

Ultrasonografická diagnostika velkých slinných žláz

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Radiologická klinika LF a FN v Olomouci, ÚRM FZV
UP

Kurz UZ techniky - Ultrazvukový kongres

Čejkovice 2014

Zobrazovací postupy

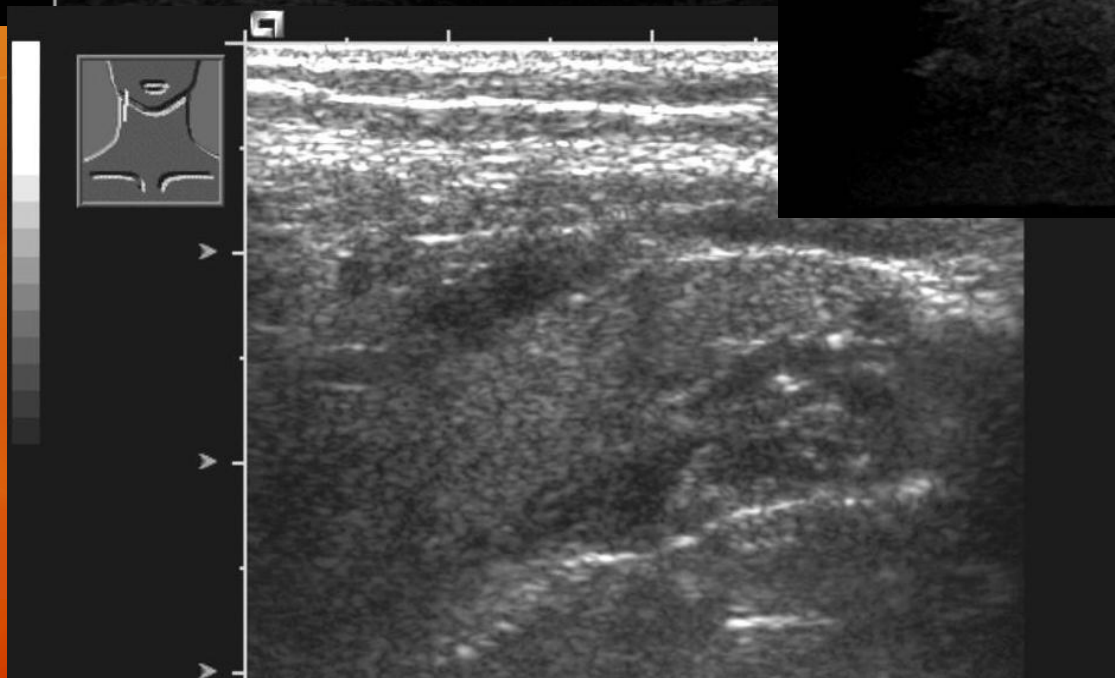
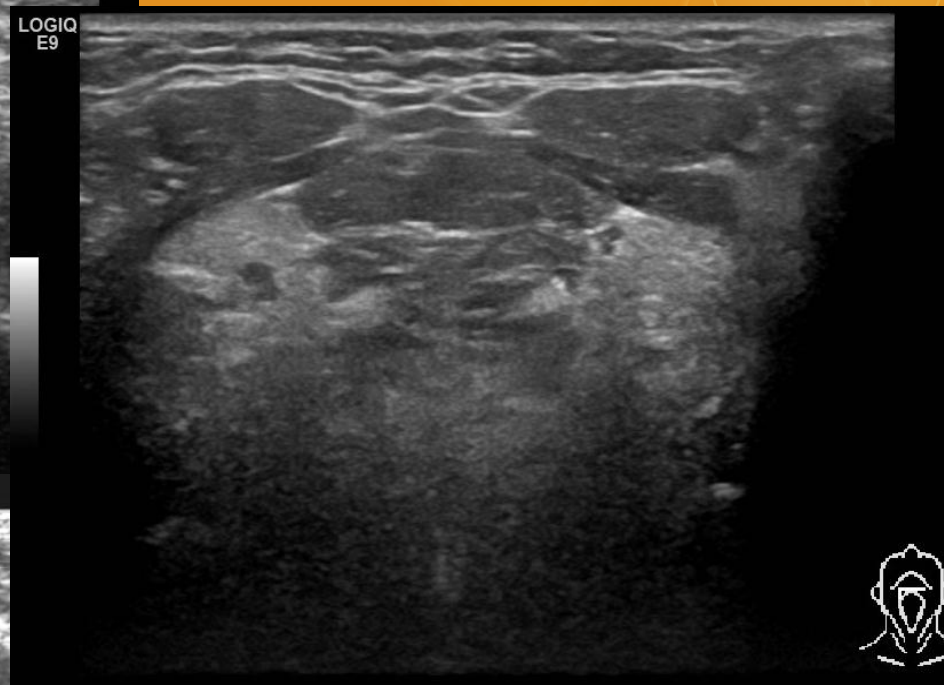
- **Ultrasonografie** včetně dopplerovské a sonoelastografie
- MRI včetně **MR- sialografie** (bez použití KL)
- CT vyšetření nativně a po aplikaci KL iv., výjimečně i do vývodů CT- sialografie, **PET-CT**
- Konvenční sialografie, DSS, prostý snímek
- Fistulografie, DSA (výjimečně u nádorové terapie)
- Intervenční metody (řízené US a CT) - v praxi **cílená punkce tenkou jehlou řízená ultrasonograficky** metodou “free hand“

