

## Leverpathologie



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# Lever pathologie

- Basis leverpathologie
  - Normale histologie
  - Kleuringen
- Patroon erkenning
  - Wat? (ontsteking, steatose, bilirrubinostase...)
  - Waar?
  - Klinische informatie > differentiaal diagnose

# Doel van een biopt

Stellen van een diagnose:

RIP

Ontstekingsbeeld

Prognose:

Graderen van activiteit

Stageren van ziekte (Fibrose)

# Liver biopt



**WAT?**



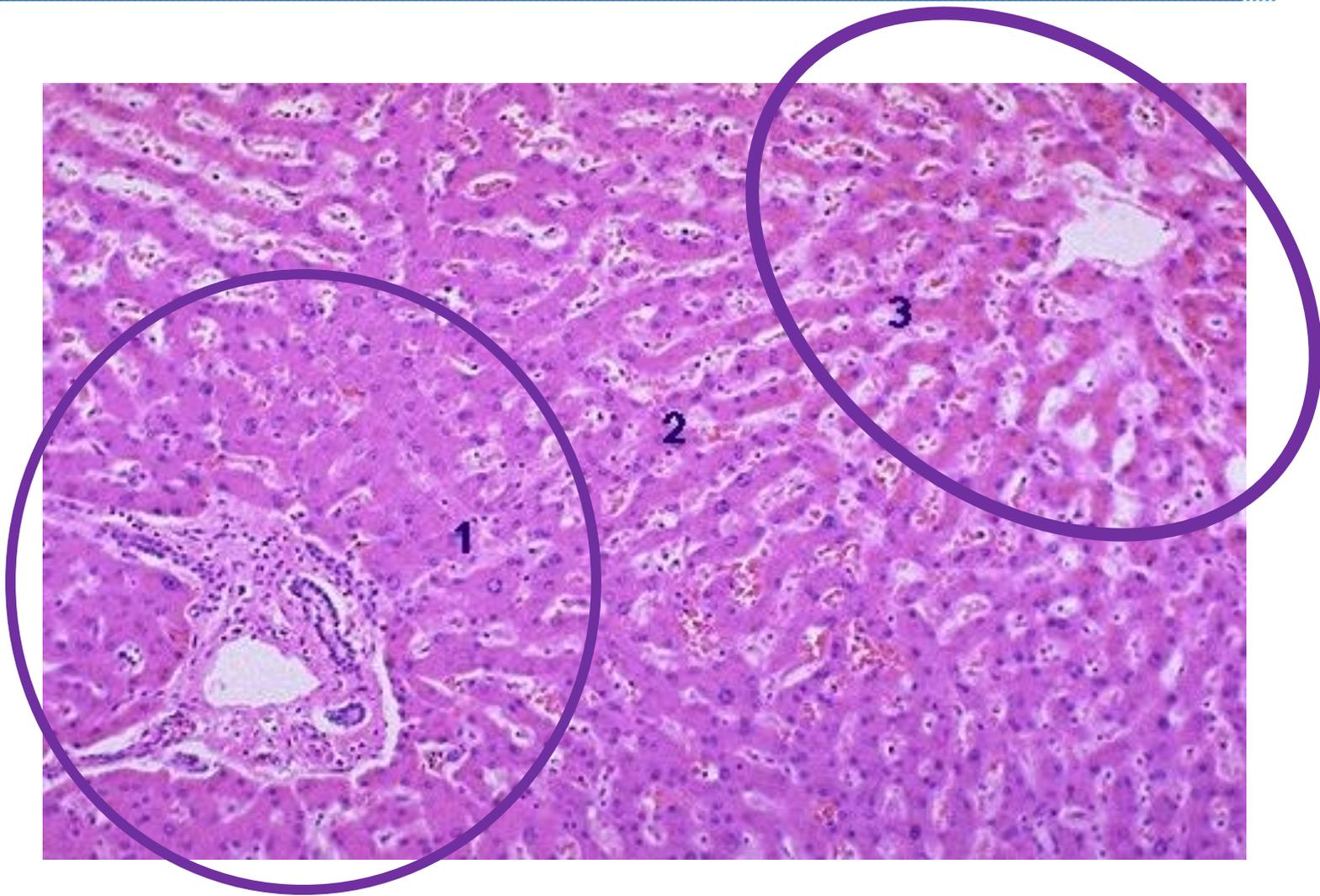
Klinische



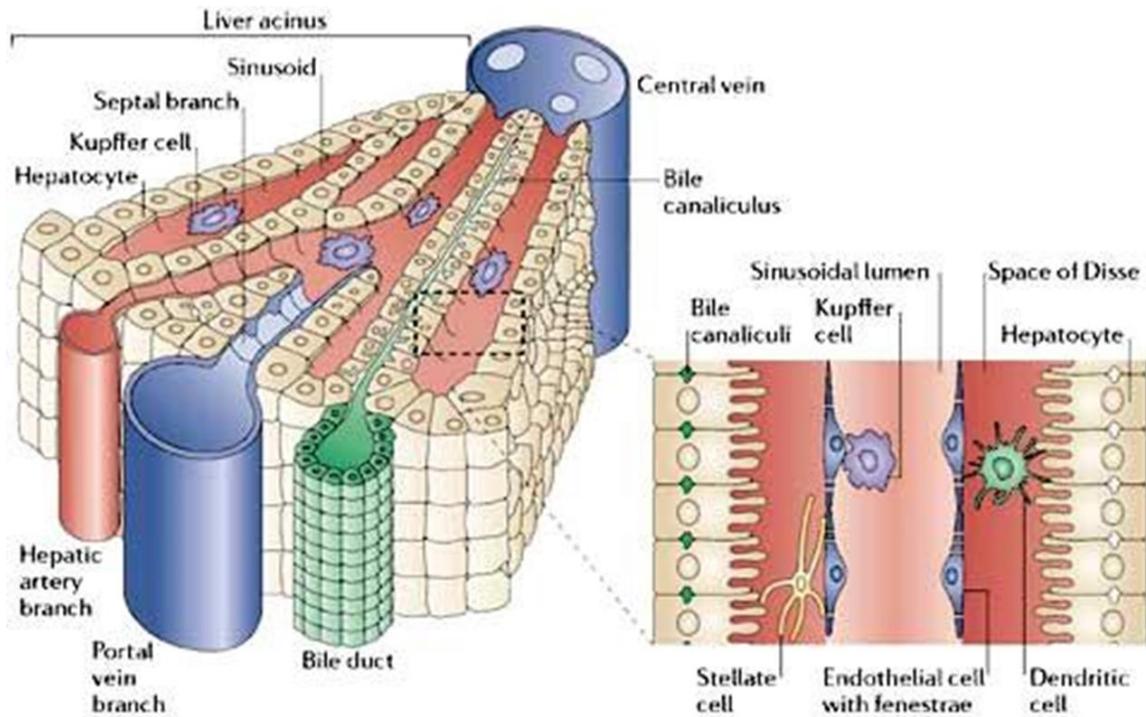
gegevens

**WAAR?**

# Normale lever morfologie



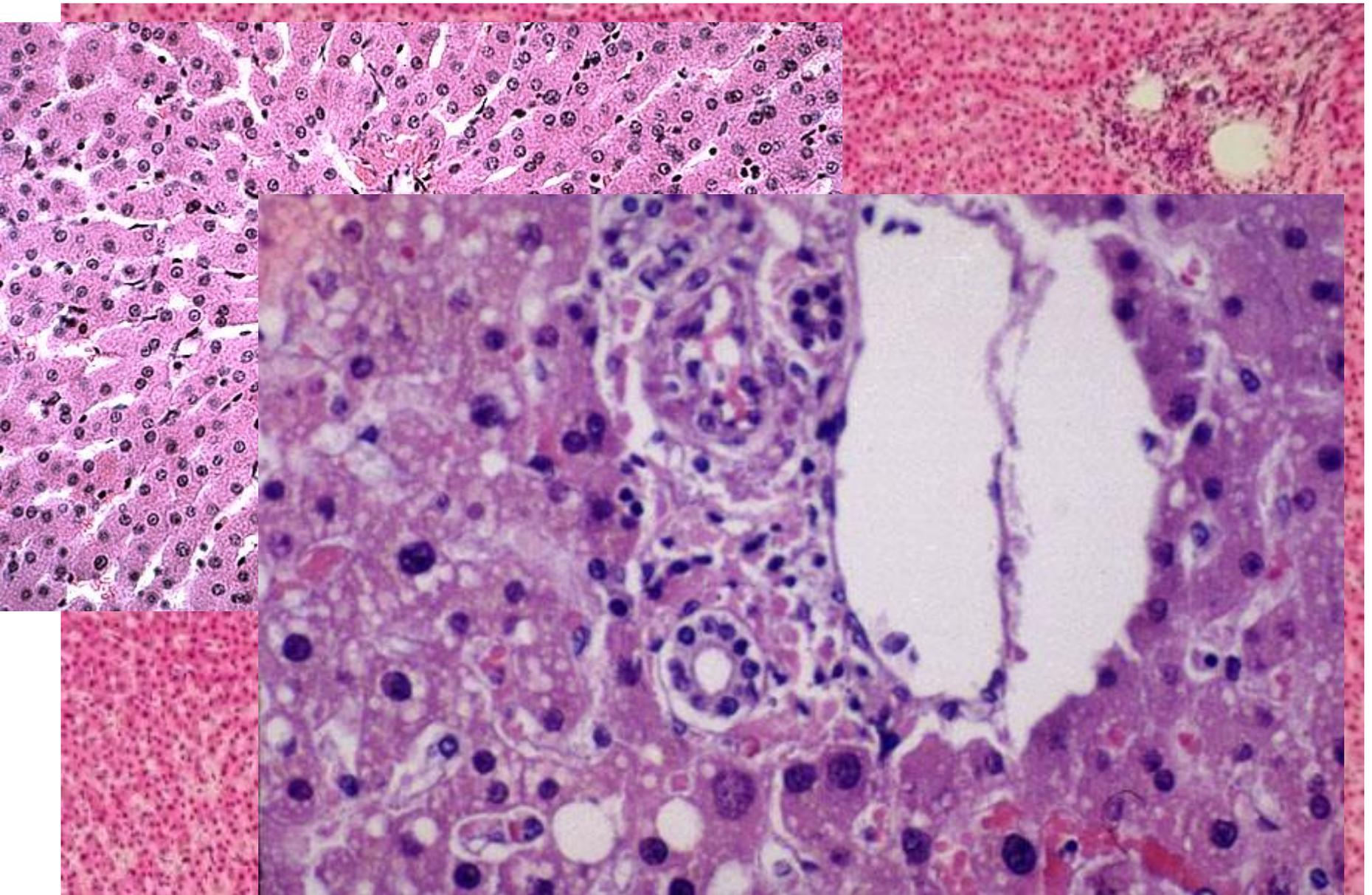
