



Ultralyd av galleblære og galleveier

Grunnkurs i gastroenterologisk ultralyd

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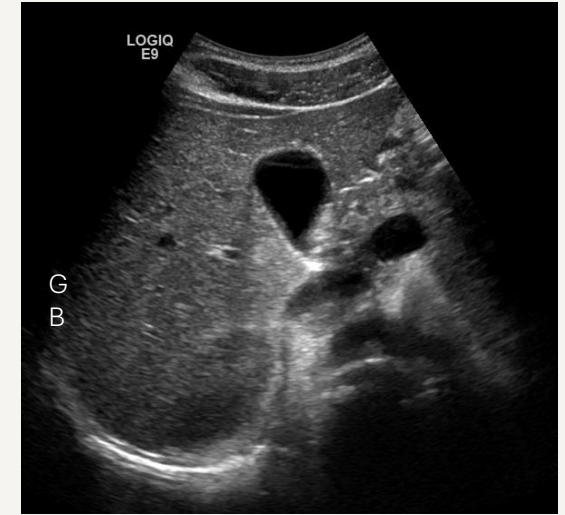
Normalfunn galleblære

Hvordan?

- Undersøkes fastende
- Inspirasjon ofte nødvendig
- Bruk fargeDoppler

Normal galleblære:

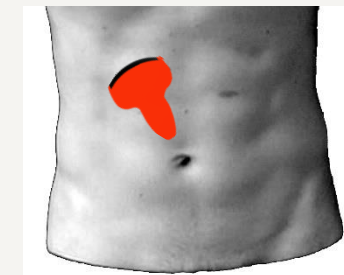
- Veggtykkelse 2-3 mm
 - Cut-off 4 mm
- Størrelse 2-3 cm x 7-8 cm
 - Cut-off 4-5 cm i tverrdiameter
- Ingen lagdeling av vegg