Normální anatomie

- Velké slinné žlázy: a) **příušní lobus superficialis** (80% objemu) et profundus (20% objemu), akcesorní lalůčky, b) **podčelistní**, c) **podjazykové**
- Vývody: ductus parotideus (Stenonův), ductus submandibularis (Whartoni), ductus sublinguales minores (i samostatně do d. Whartoni)
- Mízní uzliny (20-30 parotidomasseterická oblast, 15 subm. obl.) intraglandulární, LU skákavé (meta), povrchové parotické, submandibulární a submentální mízní uzliny



LOGIQ
E9

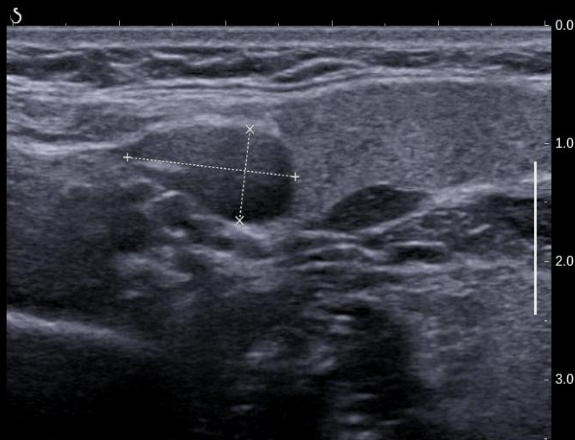


Indikace, parasialomy

- Aspekci viditelné zduření (lipomatosis, hypertrofie m.masseter)
- Hmatná rezistence (kombinace s prvním jmenovaným příznakem častá)
- Bolestivost regionu velké slinné žlázy
- Nutnost odlišit postižení žlázy od parasialomu (mízní uzliny, laterální krční cysty.....)

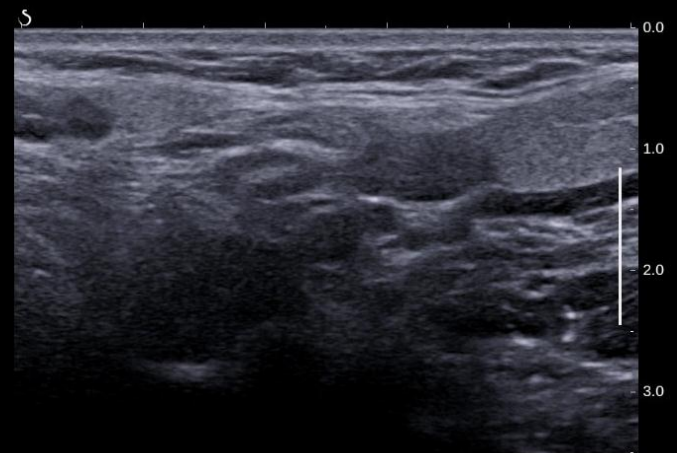
B
Gen/Med
M 5/69 dB/Med
T 1540 m/s
SC/SR 2
G 53 %
Fr. 51 Hz