# Functionele eenheid



# Kleuringen

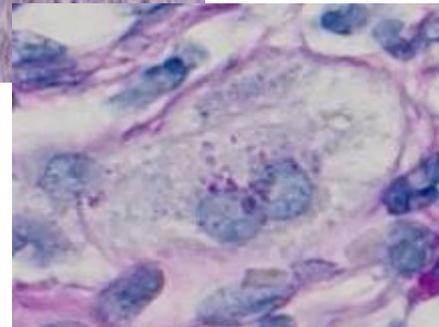
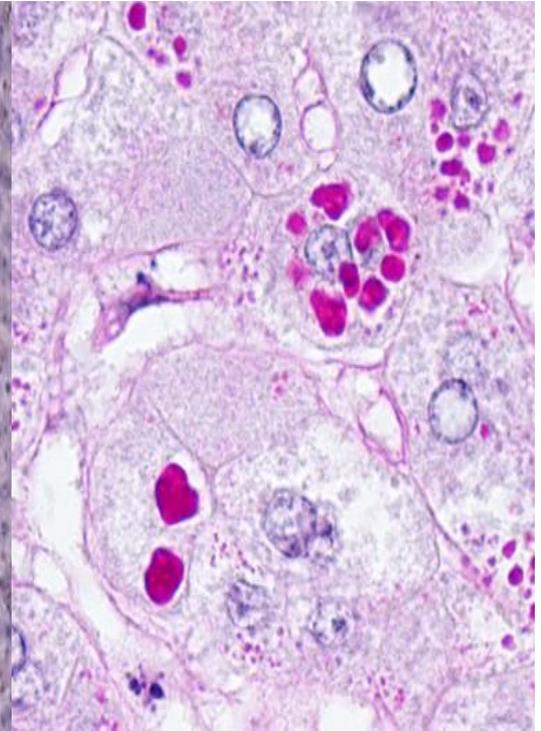
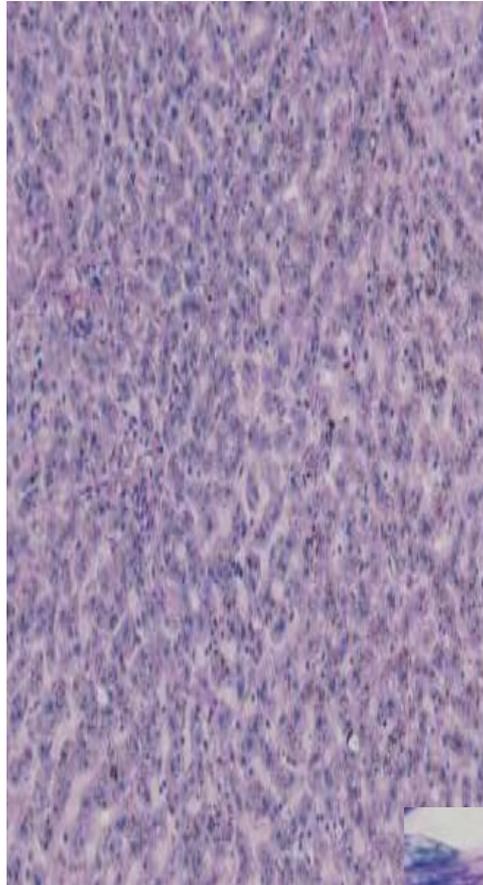
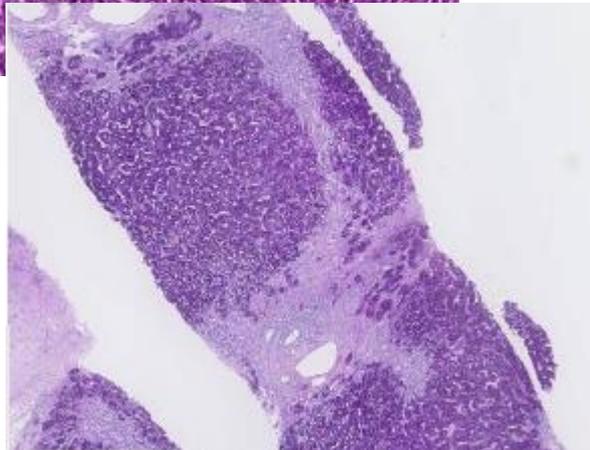
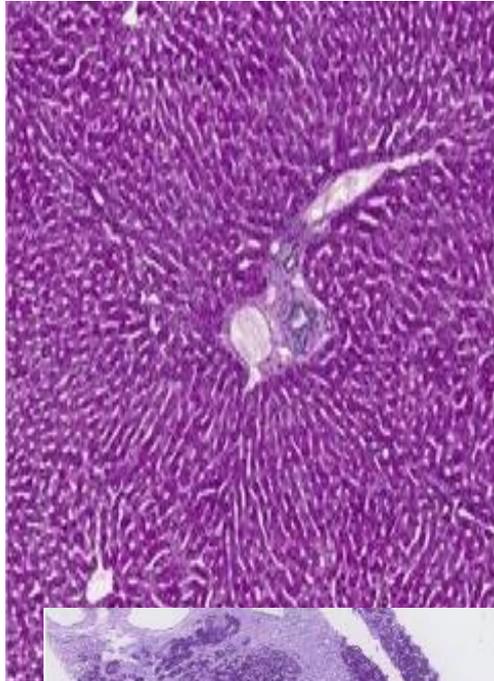
Kleuringen	
Hematoxiline Eosine (HE)	Architectuur Aanwezigheid van ontsteking Steatose
Periodic Acid Schiff (PAS)	Glycogeen Architectuur portale velden
PAS + (PAS Diastase)	Geactiveerde Kupfer cellen, A1AT, koper bindende eiwitten
Reticuline	Structuur leverplaten, fibrose
Bindweefsel Verhoeff van Giesson (VVG)/SR/AZAN	Collagen depositie/fibrose/cirrose
Pigment (Ijzer, koper, gal)	