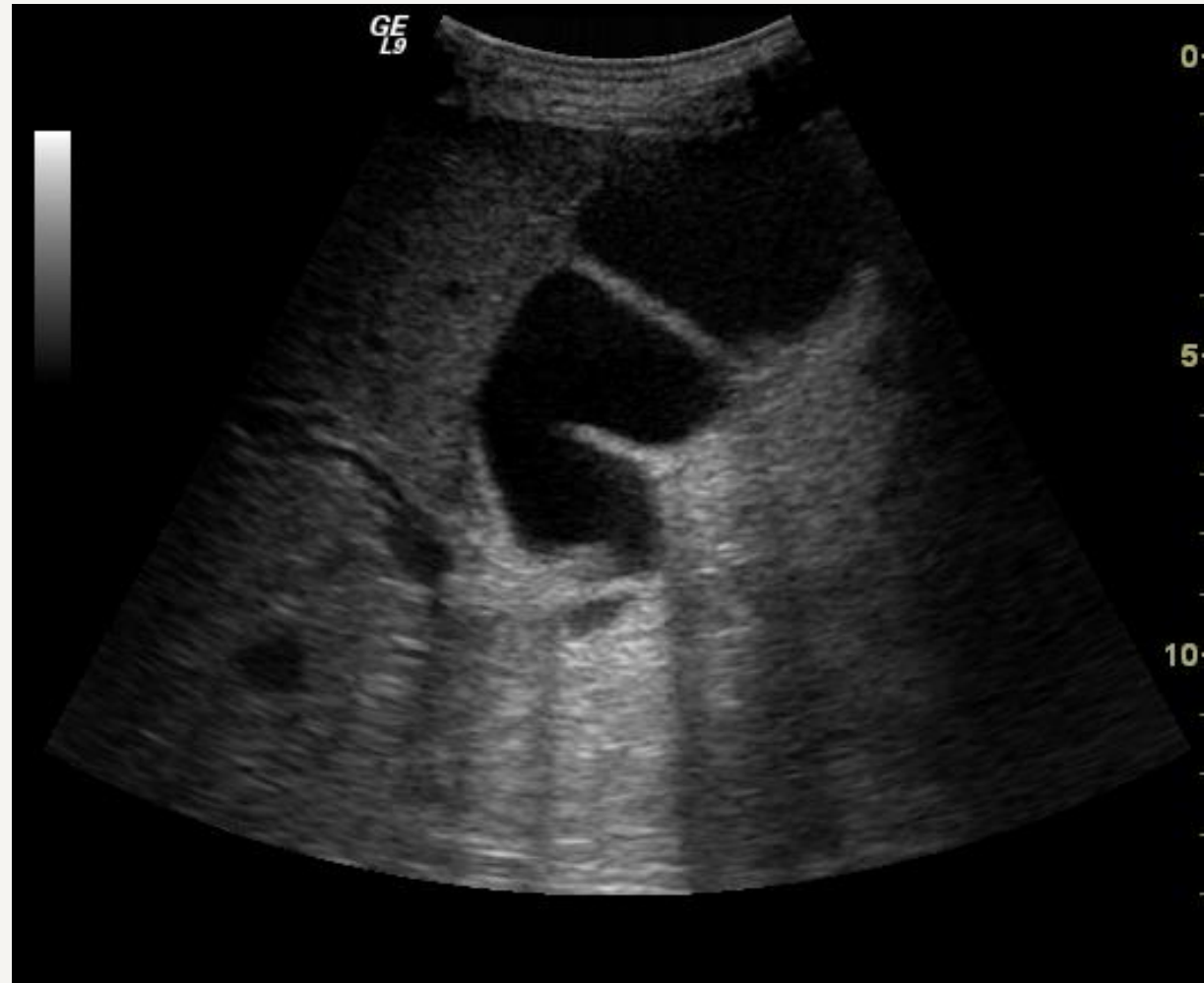
Stasjon 3, skrått subcostalt



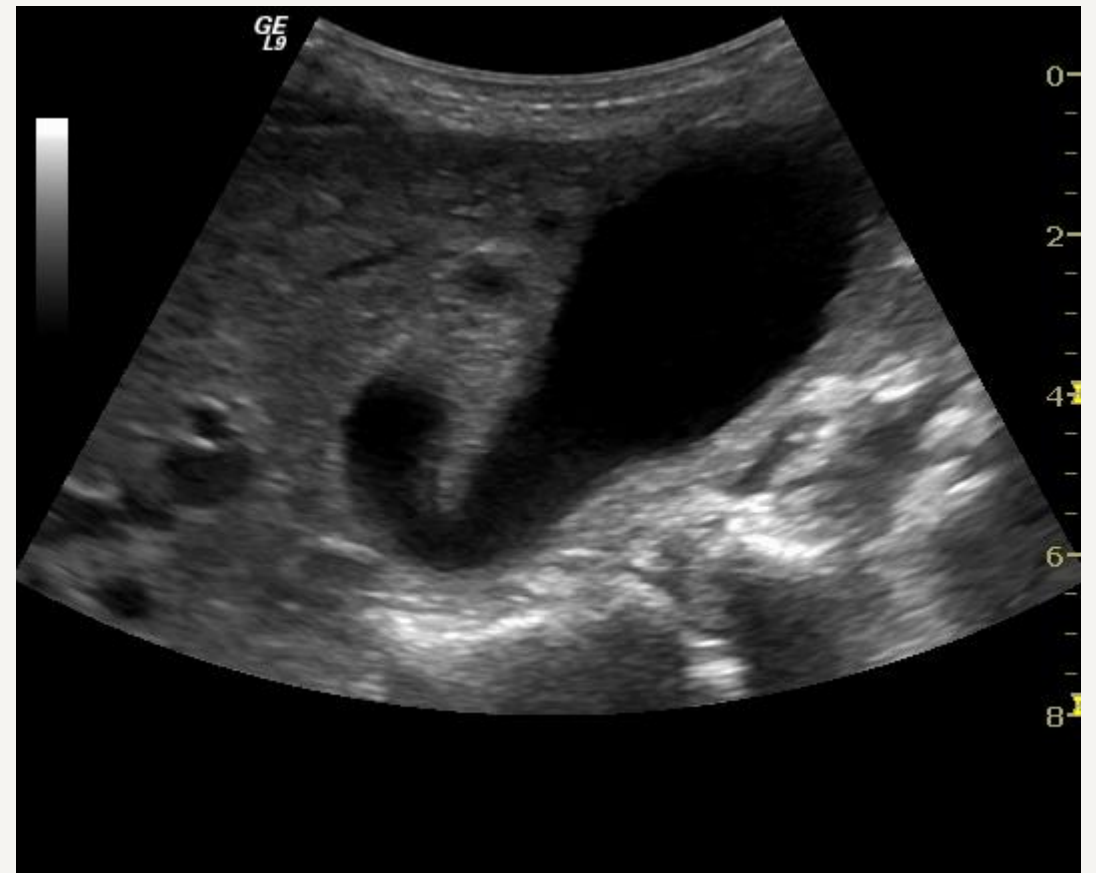
Stasjon 3, rotert 90 grader



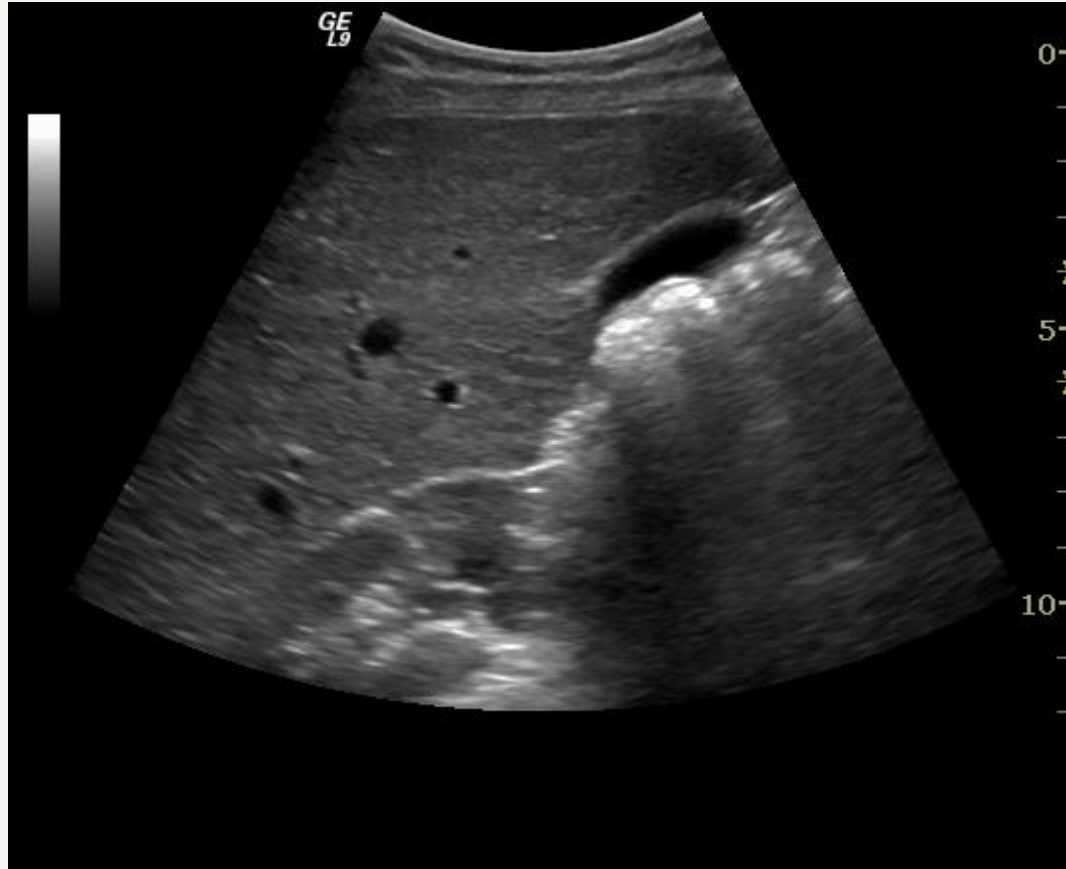
Normalfunn: Folder i galleblæren



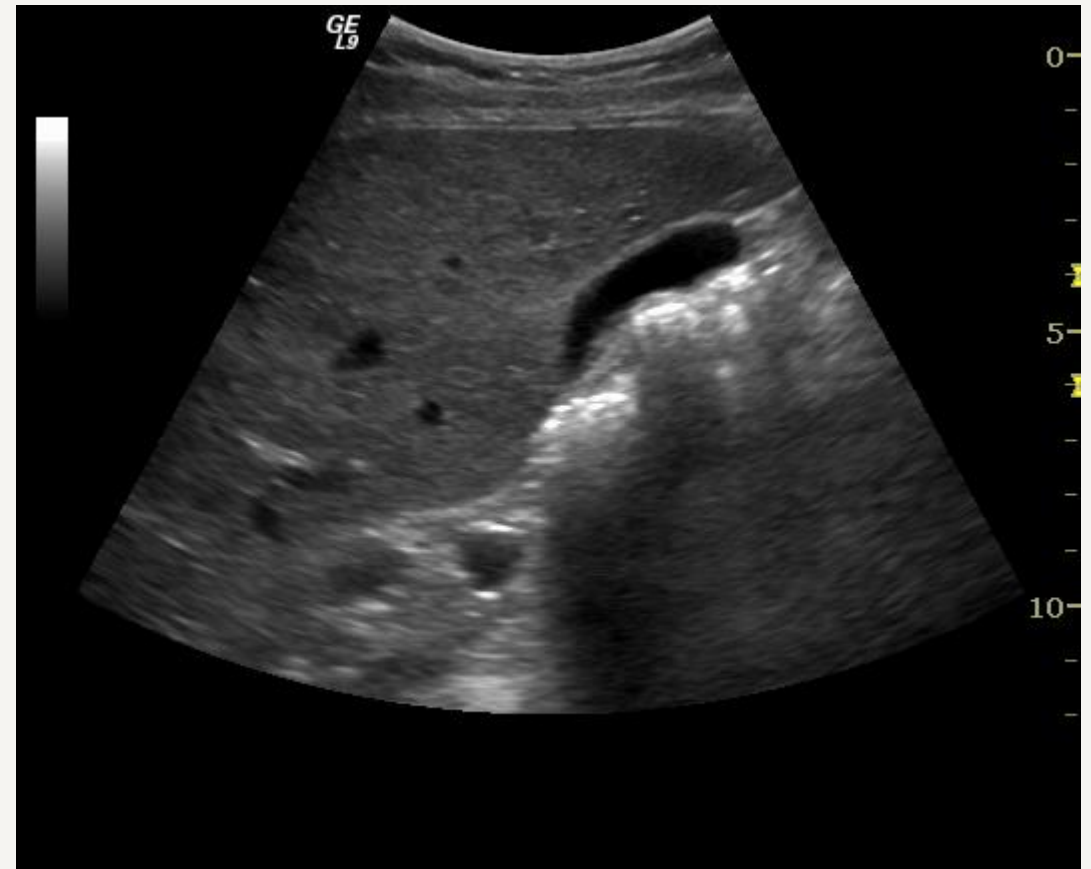
Normalfunn: Galleblærehalsen



Normalfunn: Luft i duodenum

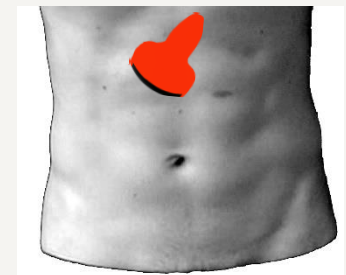
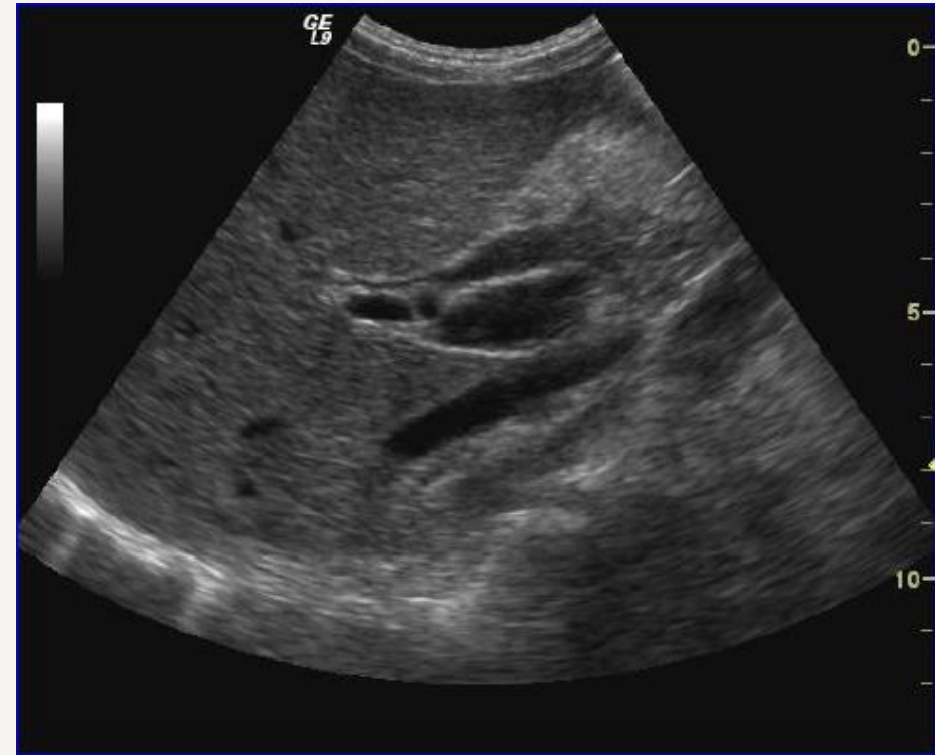


Ved skygger fra luft i duodenum tilbys pasienten et glass vann

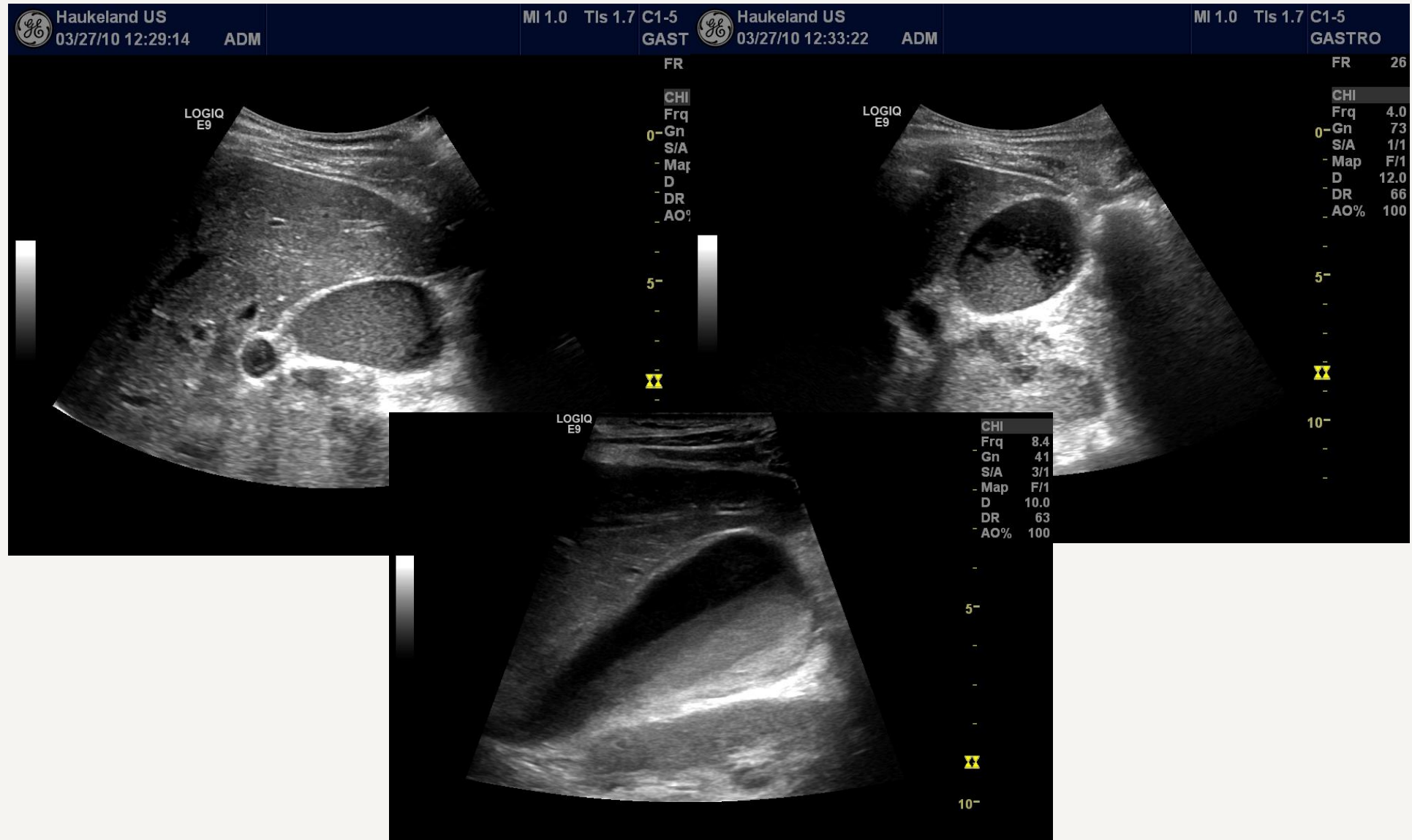


Galleveier

- Normal ductus hepaticus communis/choledochus <7 mm
- <8-9 mm hos cholecystektomerte eller eldre
- Intrahep. galleganger følger porta og ofte ikke synlige.
- Utvidete intrahep. galleganger
→ parallelltegn
- FargeDoppler brukes for å skille galleveier fra kar



Sludge i galleblæren



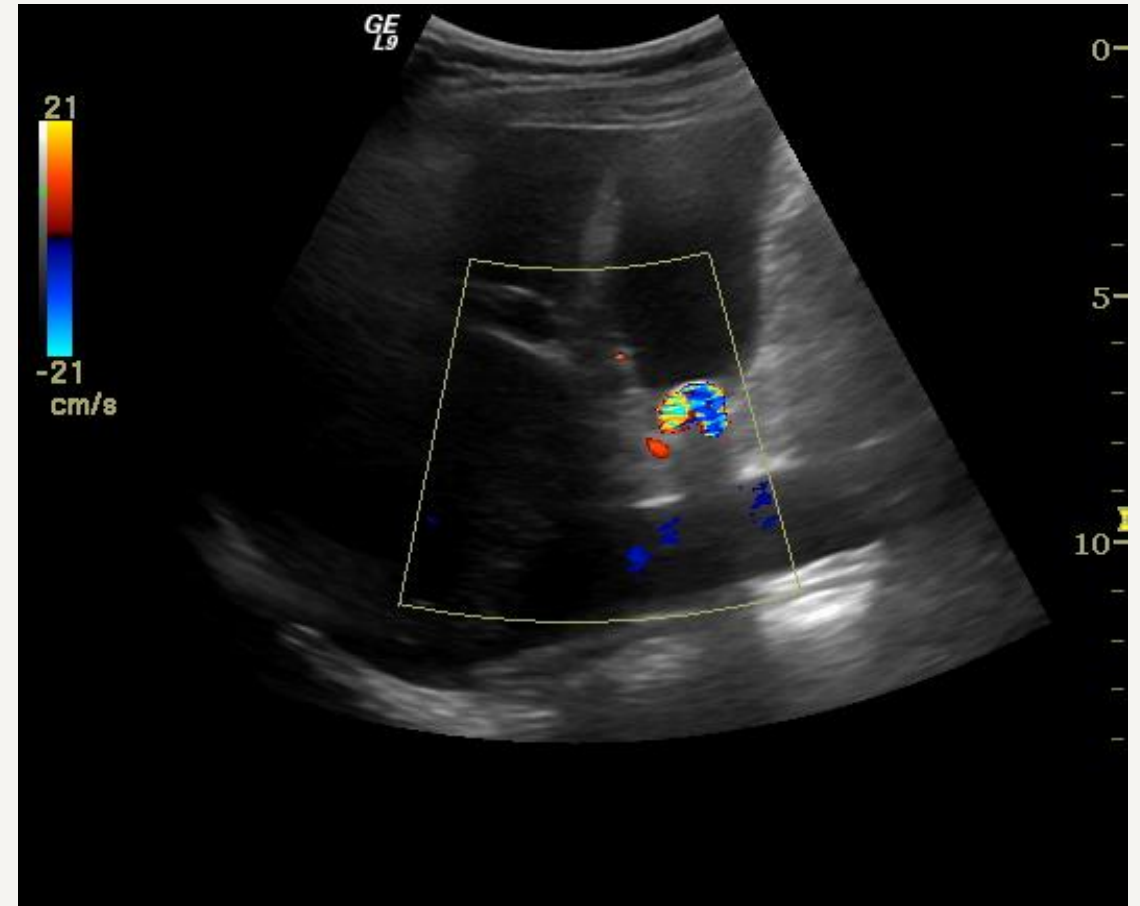
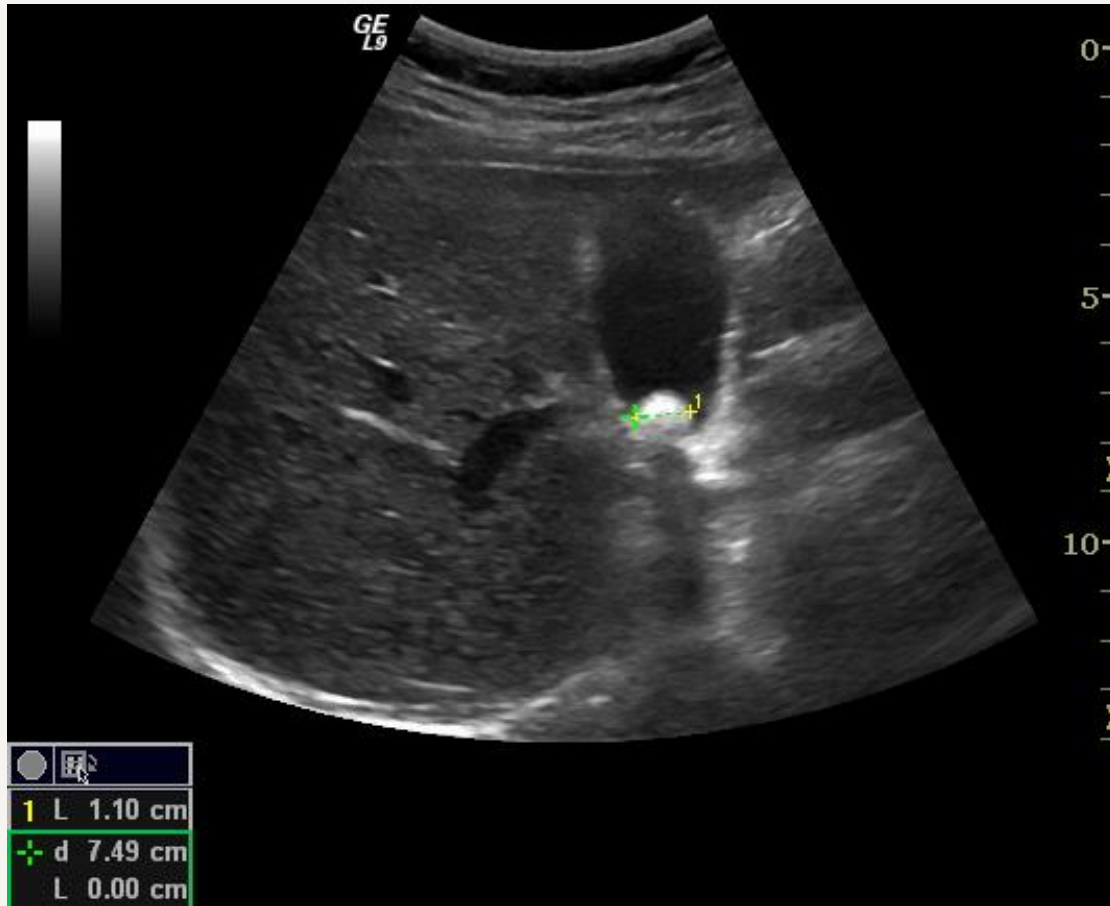
Gallestein