Z 105 %



B
Gen/Med
M 5/69 dB/Med
T 1540 m/s
SC/SR 2
G 53 %
Fr. 51 Hz

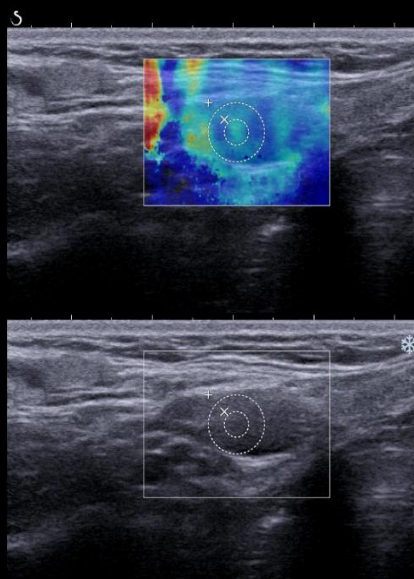
Z 105 %



B
Gen/Med
M 5/69 dB/Med
T 1540 m/s
SC/SR 2
G 53 %
Fr. 12 Hz

SWE™
Std/Med
M 1/High
S 5/O 50 %
G 70 %

Z 105 %



≥100 kPa



GE Healthcare
22/01/13 10:06:38

ADM

MI 0.5 TIs 0.5 ML6-15