HE

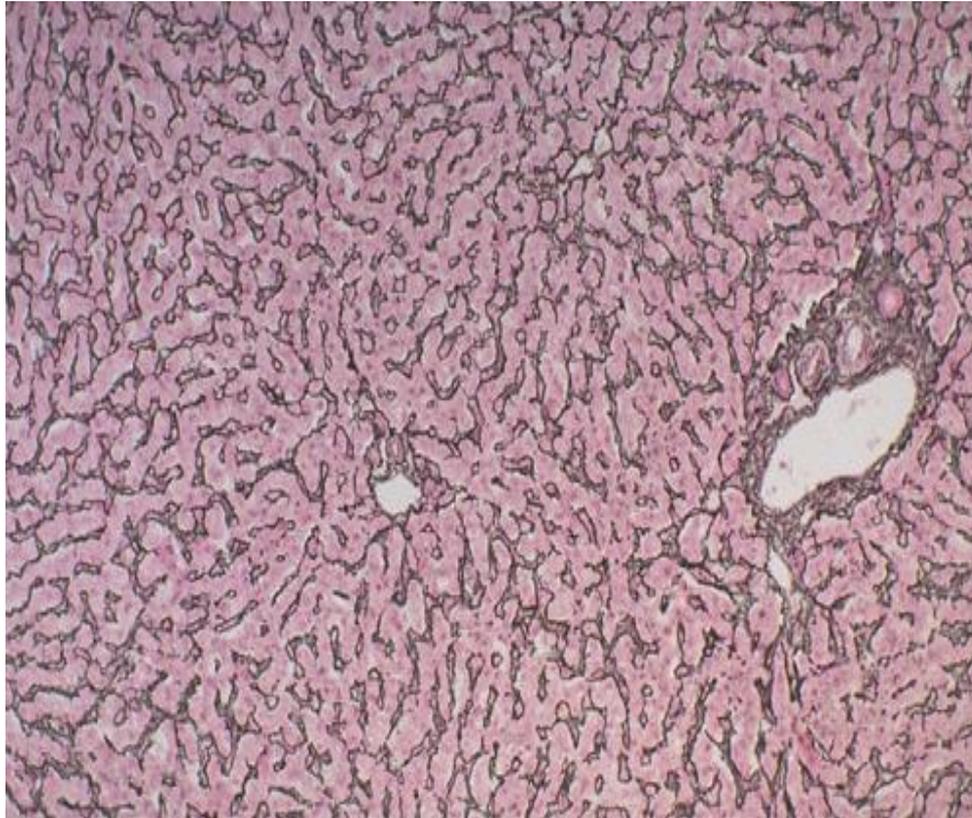


PAS

PAS +



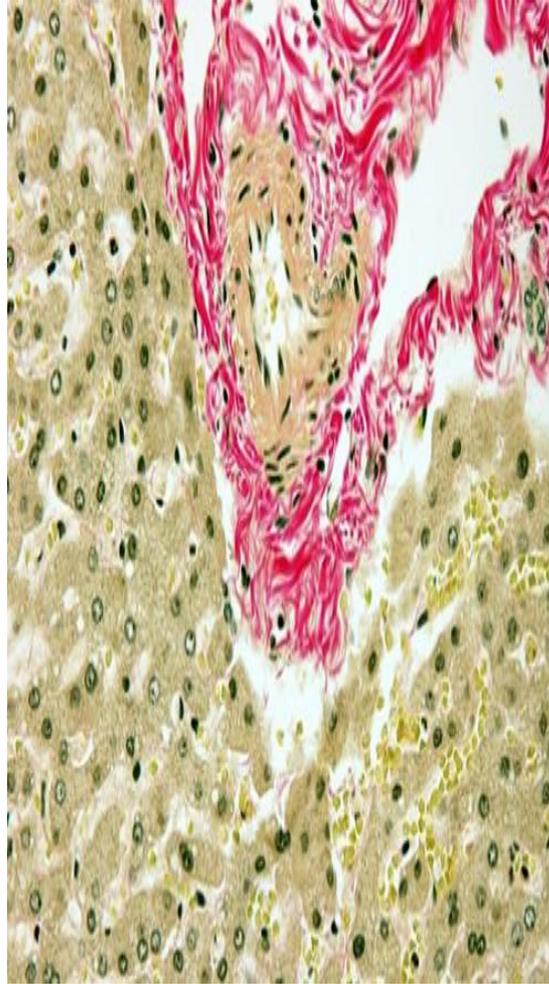
# Reticuline



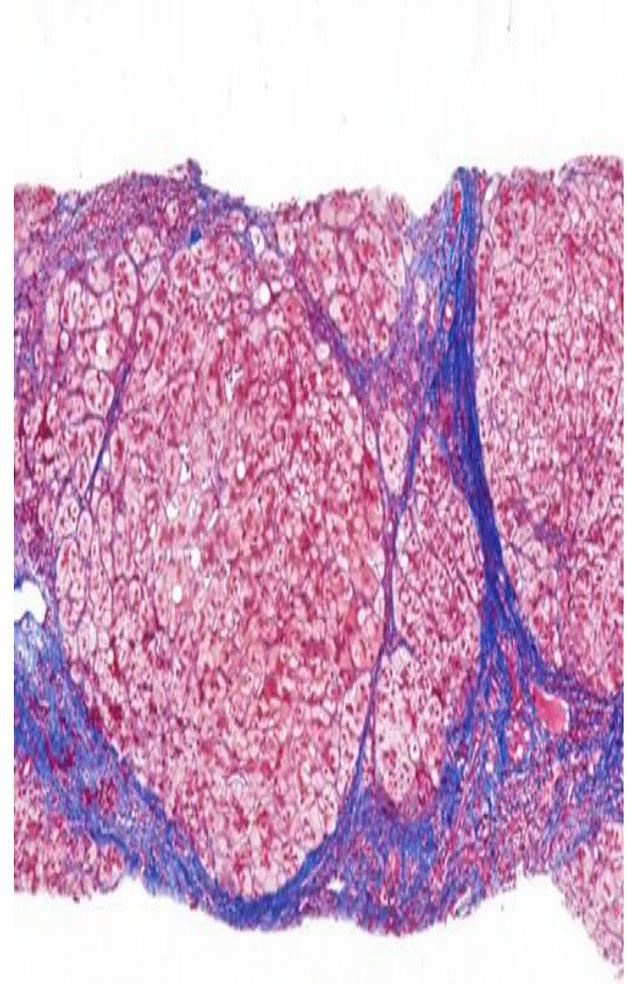
# Bindweefsel kleuringen



Sirius Rood

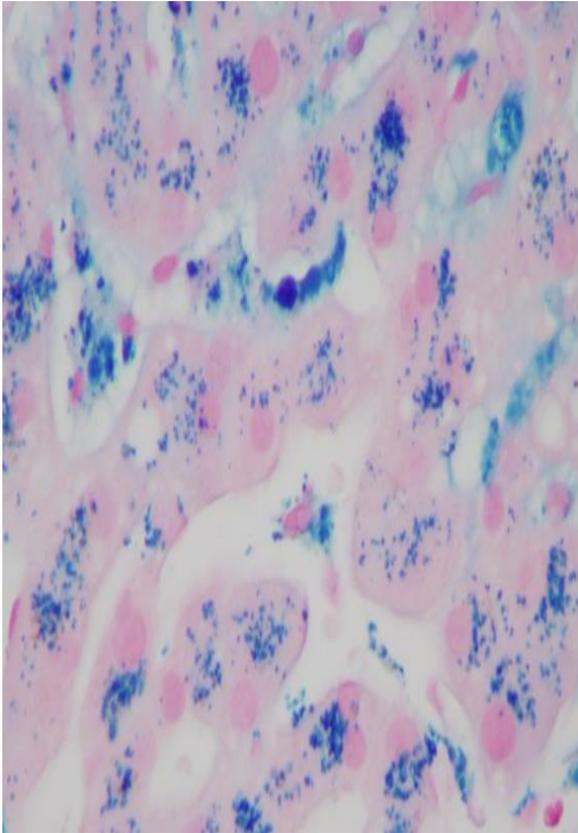


VvG

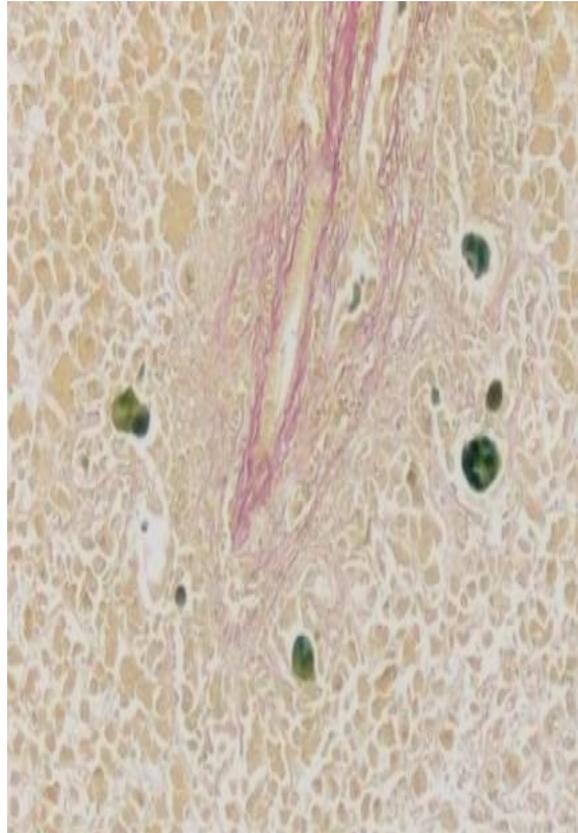


AZAN

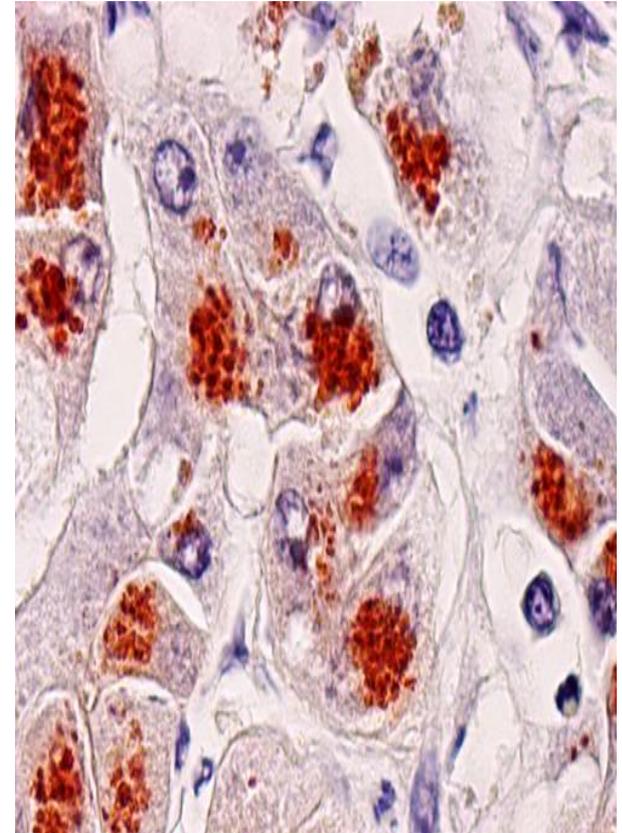
# Pigment



IJzer

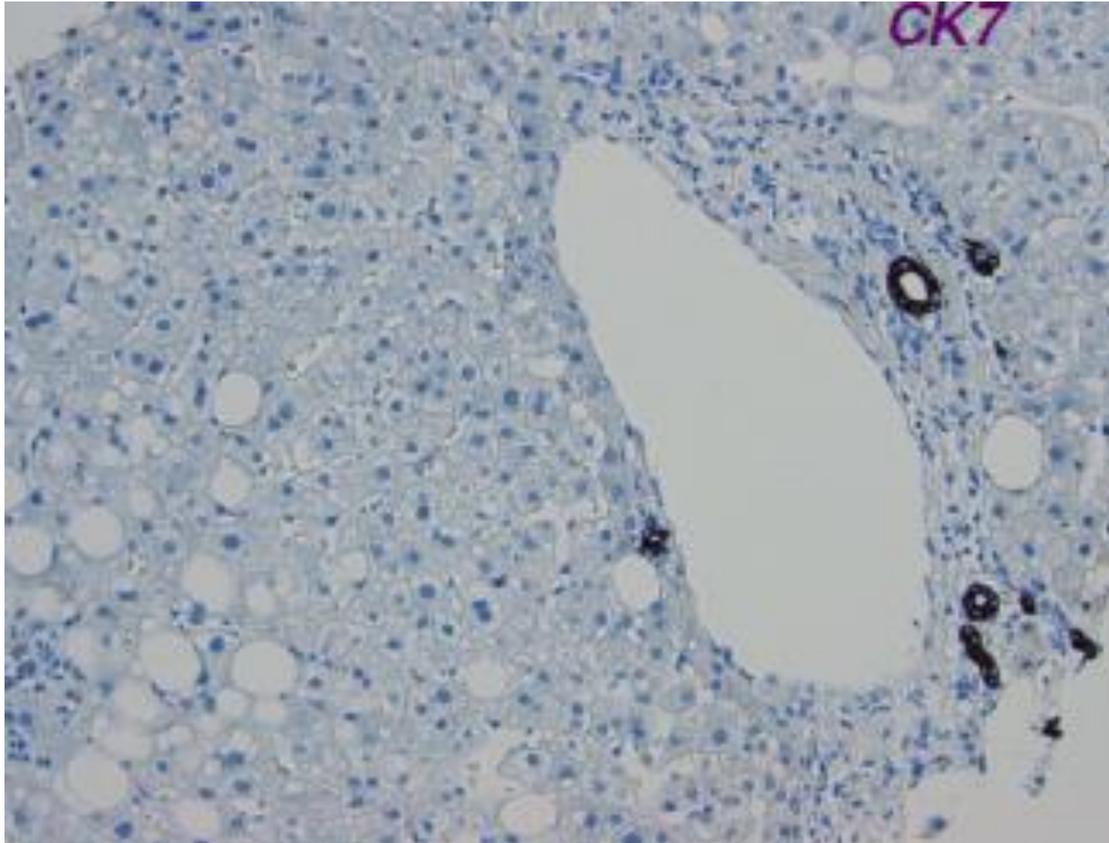


Bilirubine



Koper

# Immunohistochemie



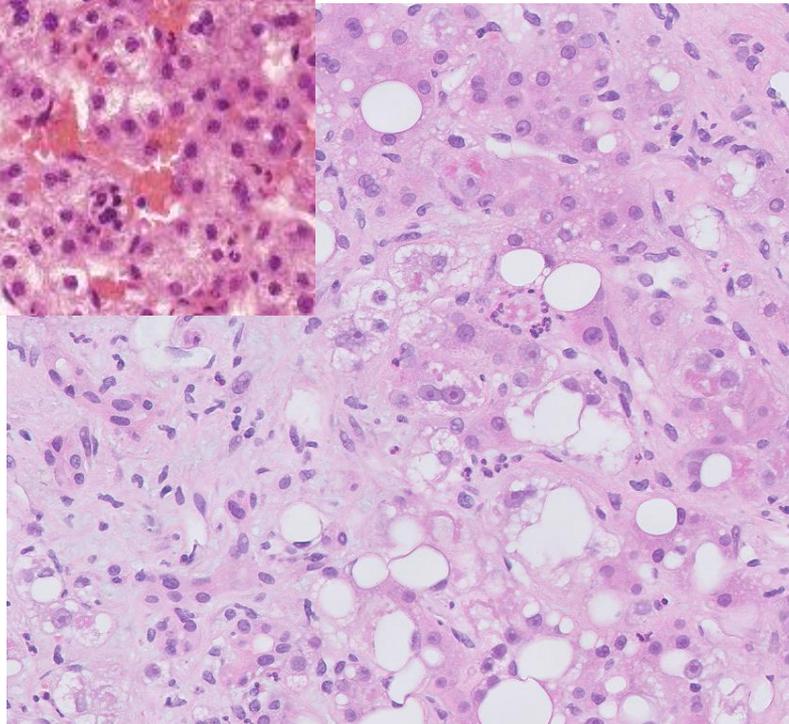
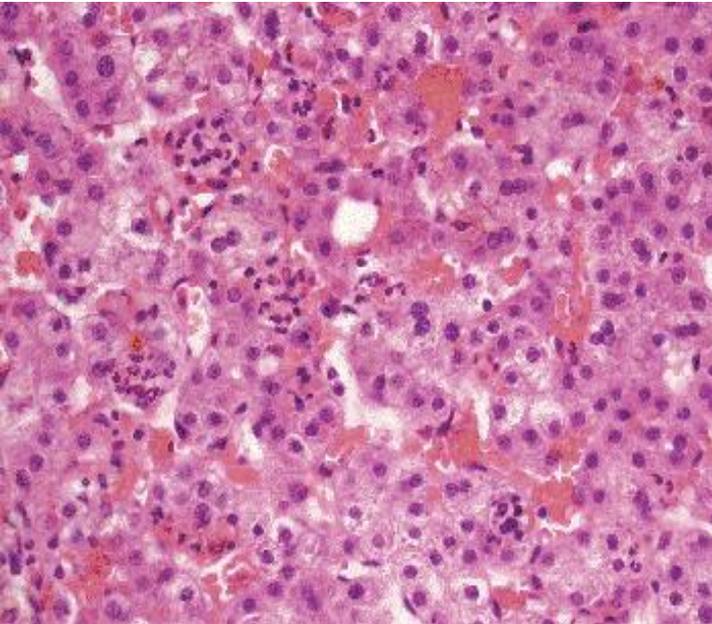