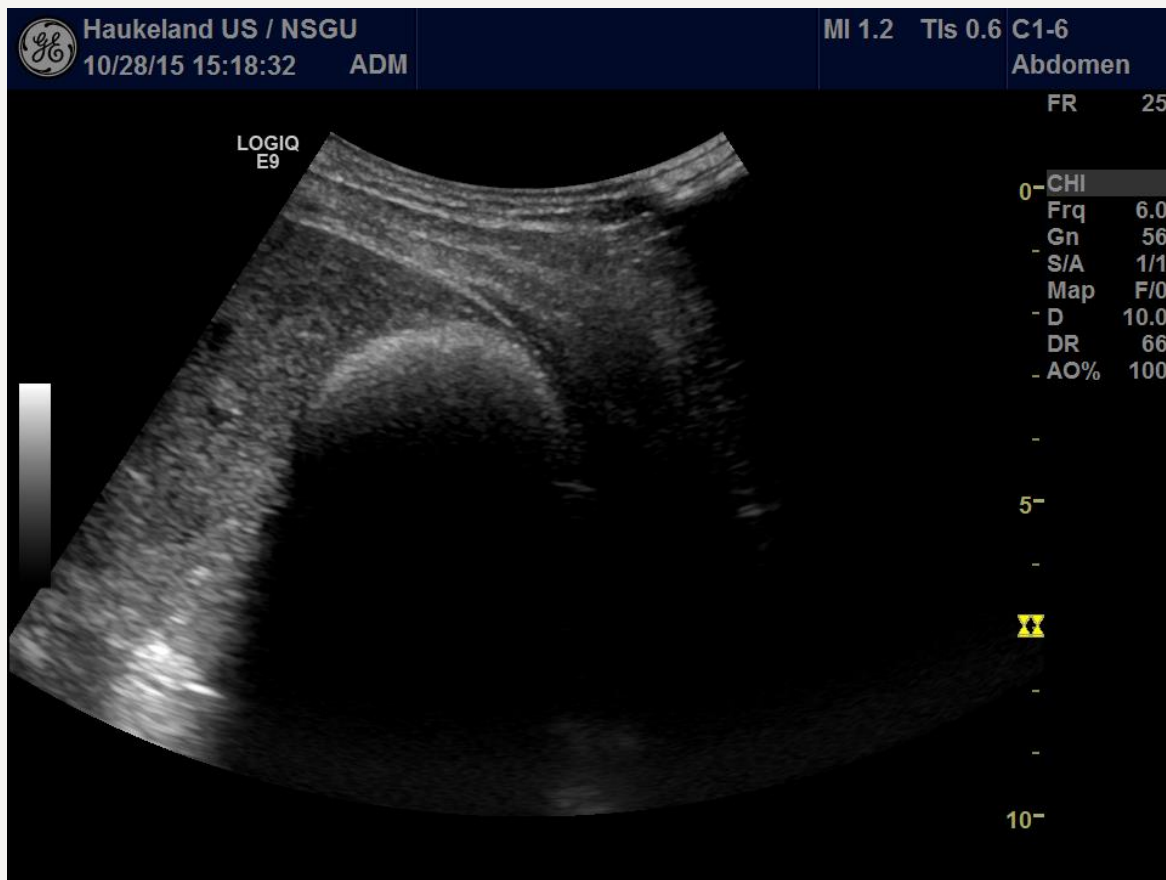
Liten galleblære,
stor stein



Gallestein - Twinkling Artifact



Gallestein i porselensgalleblære

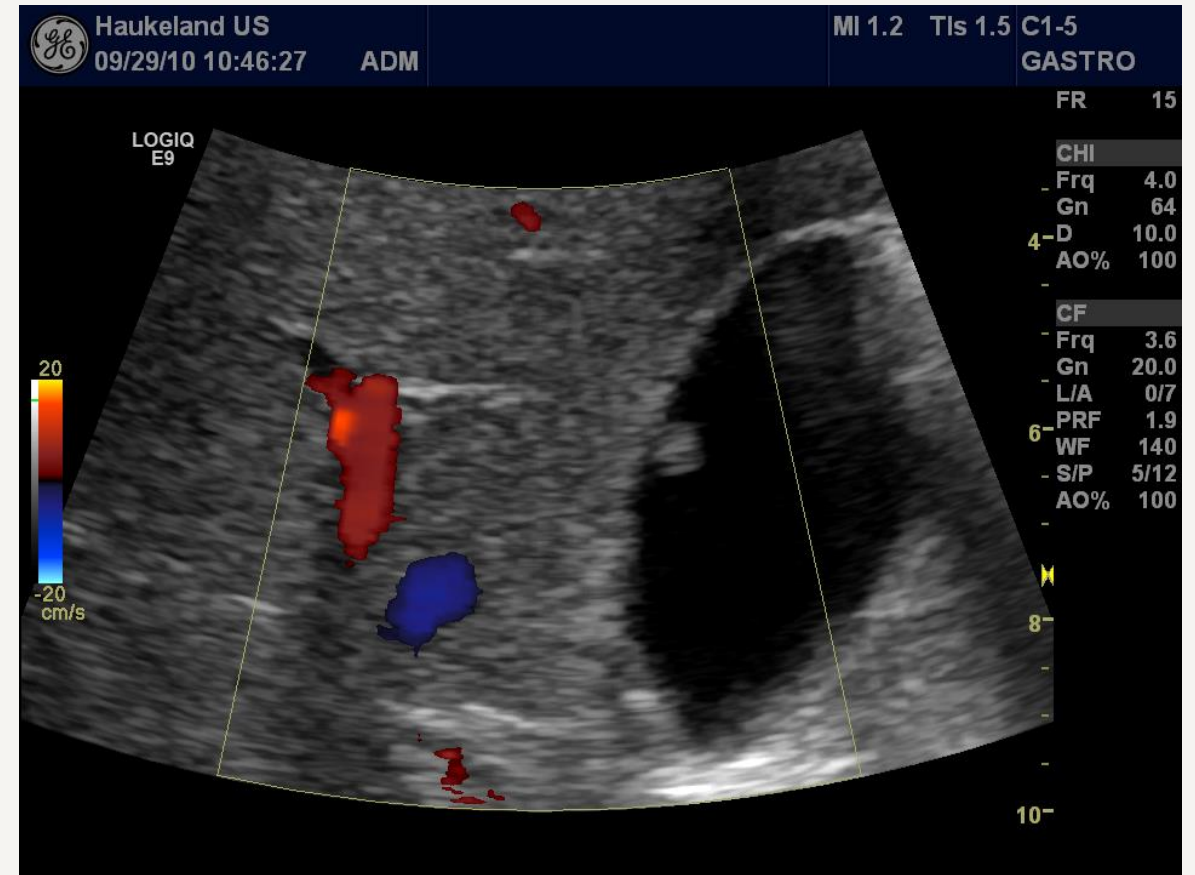
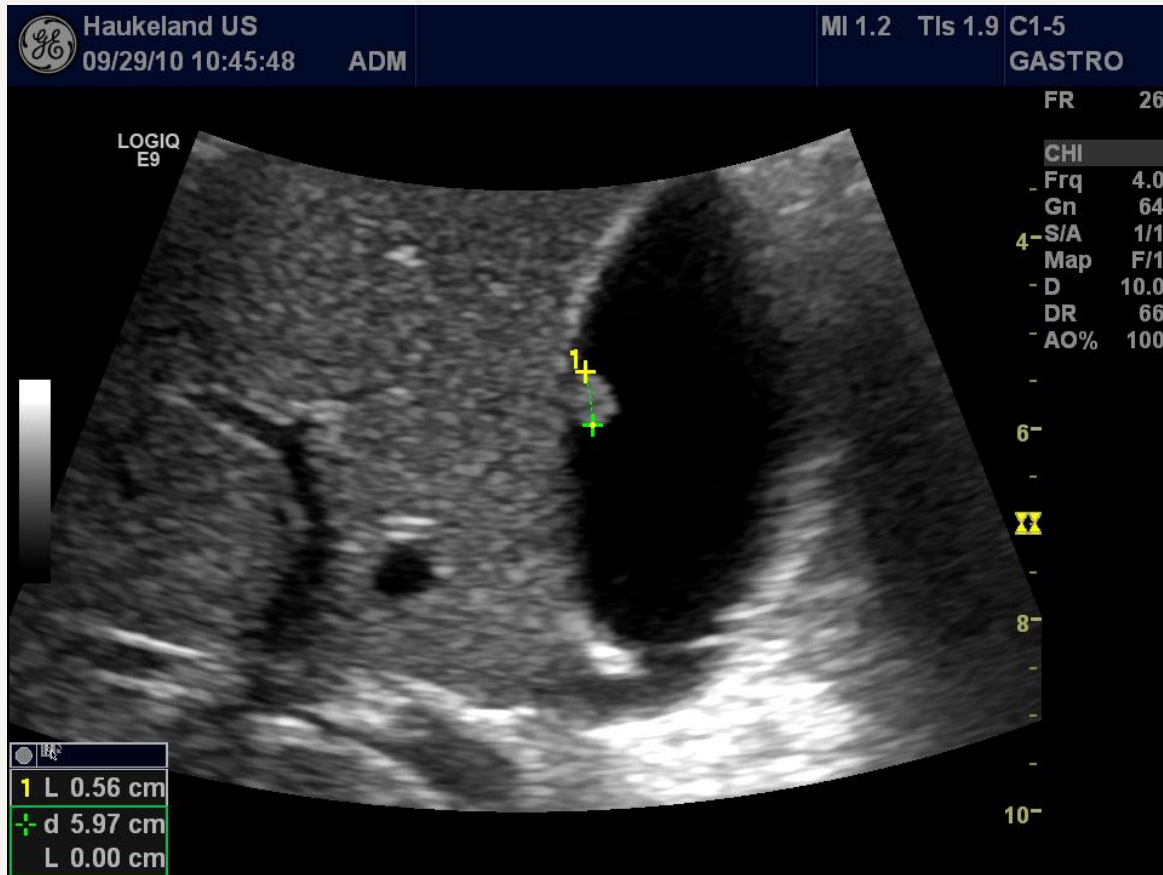