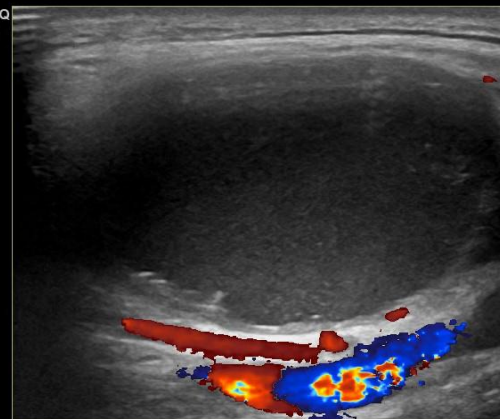
Thyroid

FR 5

B
Frq 11.0
Gn 46
D 4.5
AO% 100

1 CF
Frq 6.3
Gn 17.0
L/A 2/8
PRF 1.2
2 WF 96
S/P 1/16
AO% 100

LOGIQ
E9



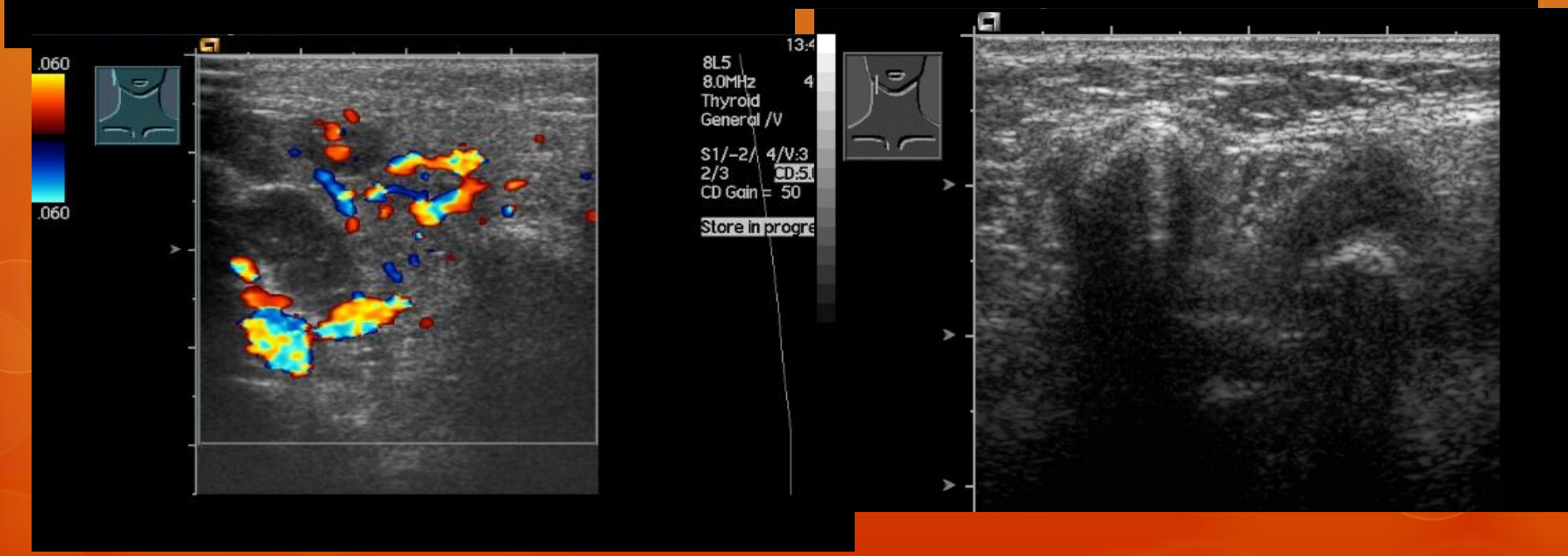
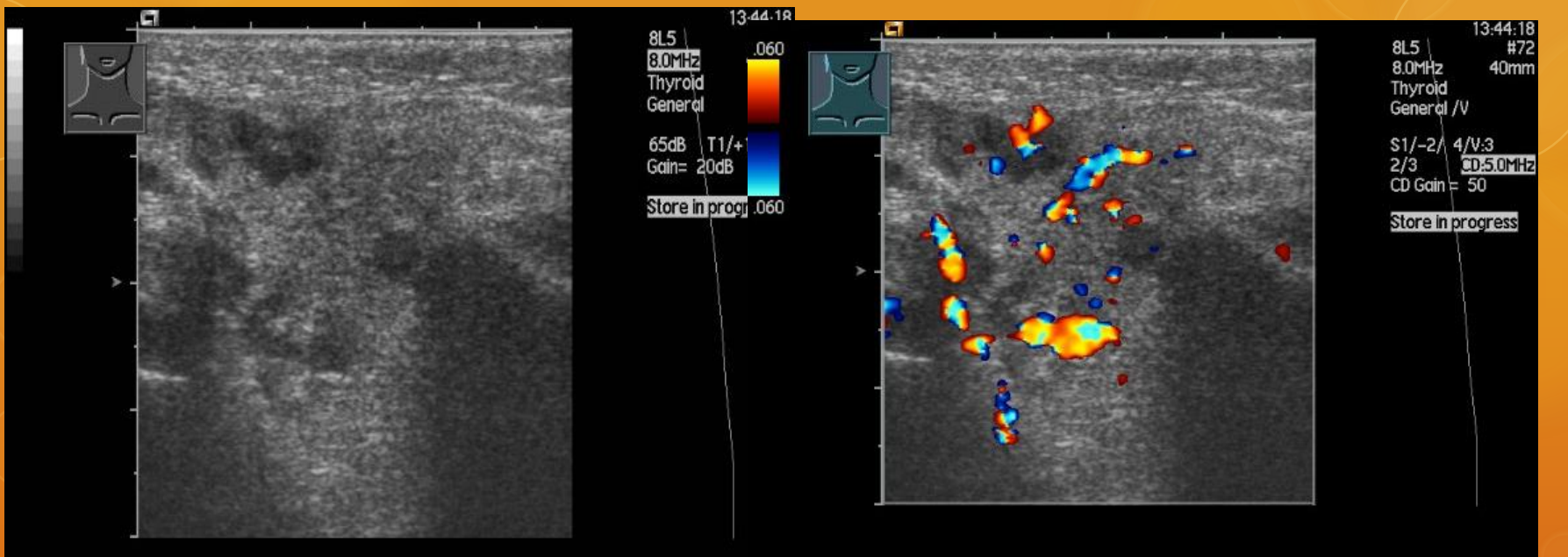
+Q-Box™
Mean 26.9 kPa
Min 19.1 kPa
Max 41.9 kPa
SD 4.7 kPa
Diam 7.0 mm

