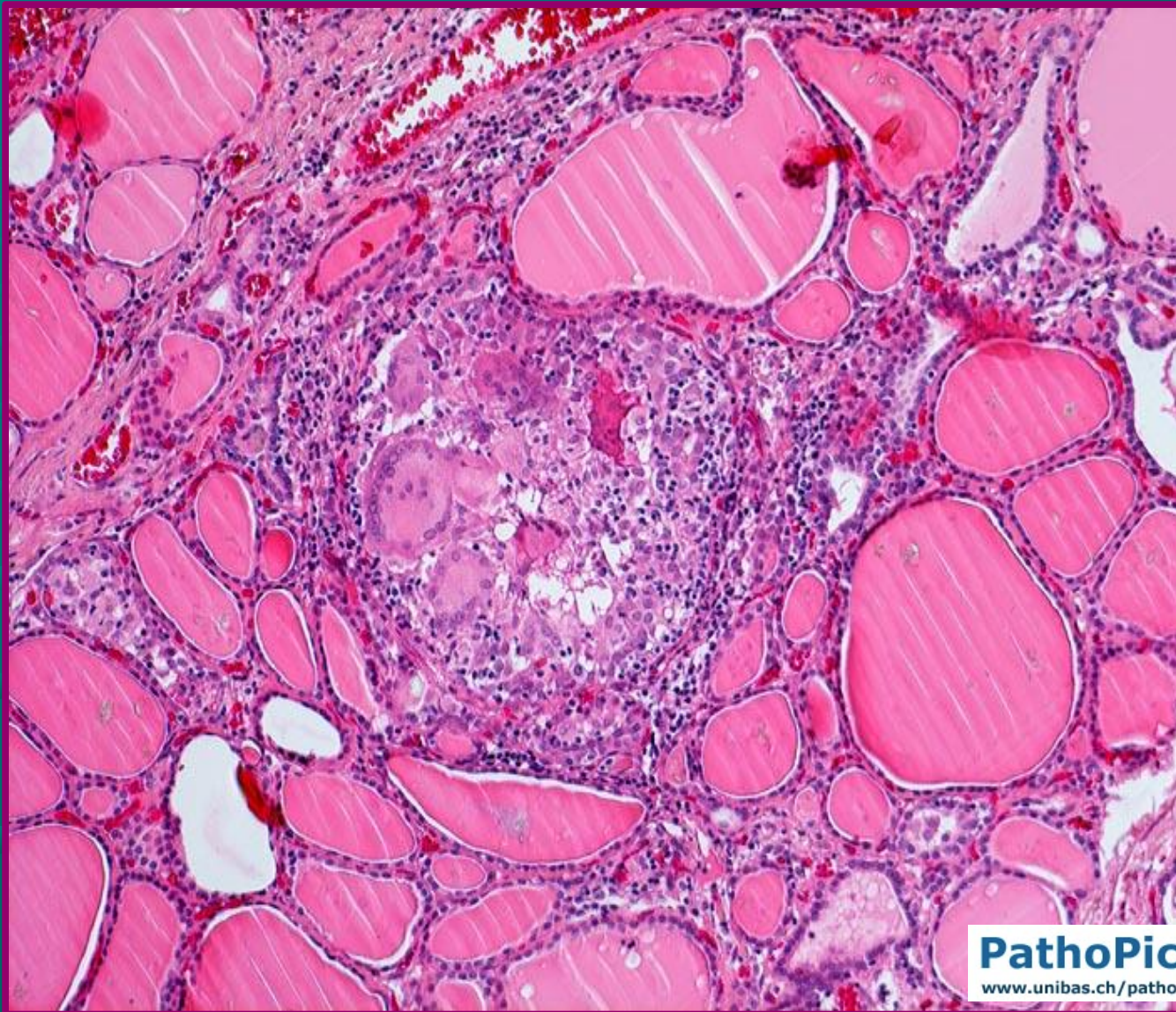


## Granulom de corp strain exogen (silicon)



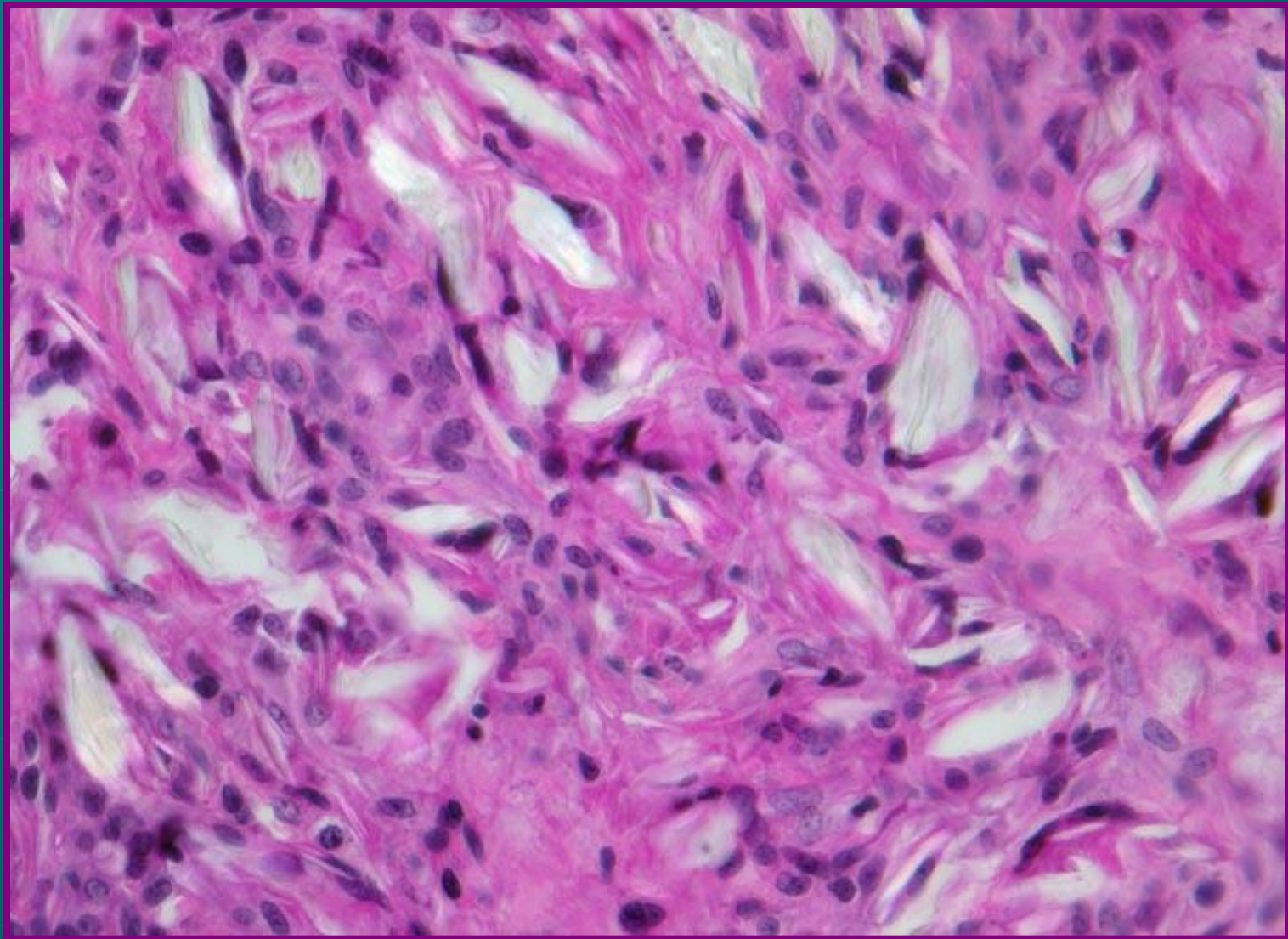


## Granulomul de corp strain endogen (coloid tiroidian)





## Granulom de corp strain



# Inflamatiile granulomatoase specifice

- dezvolta aspecte morfologice particulare care, recunoscute in preparatele histologice, permit precizarea etiologiei lor (tuberculoza, sifilisul, lepra, rinoscleromul)
  - specificitatea inflamatiei parazitare - ! evidentiarea agentului cauzal pe sectiunile histopatologice
  - inflamatii virale particulare
    - incluziile nucleare → b. cu incluzii citomegalice
    - incluziile Babes-Negri → encefalita rabica.