Polypper

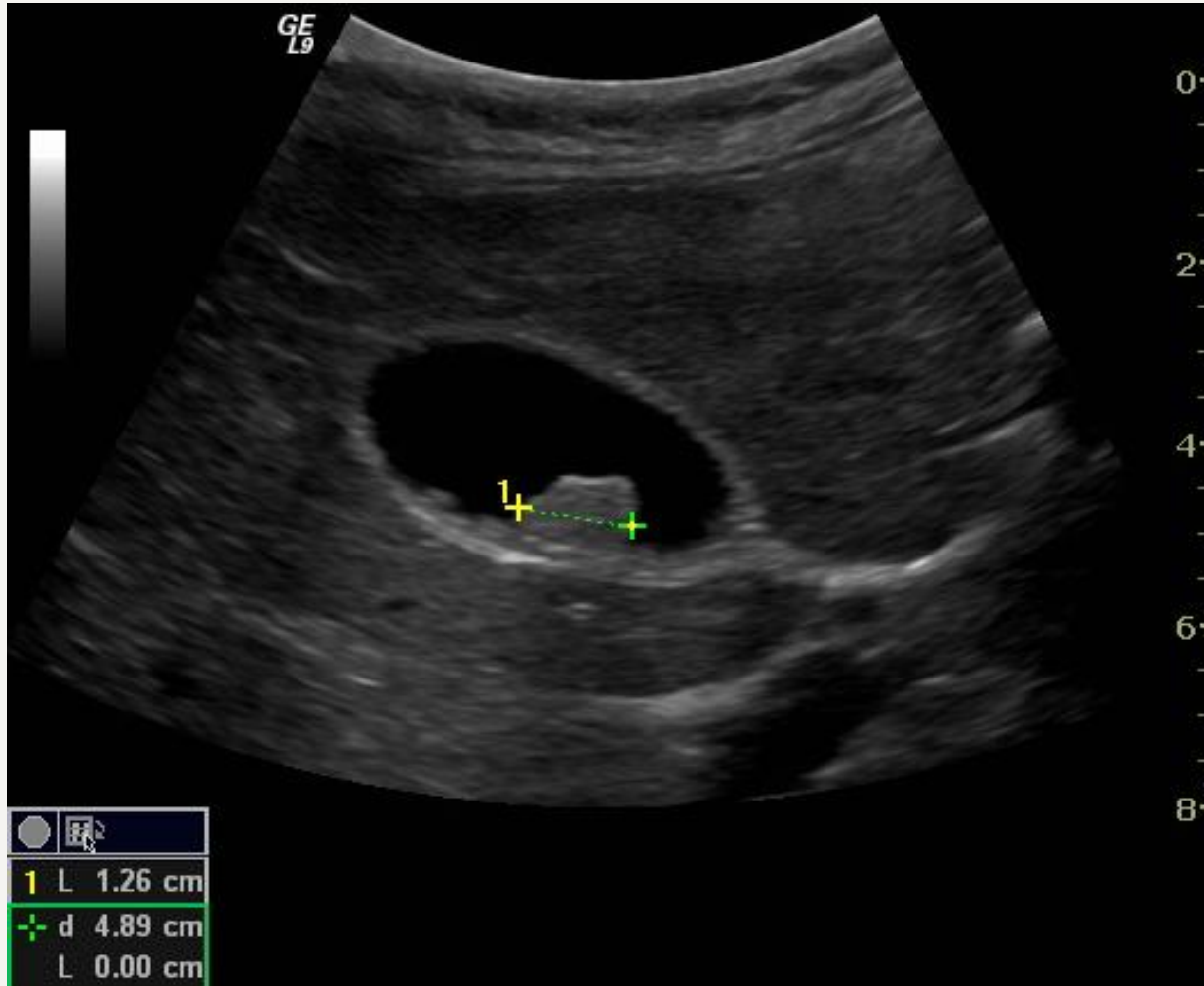
- Liten, ekkogen struktur fiksert til galleblæreveggen.
- Kan være stilket
- Ingen skygge
- Ingen twinkling artefact
- Små vanligvis - pseudopolypper
- Kontroller for oppfølging



Polypper



Galleblæresvulst



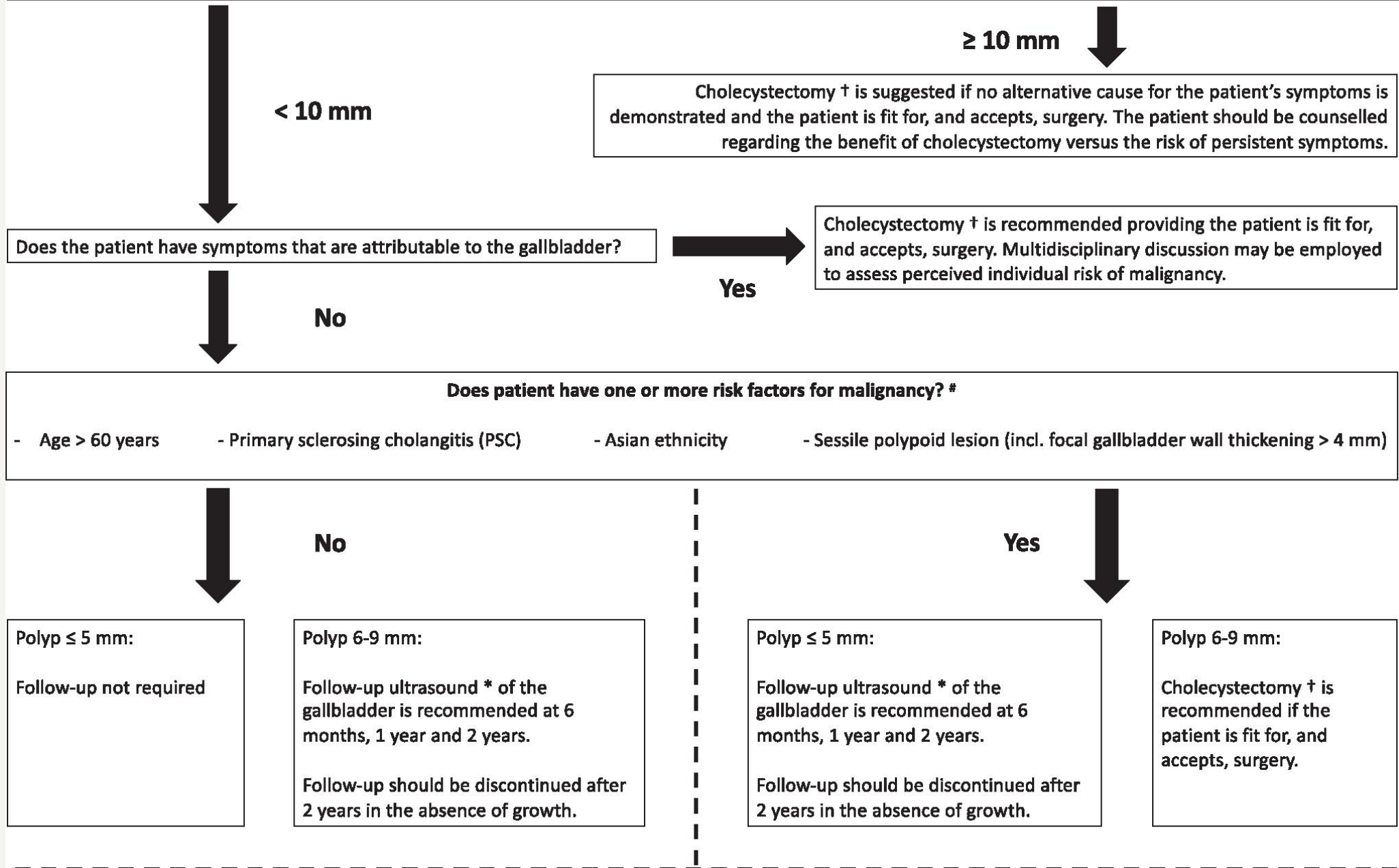
Galleblæresvulst



Husk - Ved mistanke om malignitet er det også viktig å se etter tegn til biliær obstruksjon, tumortromboser, forstørrede lymfeknuter og levermetastaser.

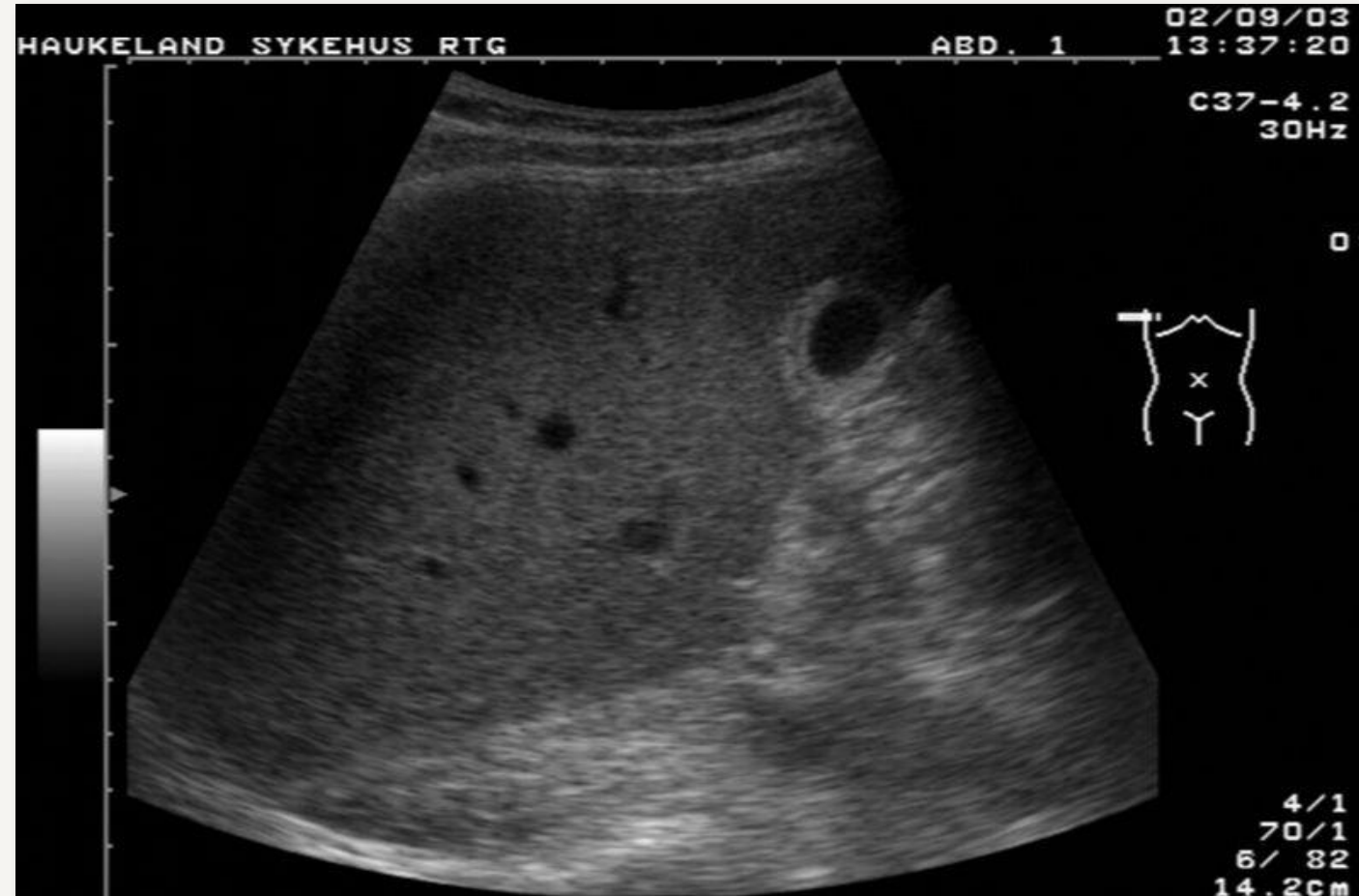
Management and Follow-up of Gallbladder Polyps

(detected on transabdominal ultrasound; excluding definite pseudo-polyp)



Årsaker til fortykkede galleveier

- Gallblære:
 - Postprandial sammentrekning
 - Ascites
 - Cirrhose / Portal hypertensjon
 - Hjertesvikt / Nyresvikt
 - Hypoalbuminemi
 - Hepatitt
 - Cholecystitt
 - Fokal fortykkelse ved polypper/svulster
- Galleveier:
 - Primær skleroserende cholangitt
 - Kolangiokarsinom



Eller manglende fasting..

Fortykket vegg ved ascites.....