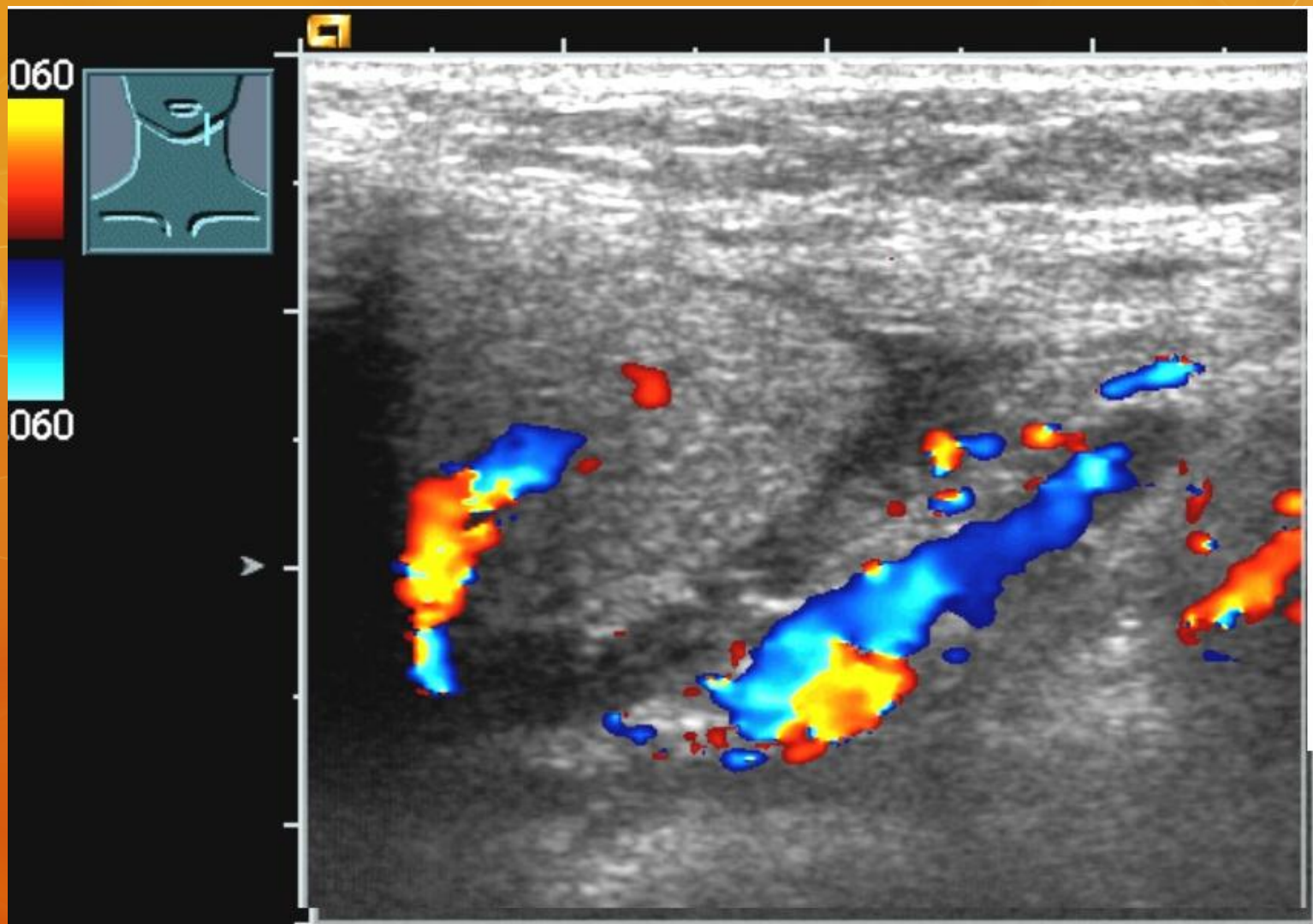
XQ-Box™
Mean 31.5 kPa
Min 20.5 kPa
Max 38.8 kPa
SD 4.7 kPa
Diam 3.0 mm