# Afwijkingen

**WAT ?**

**WAAR?**

# Wat? > Ontstekingscellen = clue voor de diagnose

Neutrofiele granulocyten



Steatohepatitis

Ductulaire reactie

Drugs

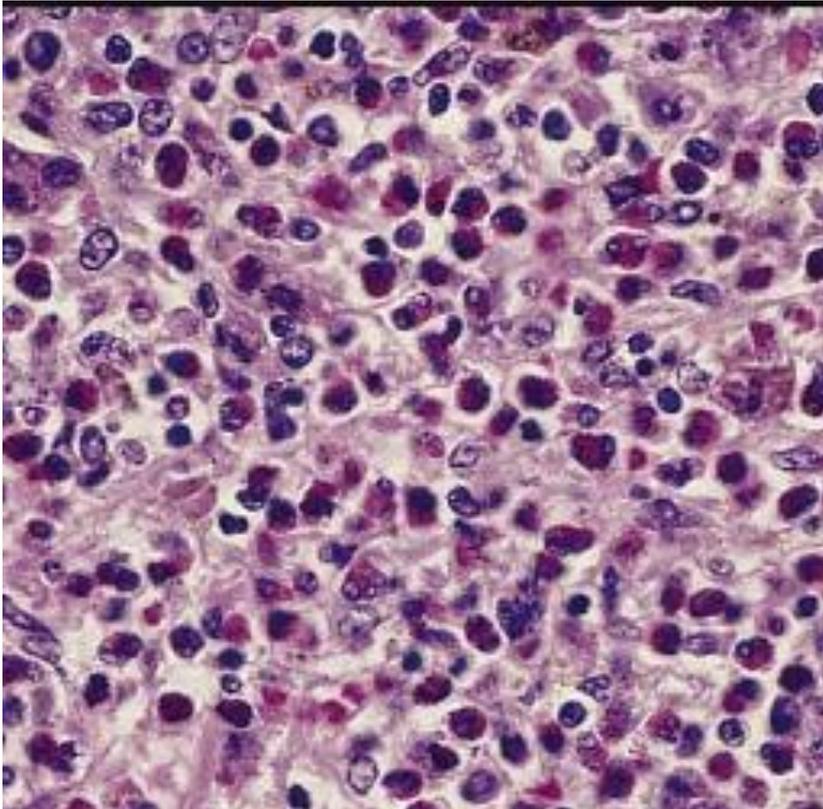
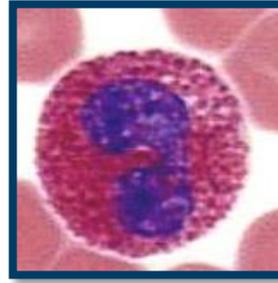
Microabcessen > CMV

Chirurgische schade

Ischemie

# Wat? > Ontstekingscellen = clue voor de diagnose

Eosinofiele granulocyten



Langerhans cel histiocytose

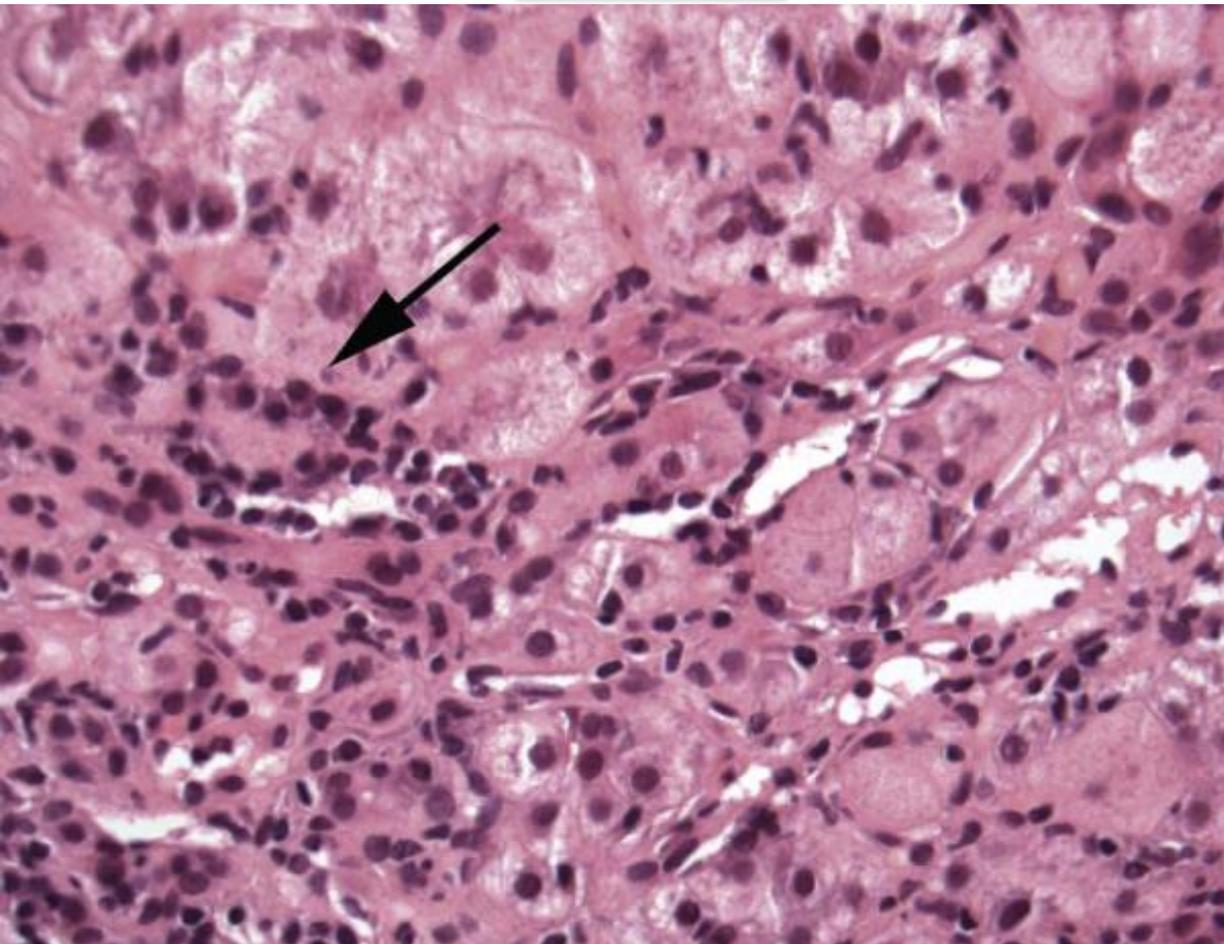
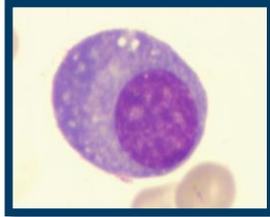
Parasieten