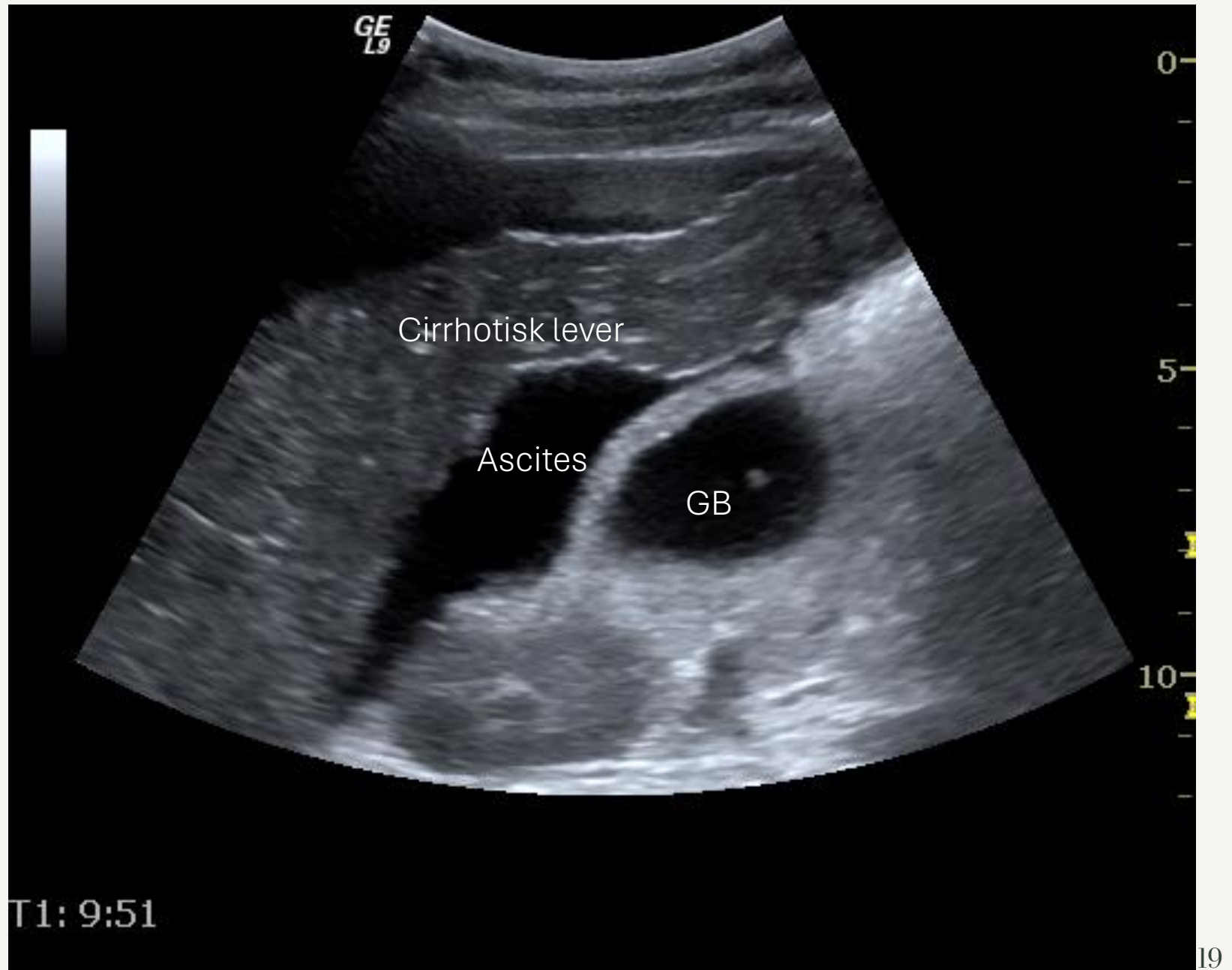


..og ved cirrhose



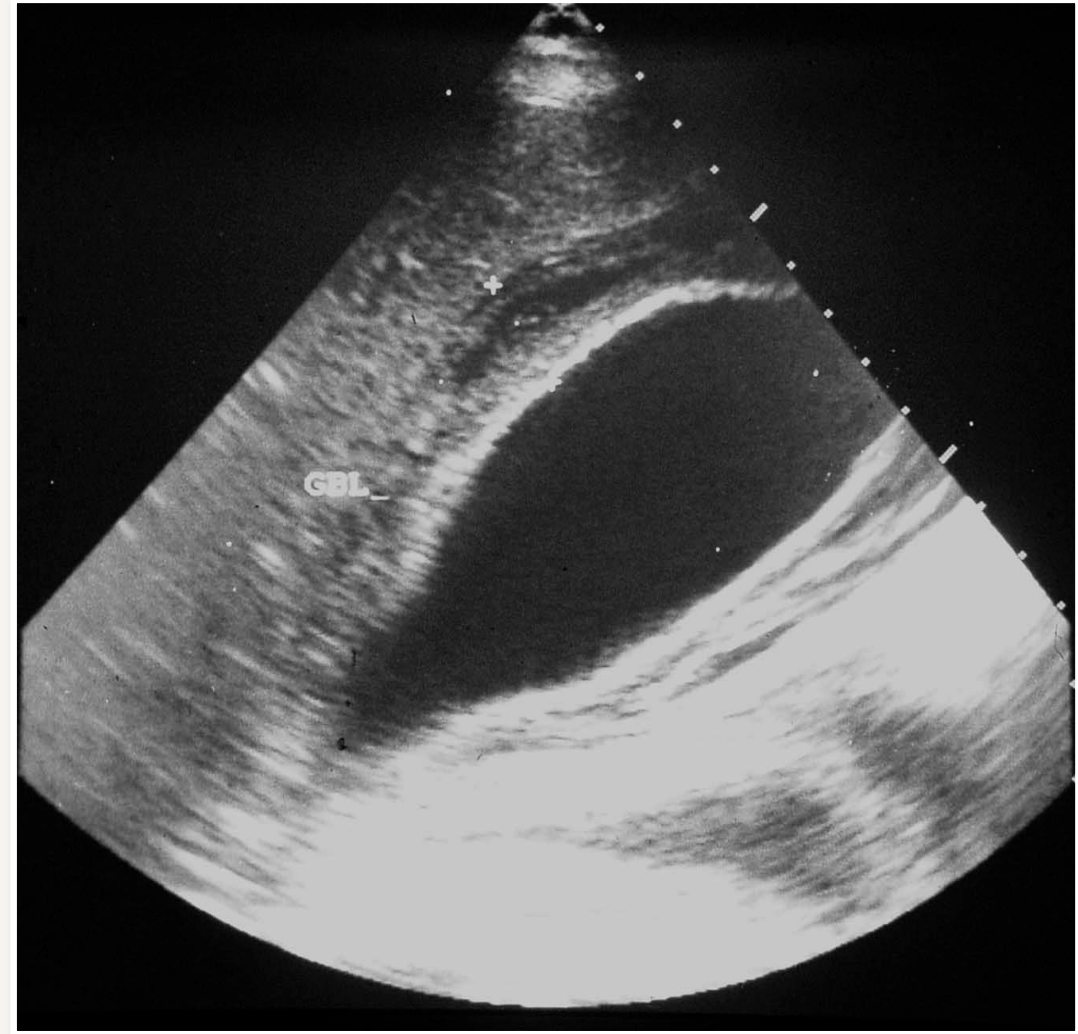
T1: 9:51

Fortykket galleblære
vegg v/cirrhose

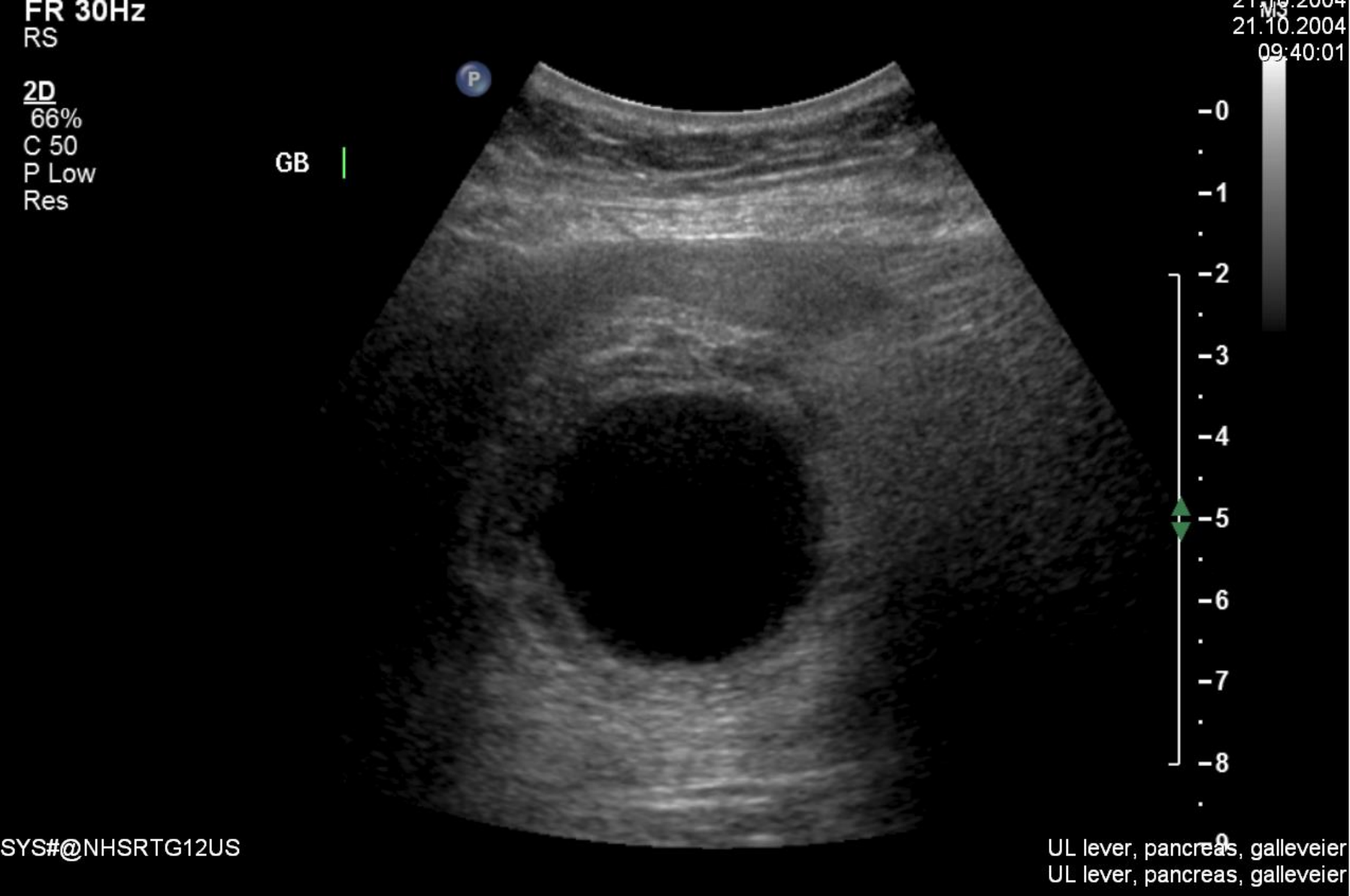


Cholecystitt

- Ømhet ved "transducer-palpasjon"
- Fortykket vegg: 5 mm eller mer
- Cholecystolithiasis
- Dilatert galleblære: tverrsnitt 4 cm eller mer
- Ekkofattig skikt i galleblærevæggen