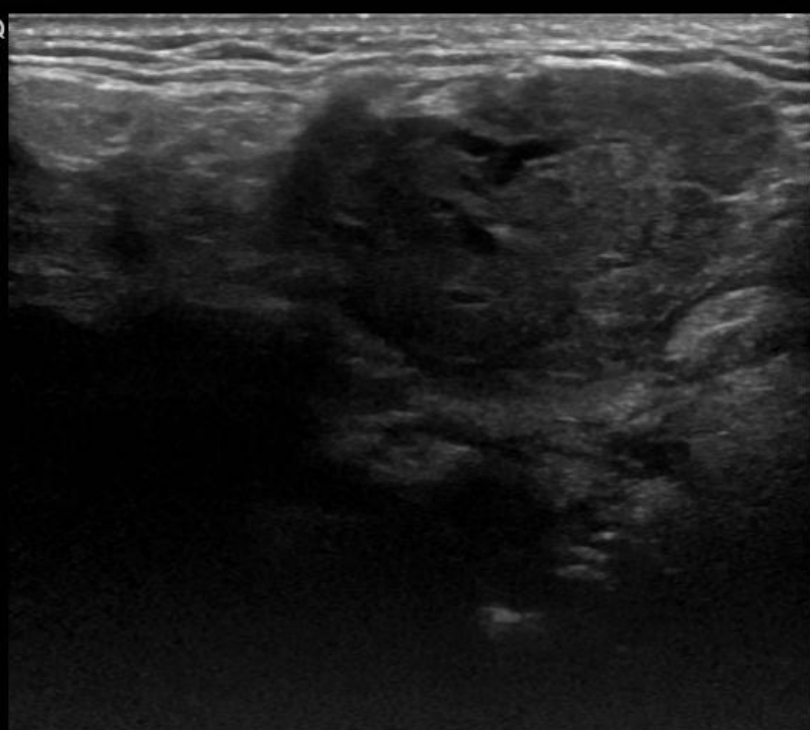
Zánětlivá a nenádorová onemocnění slinných žláz

- Akutní bakteriální sialadenitidy
- Virové sialadenitidy (parotitis epidemica, mononukleóza, CMV, HIV)
- Chron. sialadenitidy (obstrukční), Küttnerův tumor
- Specifické (tbc, aktinomykóza)
- MESA, další imunosaladenitidy (Sjogrenuv sy, sarkoidóza)
- Cysty a píštěle, 2-6% tu (mukokély, lymfoepitelové, retenční vývodové, branchiogenní)
- Sialolitháza