Drugs

PBC/AIH

# Wat? > Ontstekingscellen = clue voor de diagnose

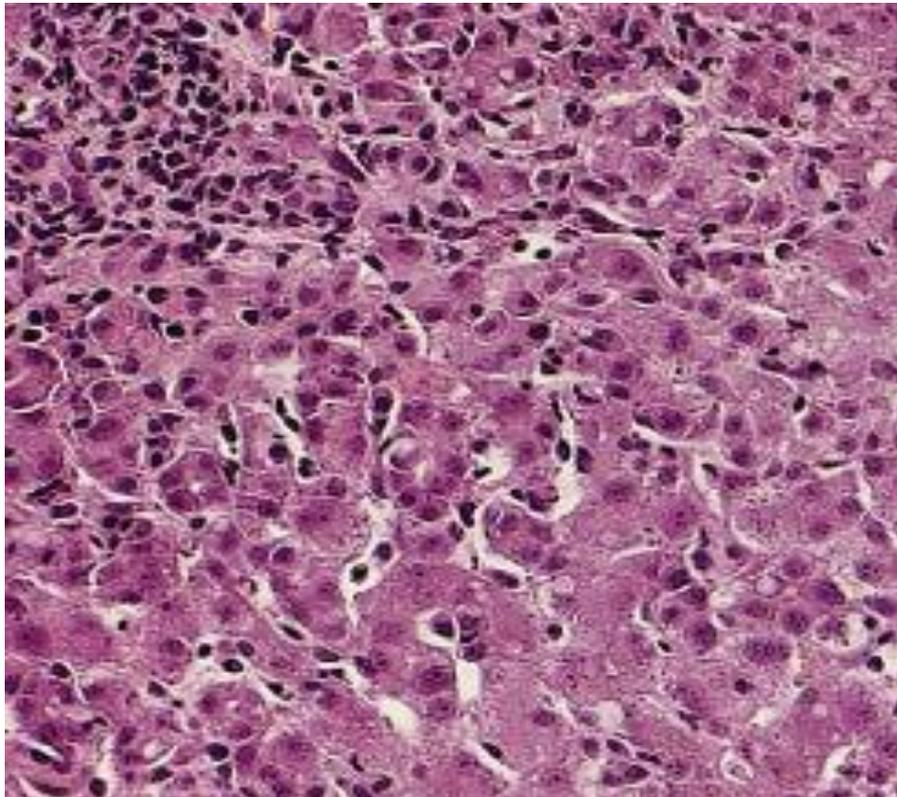
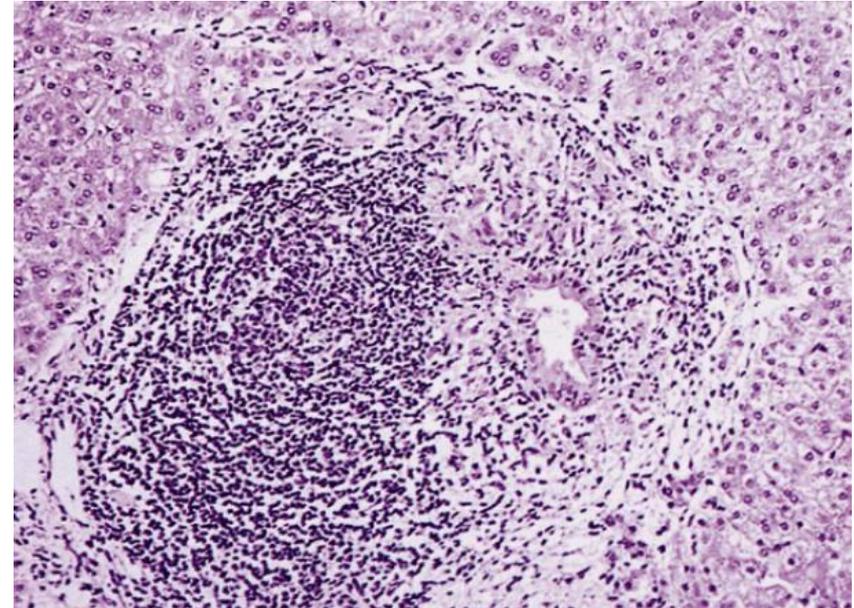
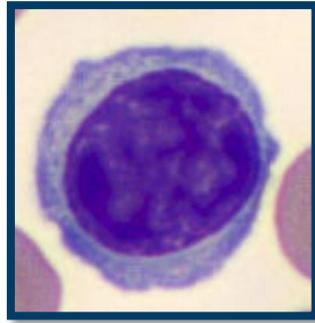
Plasma cellen



Autoimmune hepatitis  
Virale hepatitis  
Drugs

# Wat? > Ontstekingscellen = clue voor de diagnose

Lymfocyten



Virale hepatitis

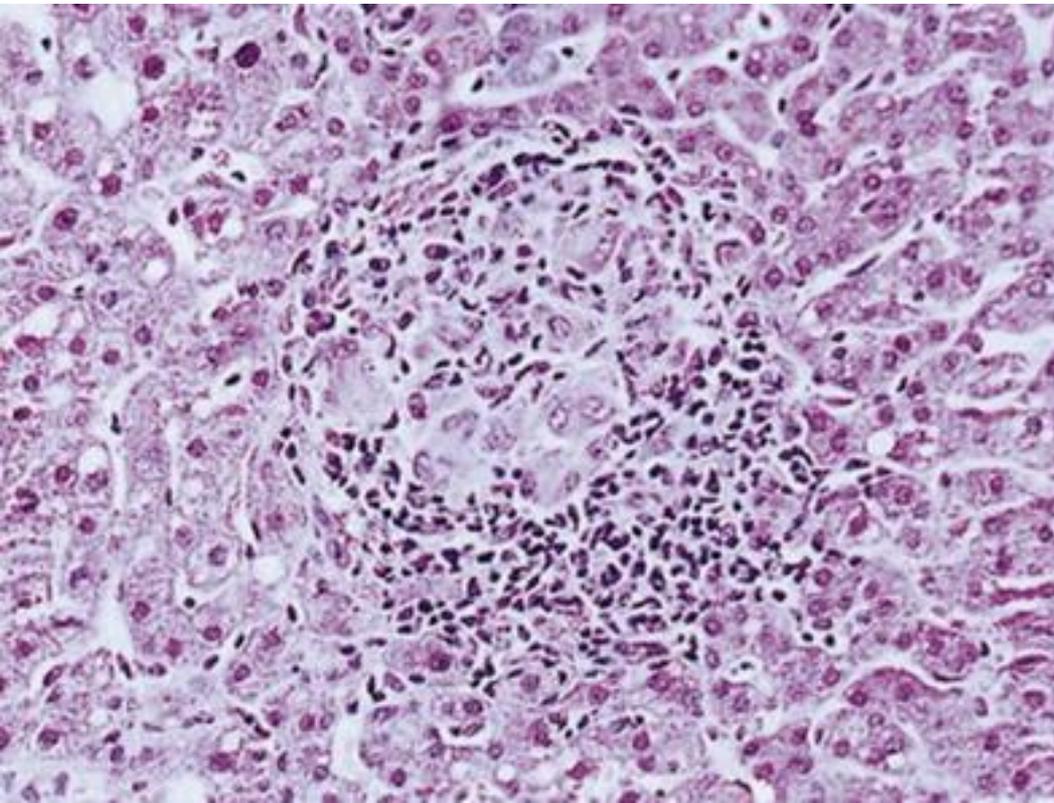
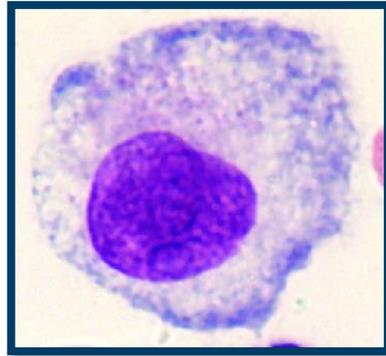
PBC