Cholecystitt

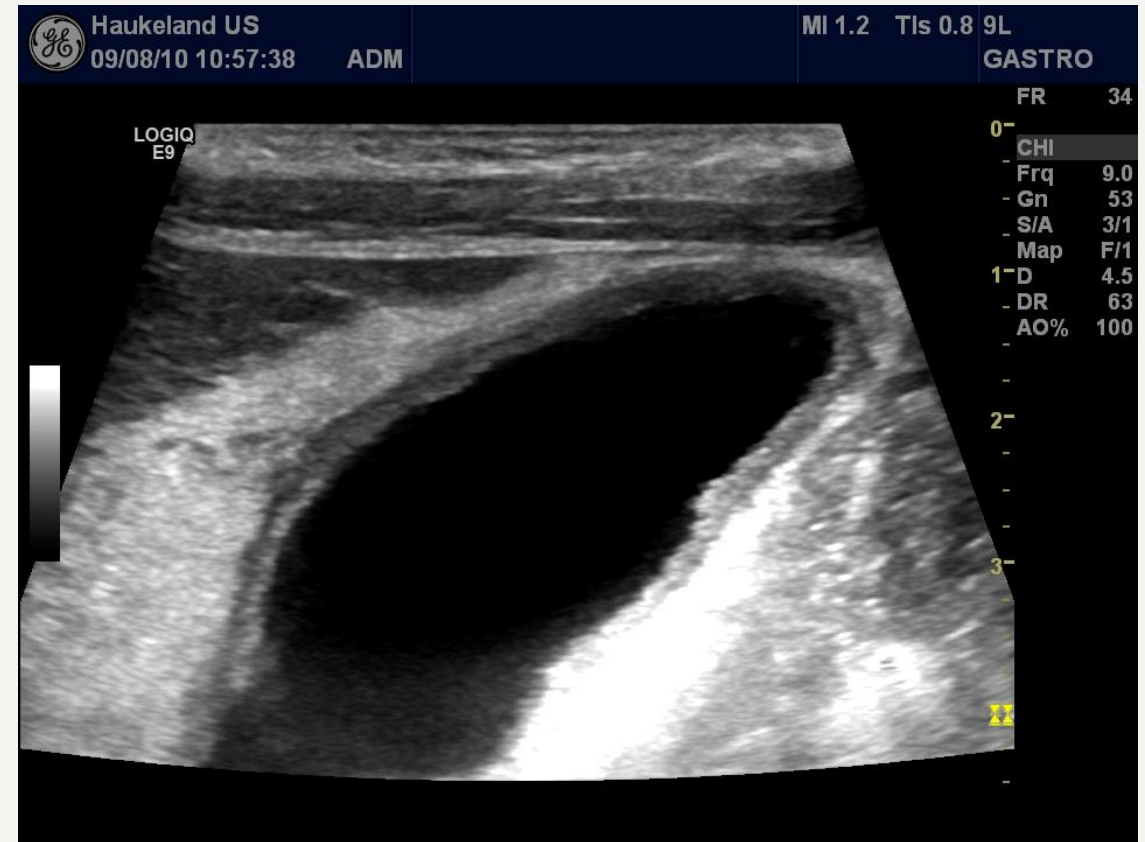
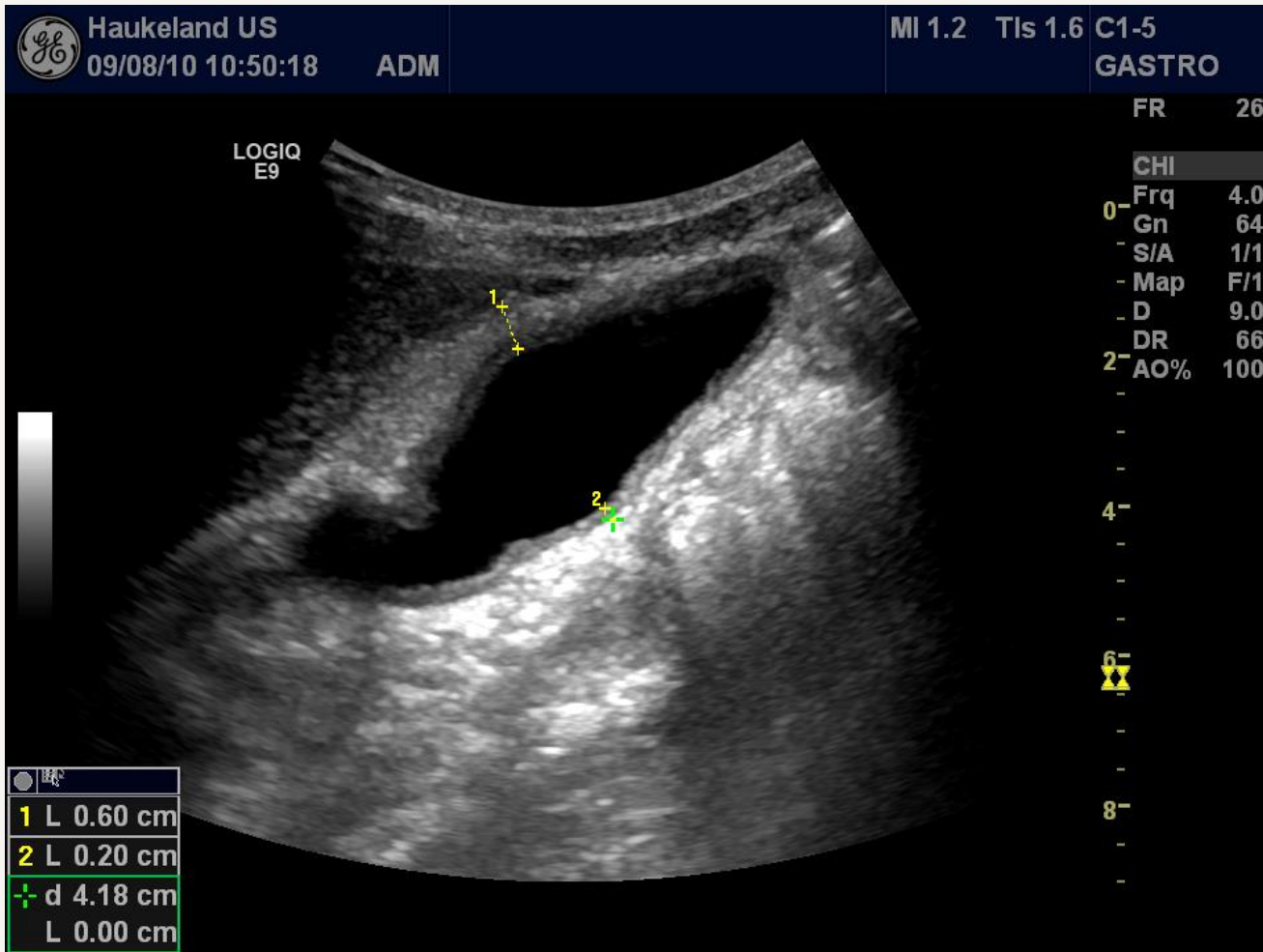


Cholecystitt



- Gallestein? Ja
- Veggfortykkelse? Ja
- Transduserømhet? Ja

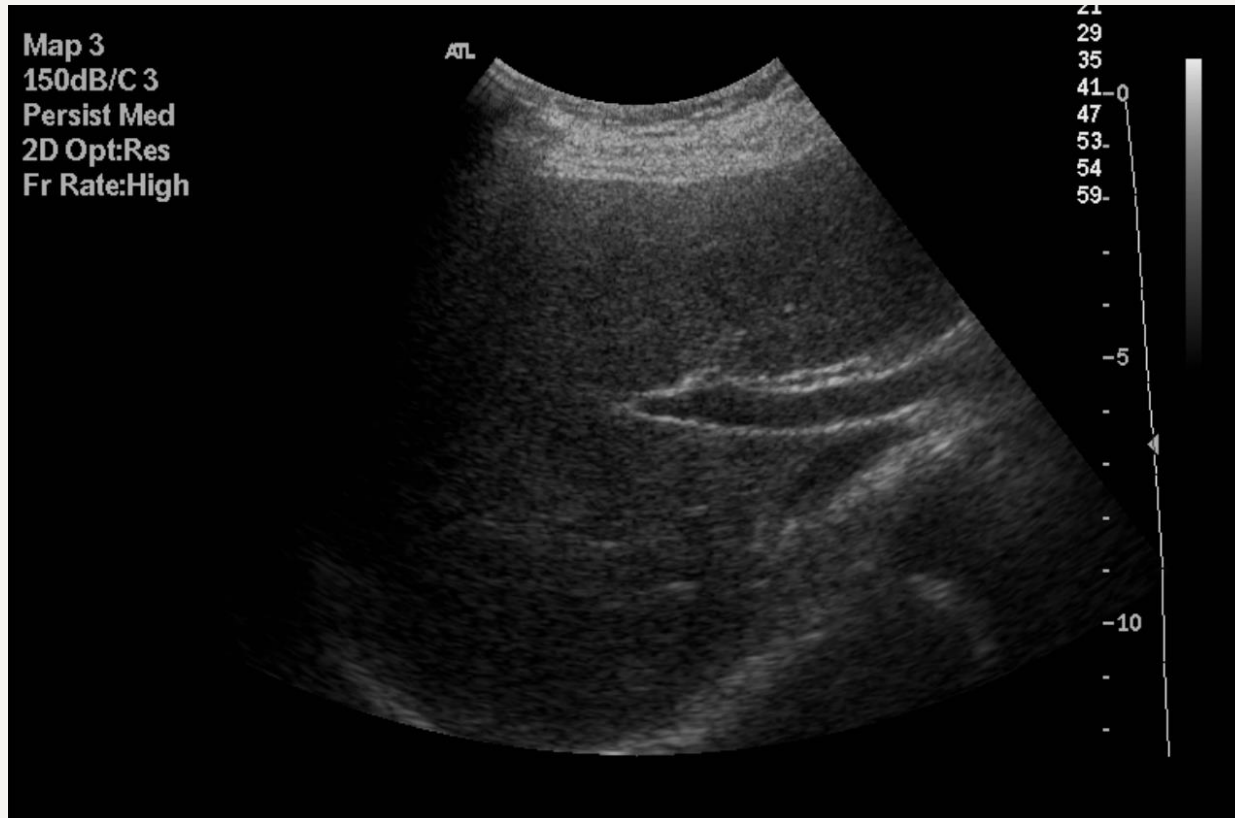
Kronisk cholecystitt



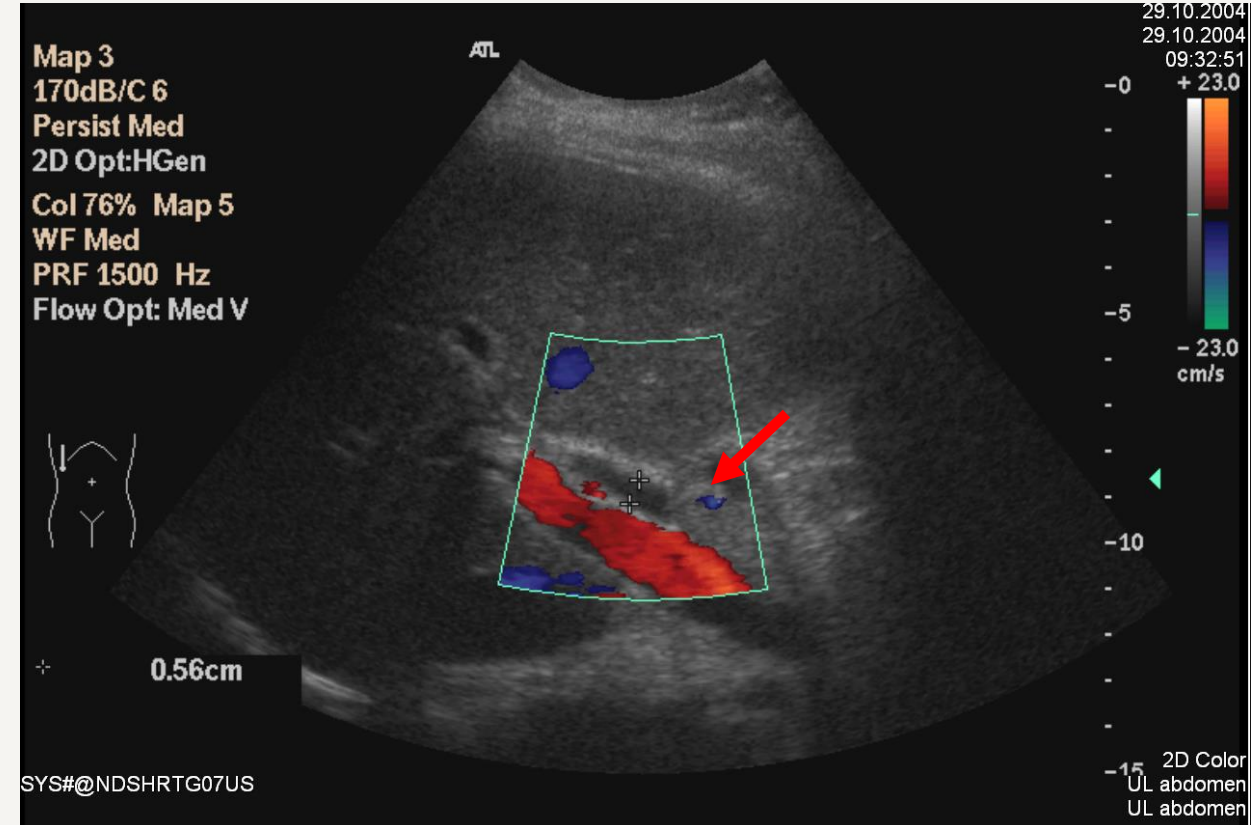
GALLEGANGENES KALIBER

- Intrahepatiske galleganger, normalt $\leq 1-2$ mm
- Ductus hepatis communis og ductus choledocus kan måle opptil 4-5 mm
 - 5-6 mm er usikkert patologisk
 - >6 mm indikerer obstruksjon
- Ductus bør måles proksimalt, ekstrahepatisk
- Økende diameter med alder
- Økende diameter etter perioder med dilatasjon(akutt/kronisk), postcholecystectomi