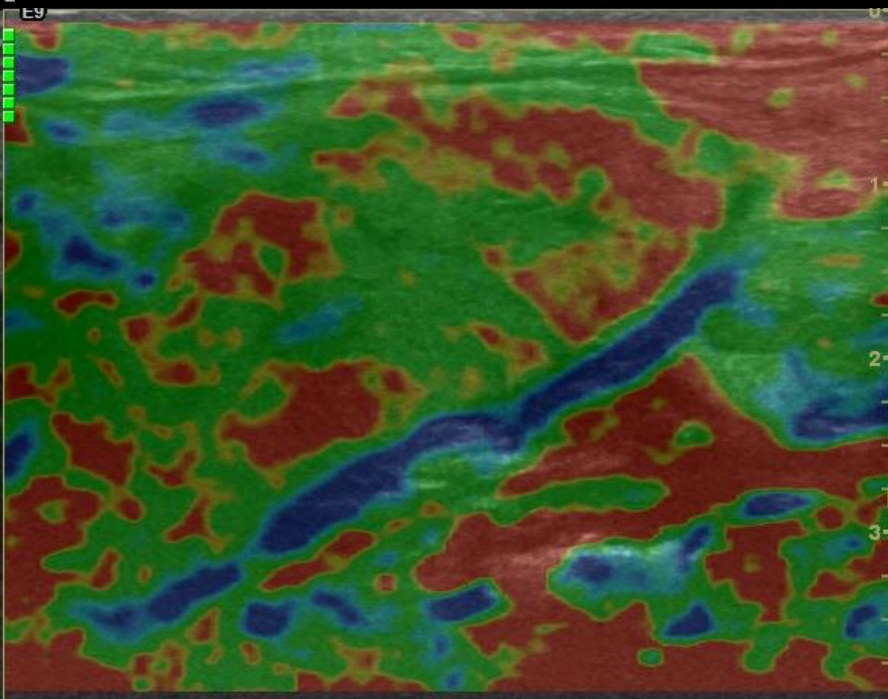
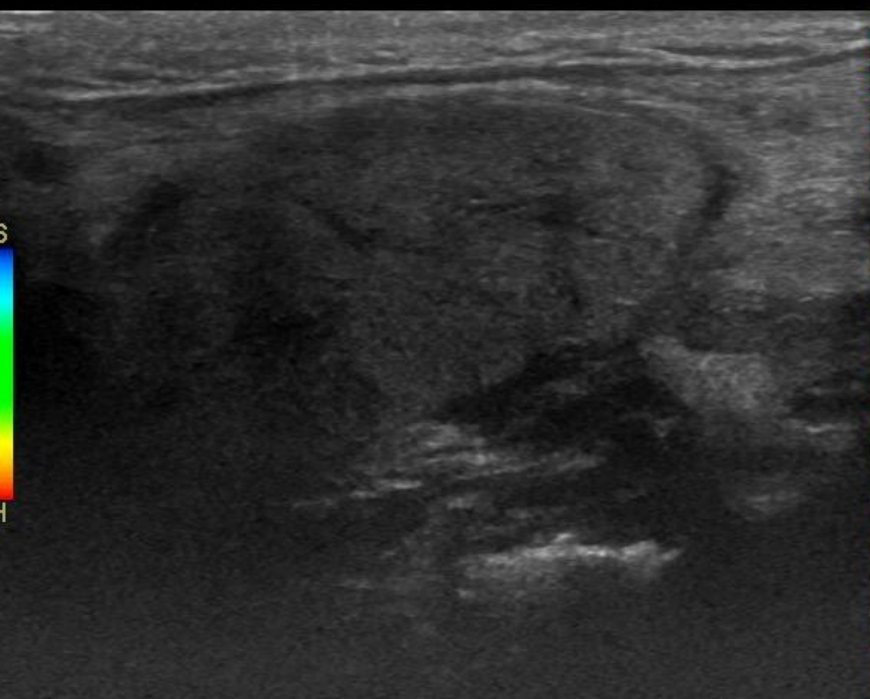
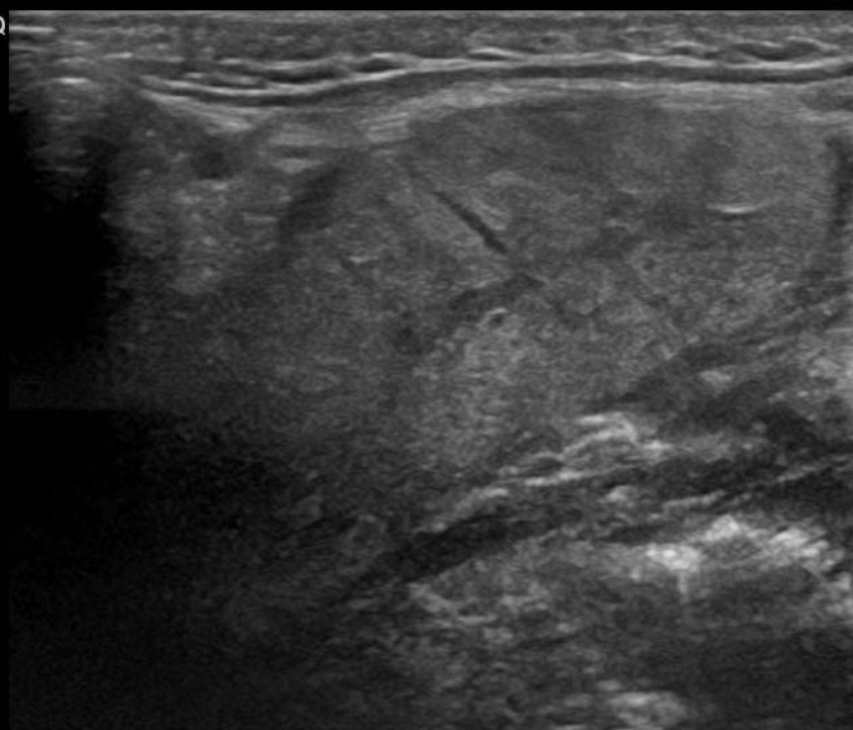