AIH

Lymfoom

# Wat? > Ontstekingscellen = clue voor de diagnose

Granulomen



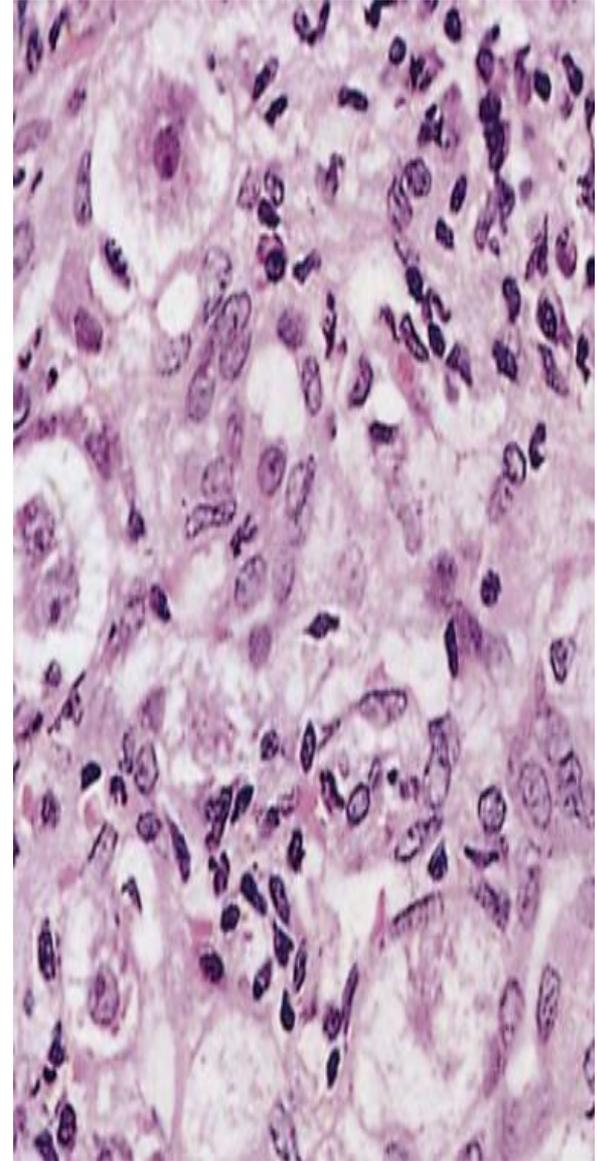
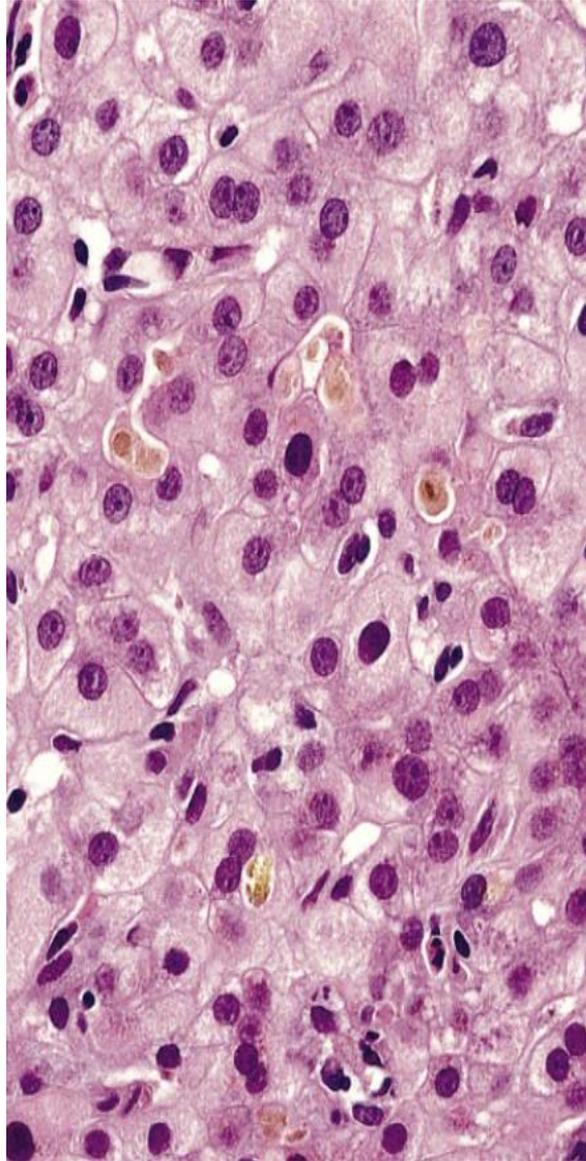
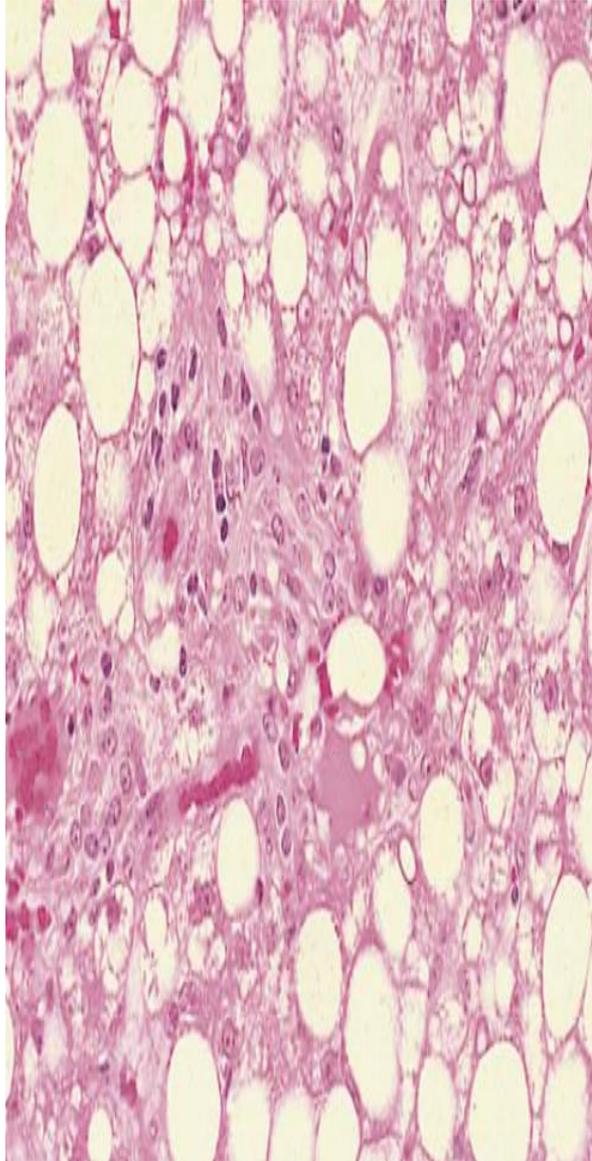
Sarcoidose

Primaire Biliaire Cholangitis

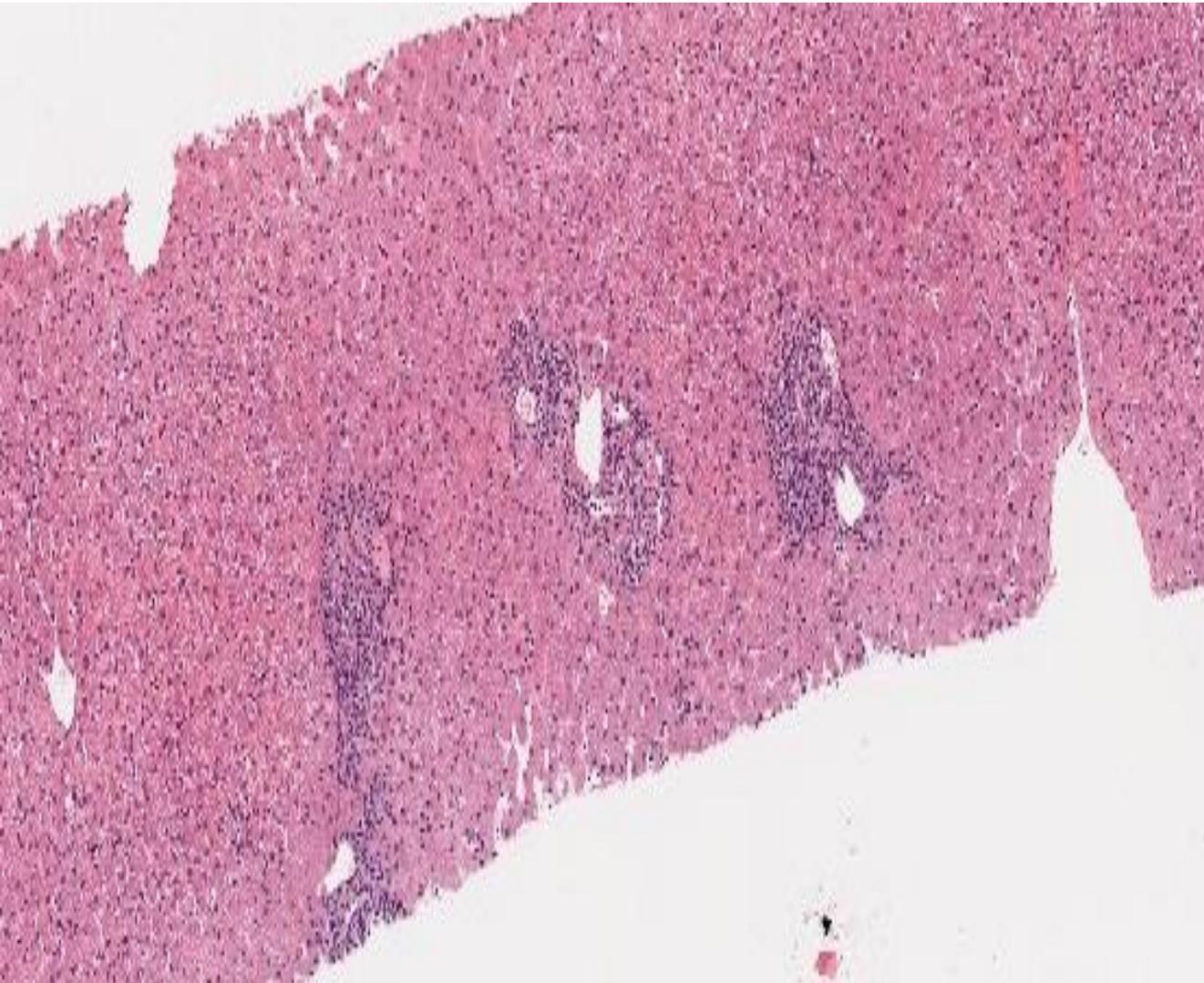
Infecties (TBC)