Galleangene



Normalt

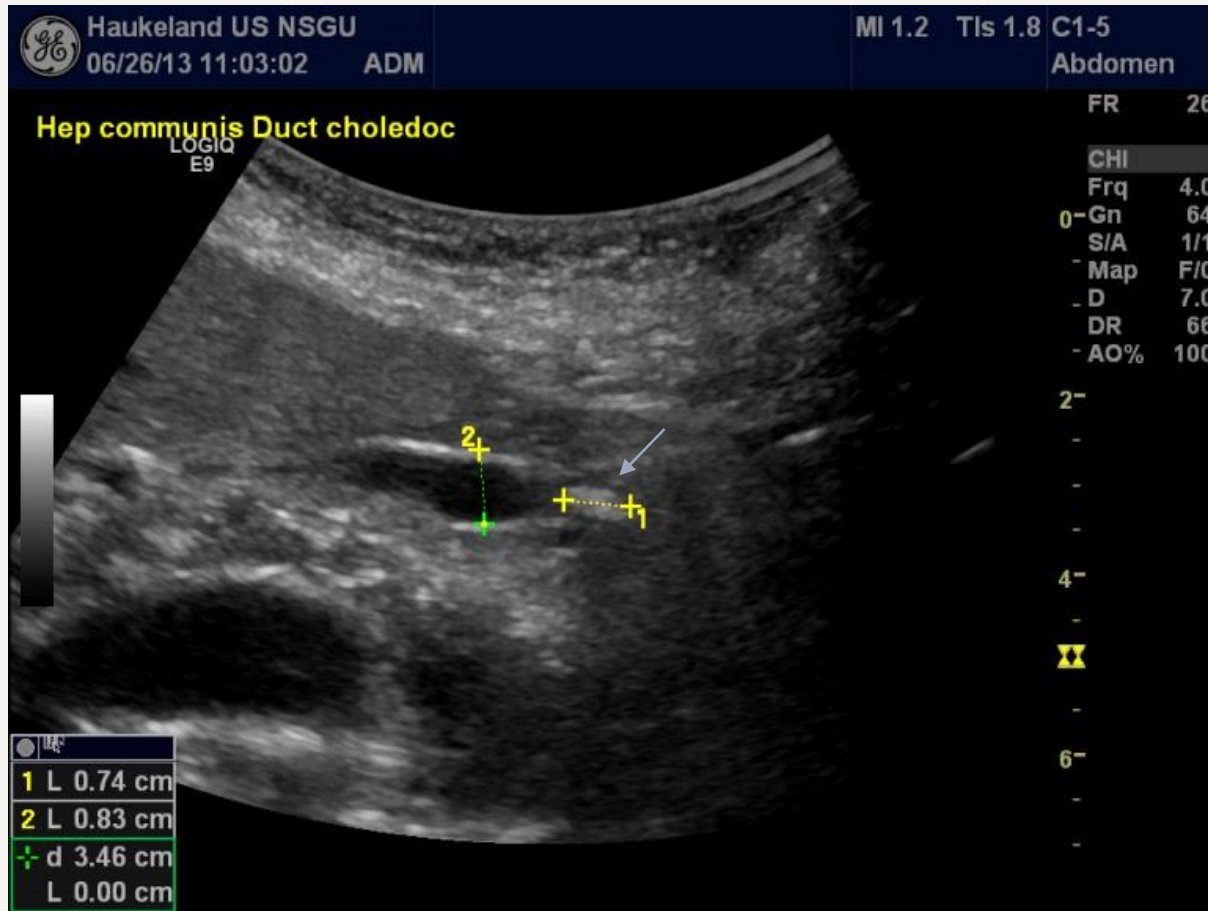


Gallestein i ductus choledochus,
oppstrøms dilatasjon

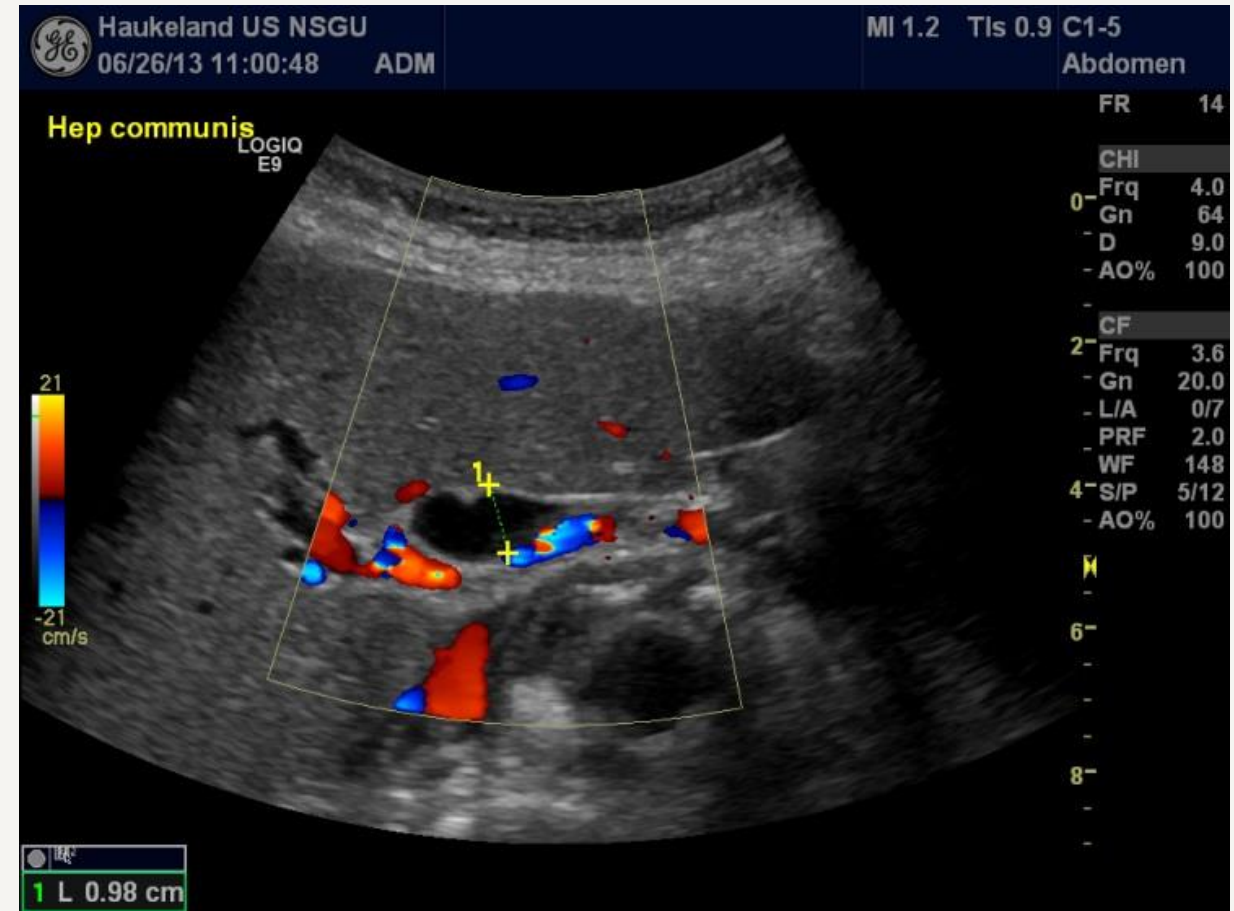
Årsaker til ekstrahepatisk dilaterte galleveier

- Konkrement
- Neoplasmer
 - Kolangiocarcinom
 - Pankreascancer
 - Papillecancer
- Lymfadenopati
- Inflammasjon
- Choledocuscyste
- Skleroserende cholangitt

Choledocholithiasis

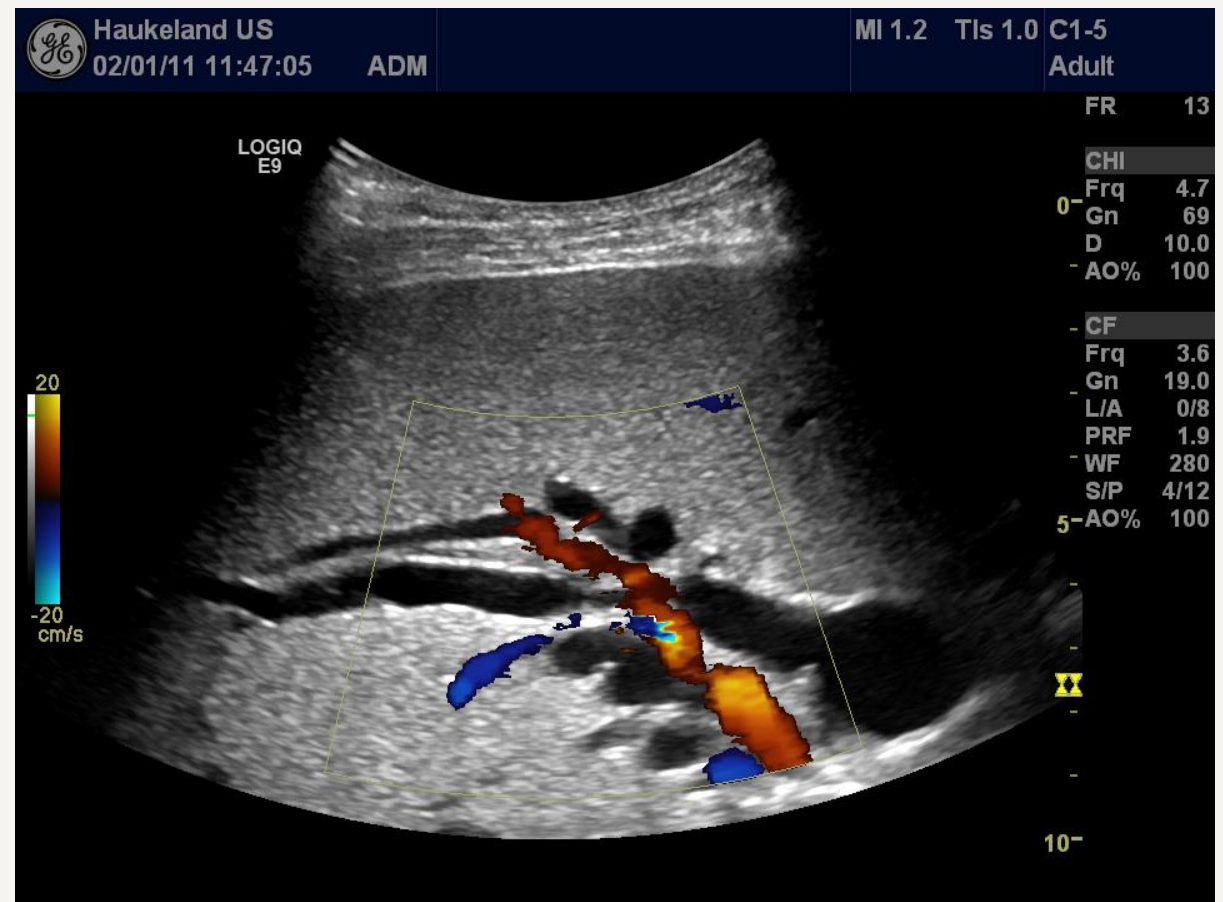


Gallestein blokkerer sentrale galleveier



«Twinkling» artefakt med farge Doppler

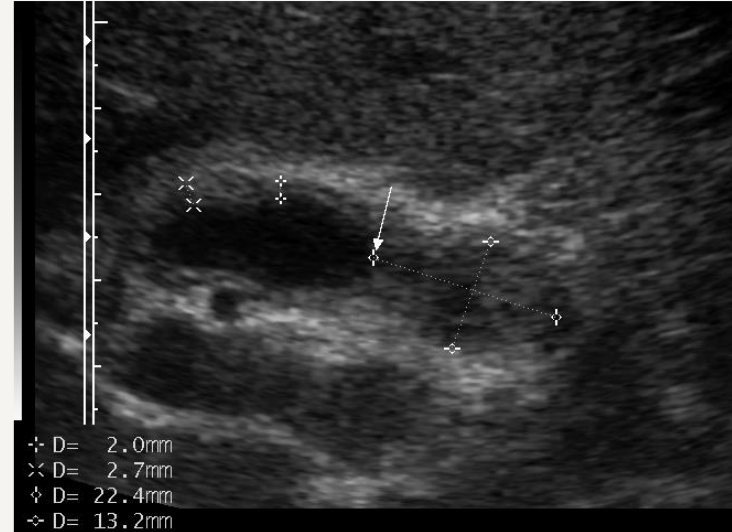
Dilaterte intrahepatiske galleganger



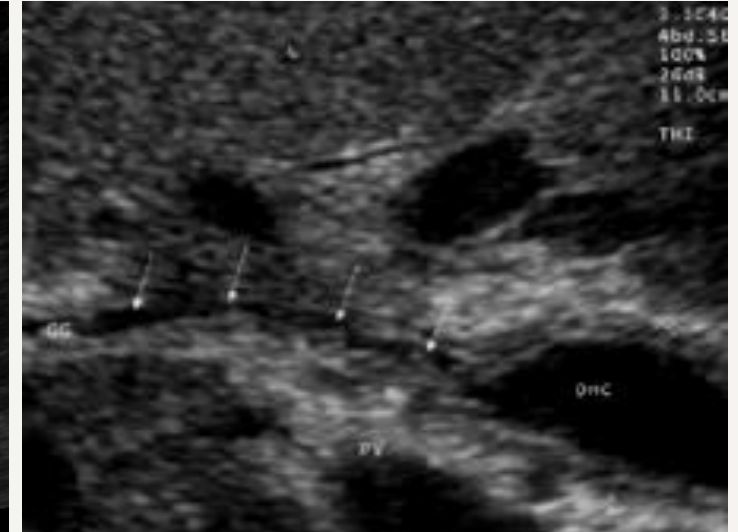
Primær skleroserende cholangitt

- Ofte lite funn
- Uregelmessige galleganger med strikturer/fortykket vegg
- Periportal fibrose
- Gallestenssykdom
- Periportale lymfeknuter