Drugs

Wat? > steatose/bilirrubinostase/cholaat stase

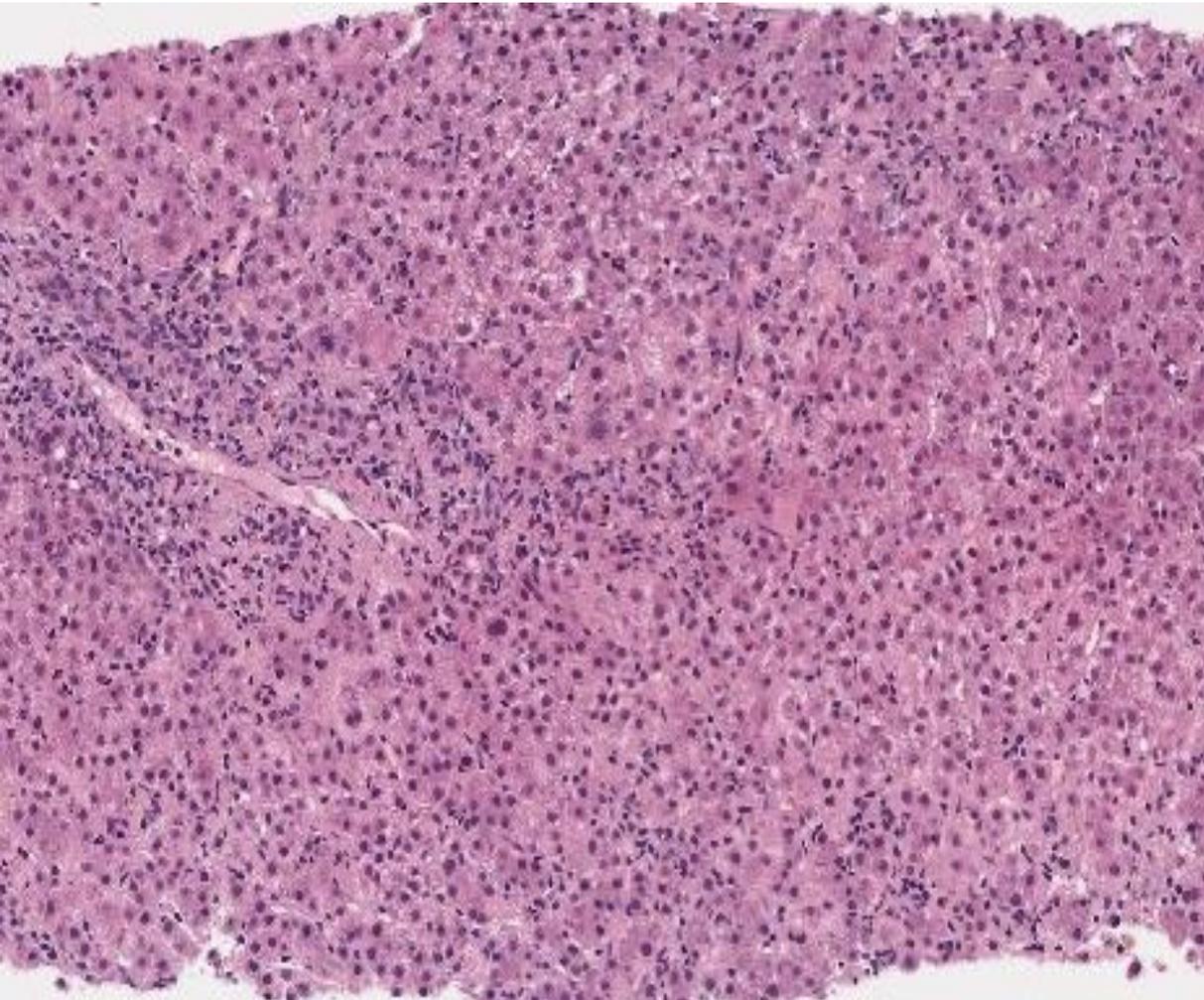


## Waar? > schadepatroon > Periportale ontsteking



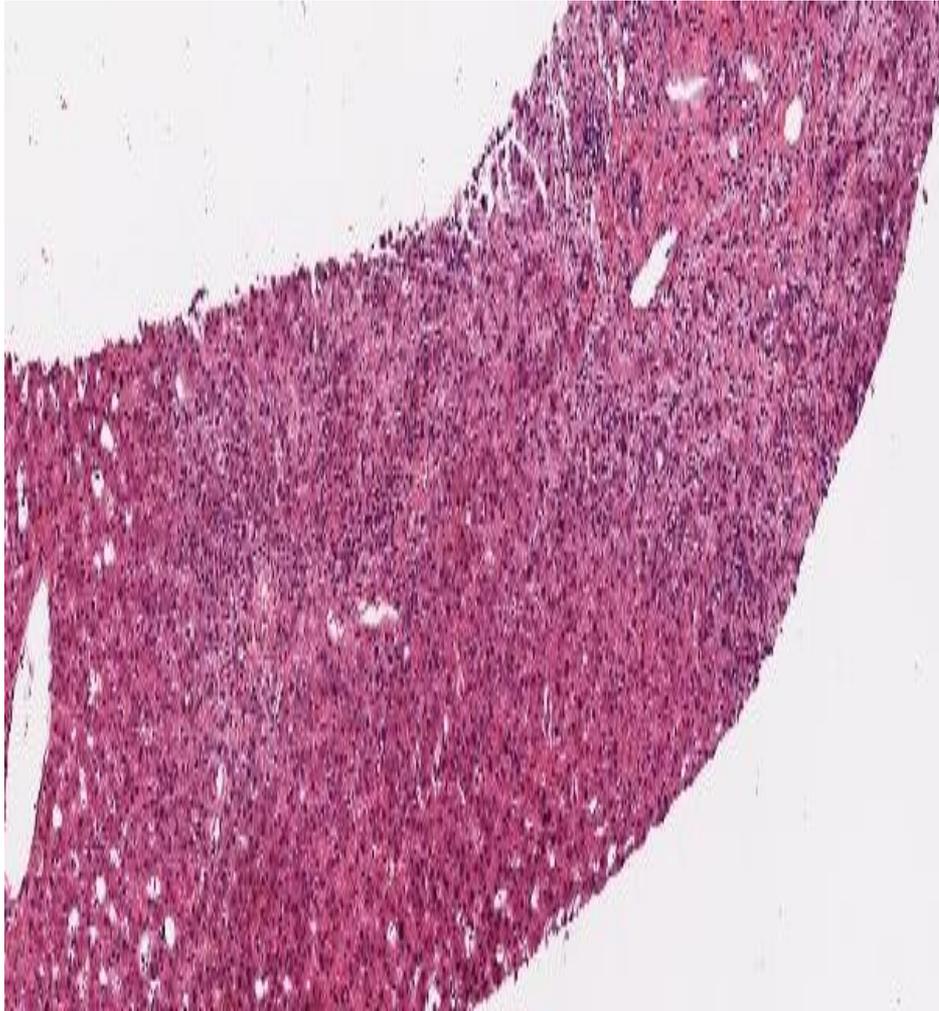
- Viraal
- AIH
- PBC
- M. Wilson
- DILI
- Rejectie bij transplantatie

## Waar? > Schadepatroon > lobulaire ontsteking



- Viraal
- AIH
- Metabool
- M. Wilson
- DILI
- Stapeling

## Waar? > Schadepatroon > ductulaire reactie



- Galgang obstructie
- PBC
- Scleroserende cholangitis (primair/secondair)
- Bilaire atresie
- Sarcoidose

## Afwijkingen

Klinische  
gegevens  
~~WAAR?~~

## Casus 1

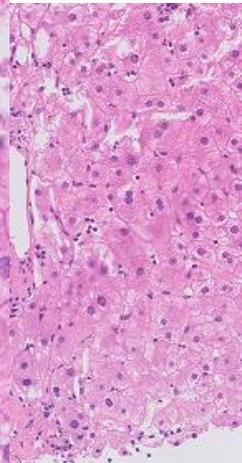
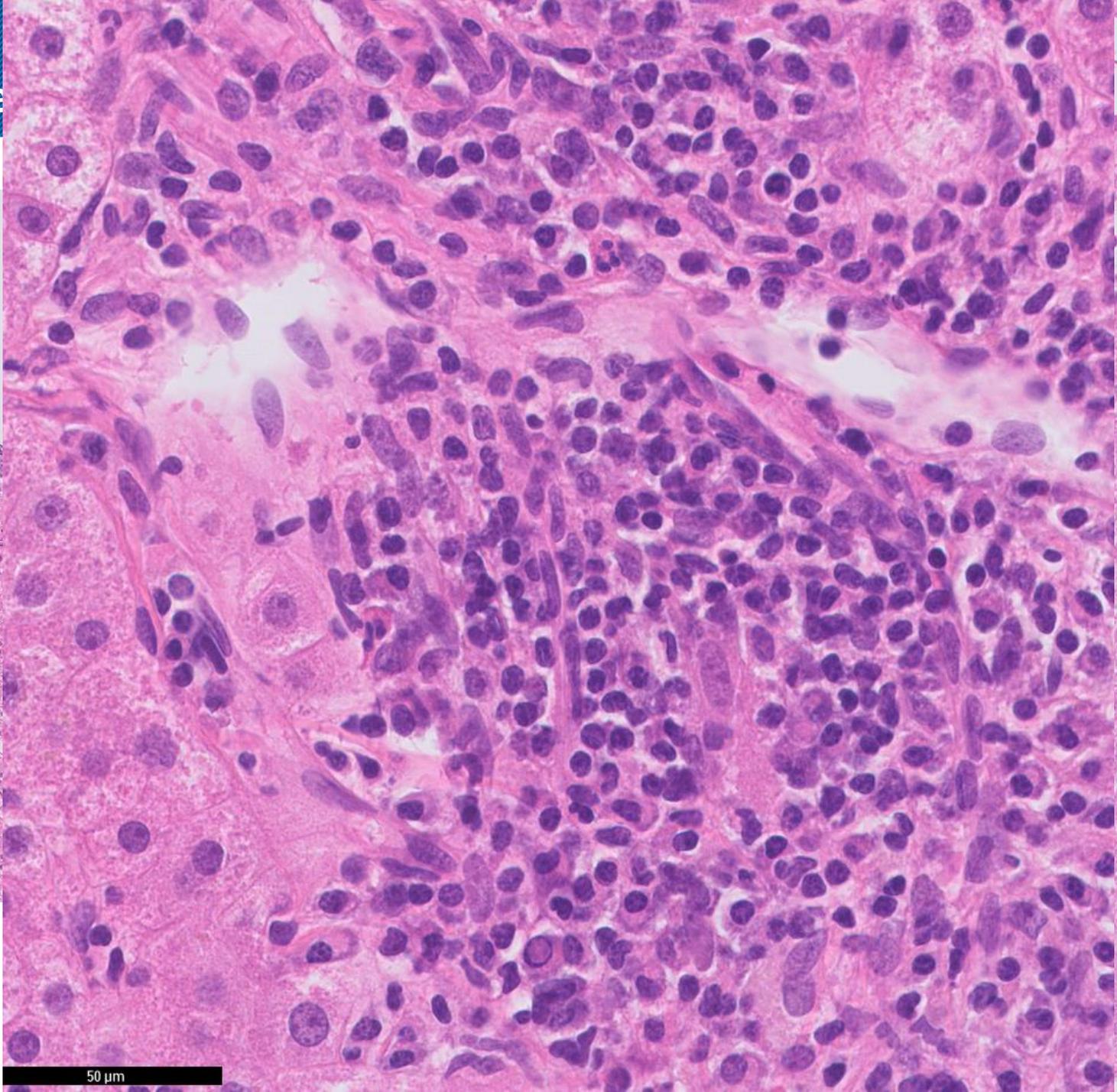
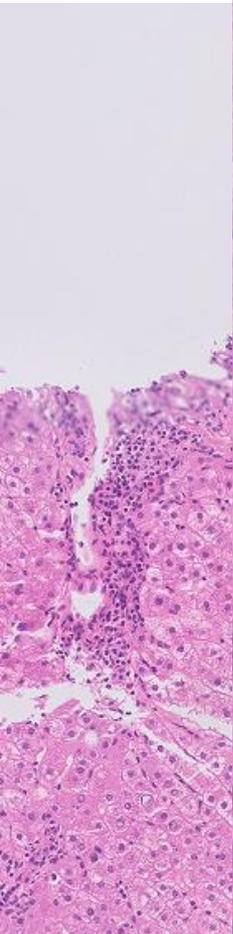
Klinische gegevens:

Sinds 2010 afwijkende leverchemie, op eerder echo steatosis hepatitis. Ook bekend met colitis ulcerosa. Nu progressieve leverchemiestoornissen, positieve auto-antistoffen en aanwijzingen lever cirrose.

Vraagstelling:

Etiologie leverlijden? NASH? AIH? PSC? Toxisch medicamenteus?

Level



50  $\mu$ m

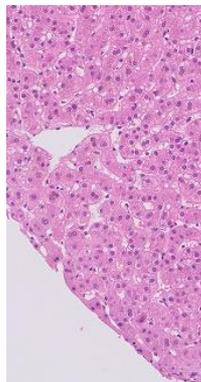
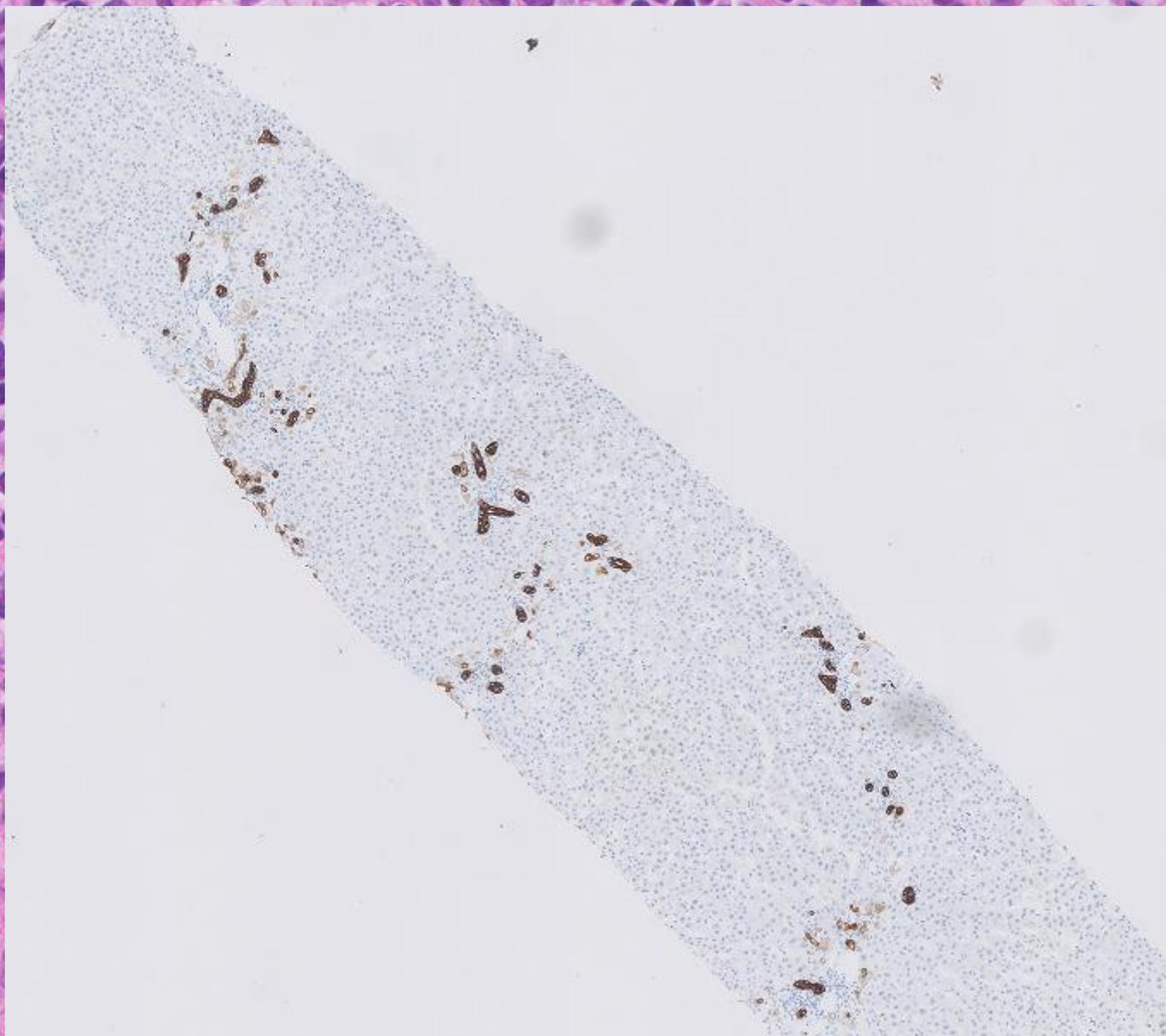
## Aanvullende vragen

Wat voor leverchemiestoornissen? ALAT/ASAT? Toch GGT, AF en bili?

Wat voor auto-antilichamen? AMAs? SMA? IgG?

Wat voor geneesmiddelen of drugs worden gebruikt?

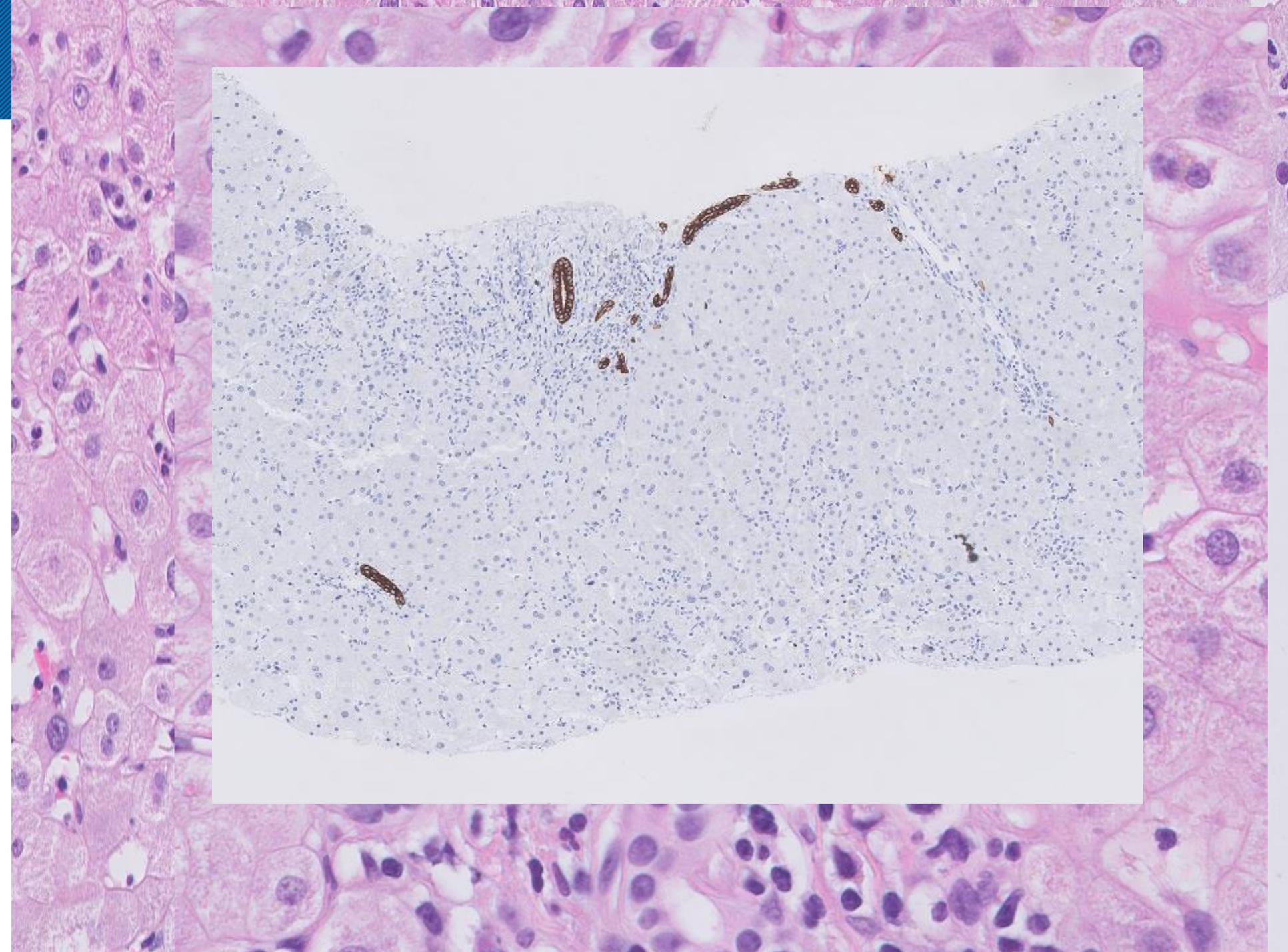
Casu



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# Diagnose

- Wat is uw diagnose?
  1. AIH
  2. Scleroserende cholangitis
  3. Infectieus bijvoorbeeld door CMV infectie
  
- Klinische informatie: lever transplantatie in mei 2018. Klinische verdenking vroege rejectie. Oplopend AF, GGT. Bili stagneert.
  
- Diagnose: rejectie



# Diagnose

- Wat is uw diagnose?
  1. AIH
  2. Scleroserende cholangitis
  3. Toxisch medicamenteus
  4. Infectieus

**Klinische gegevens:** pt. met uitgebreid gemetastaseerd melanoom (geen lever) o.a. hersenen, pulmonaal, lymfeklieren.

Op BRAF/MEK remming leverchemie afwijkingen ontwikkeld. 12/05 geswitcht naar immuuntherapie (nivolumab, ipilimumab). Nu fulminante hepatitis

## **Vraagstelling:**

Aanwijzingen voor AIH? Of meer beeld van toxische medicamenteuze hepatitis bij BRAF/MEK?

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