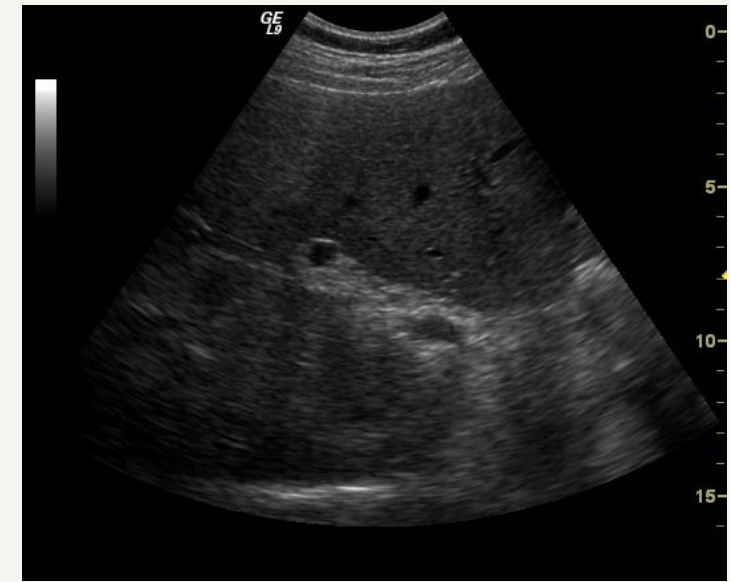
- Endestadium → cirrhose, portal hypertensjon



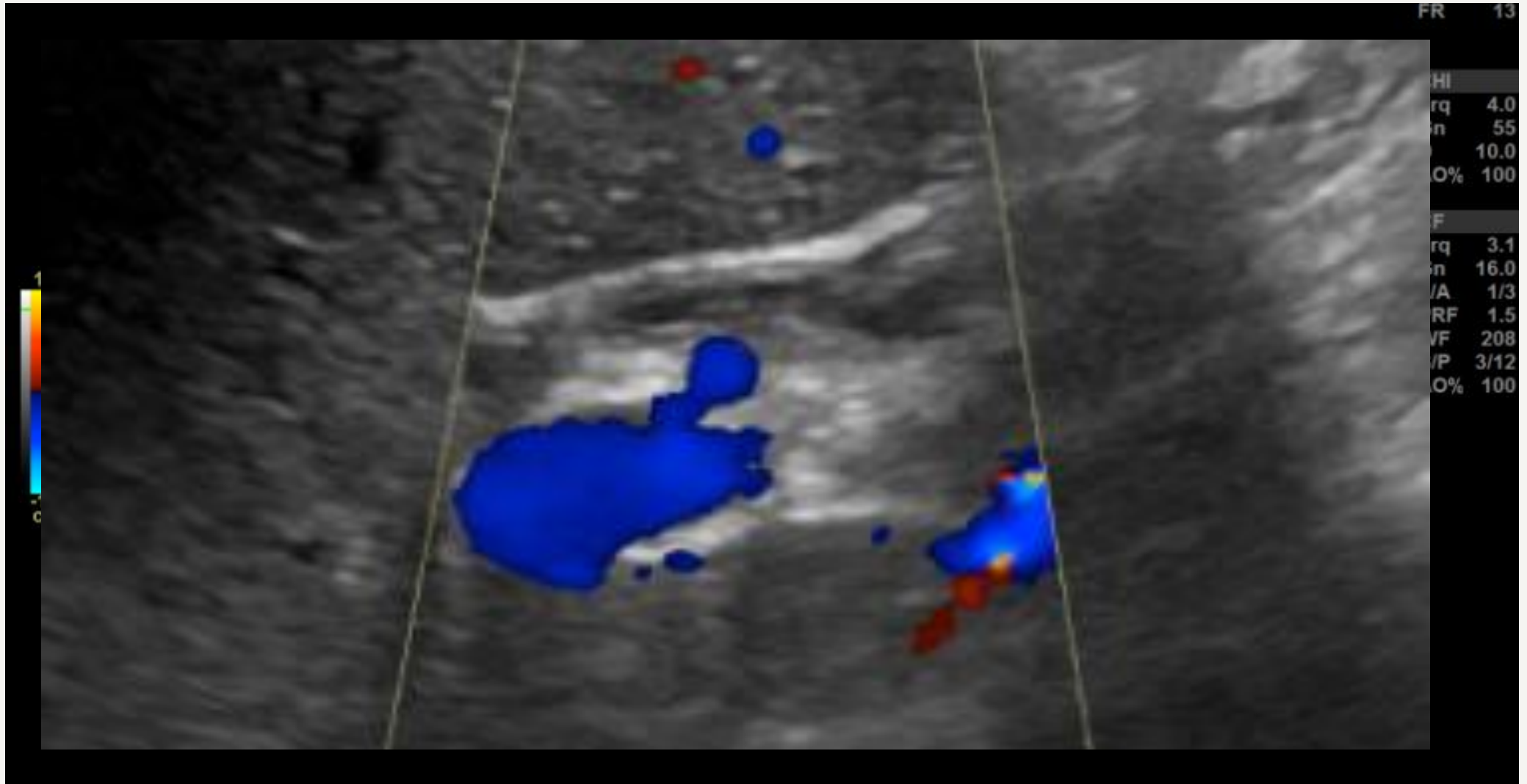
Fokal fortykkelse av vegg i galleveiene og stenose



Periportal fibrose



PSC

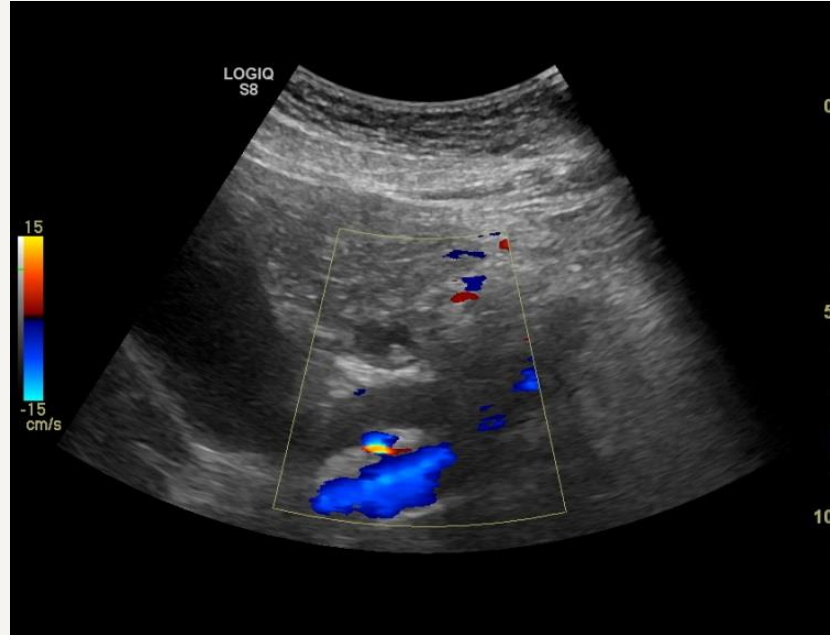


Fortykket vegg i ductus choledochus

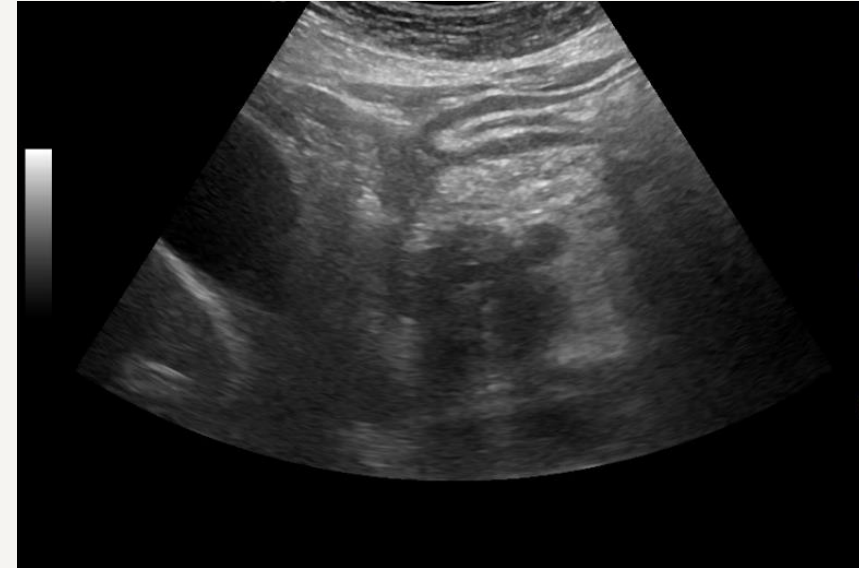
Intrahepatisk cholestase v/ pankreascancer



Intrahepatisk dilaterte galleganger



Dilatert ductus choledochus



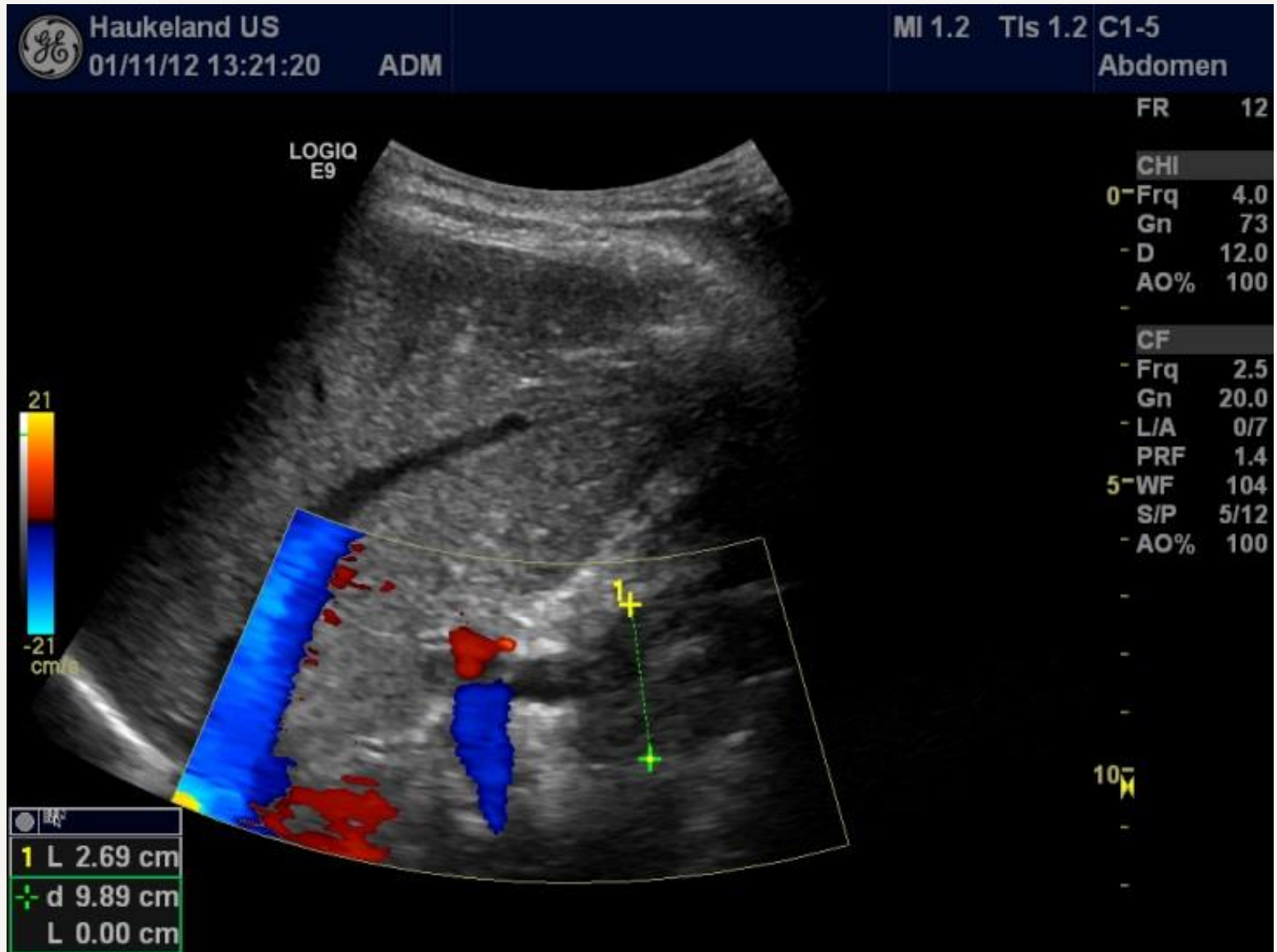
Hypoekkoisk tumor i pankreashodet

Cholangiocarcinom

Ofte kan man bare se striktur med proksimal gallegangsdilatasjon.

Tumor er gjerne isoeckoisk.

Kan oppstå hvor som helst i galletreet.



Oppsummering

- Fastende undersøkelse
- Systematisk scanning
- Bruk fargeDoppler