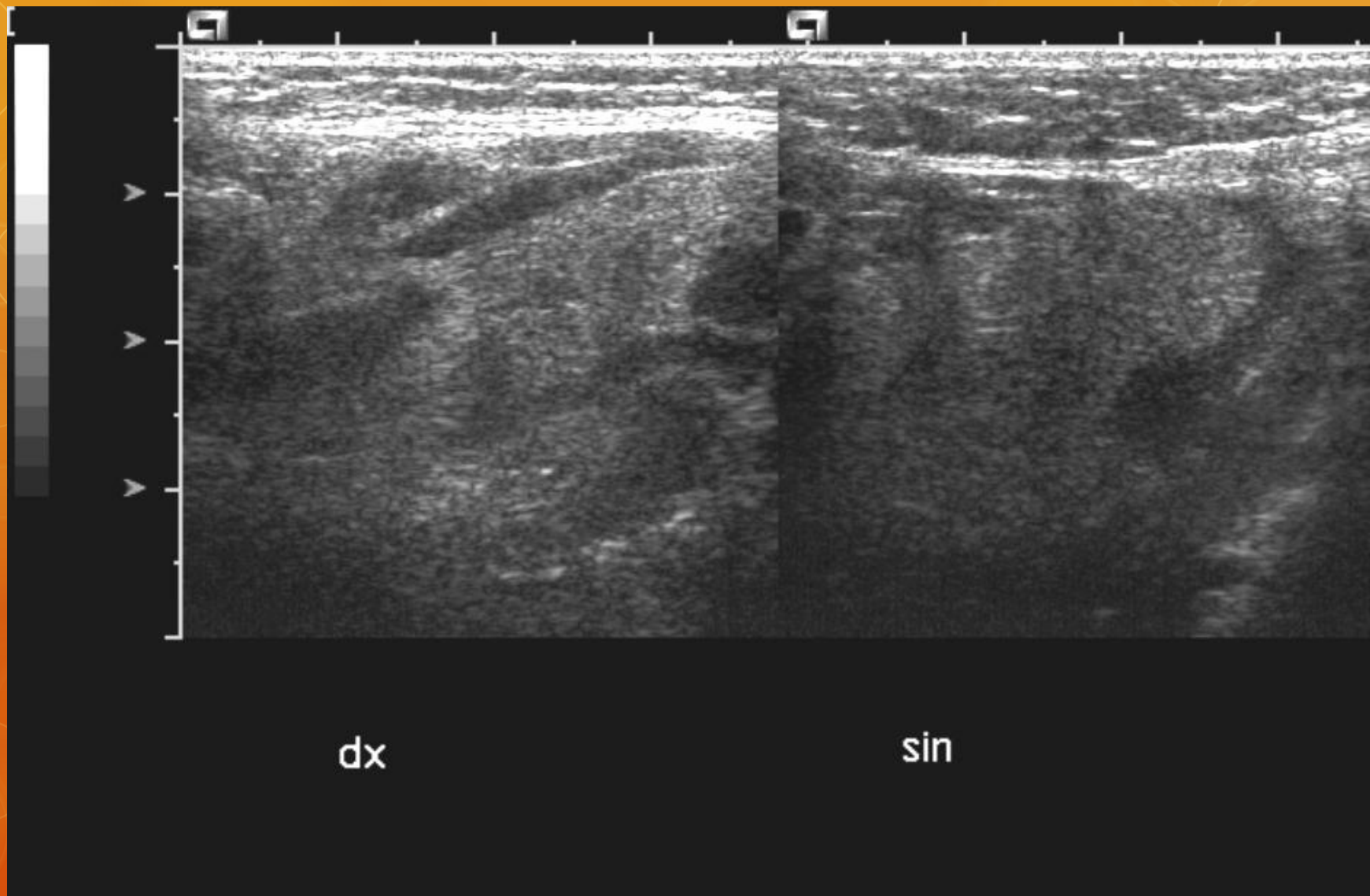
LOGIQ
E9

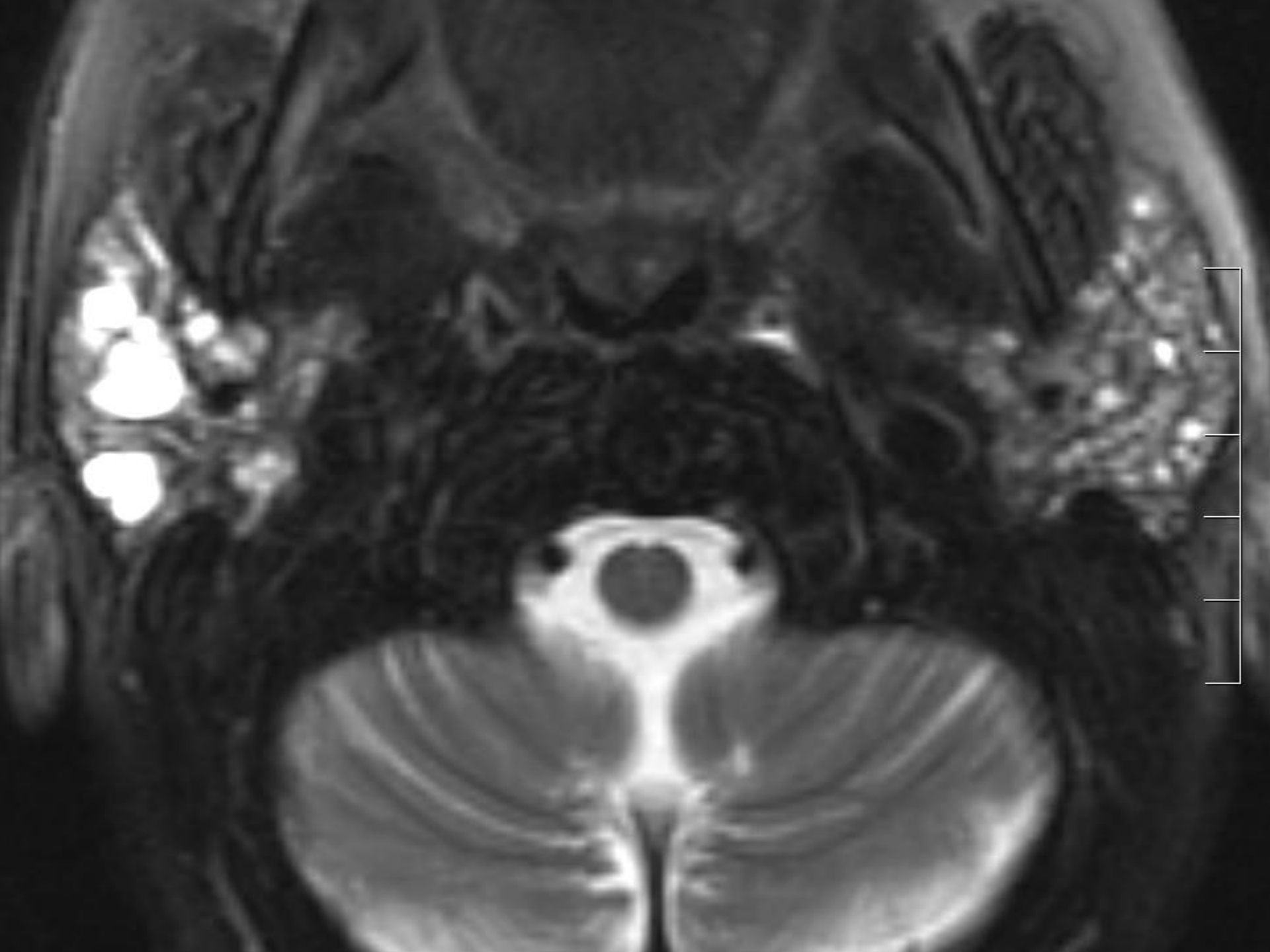


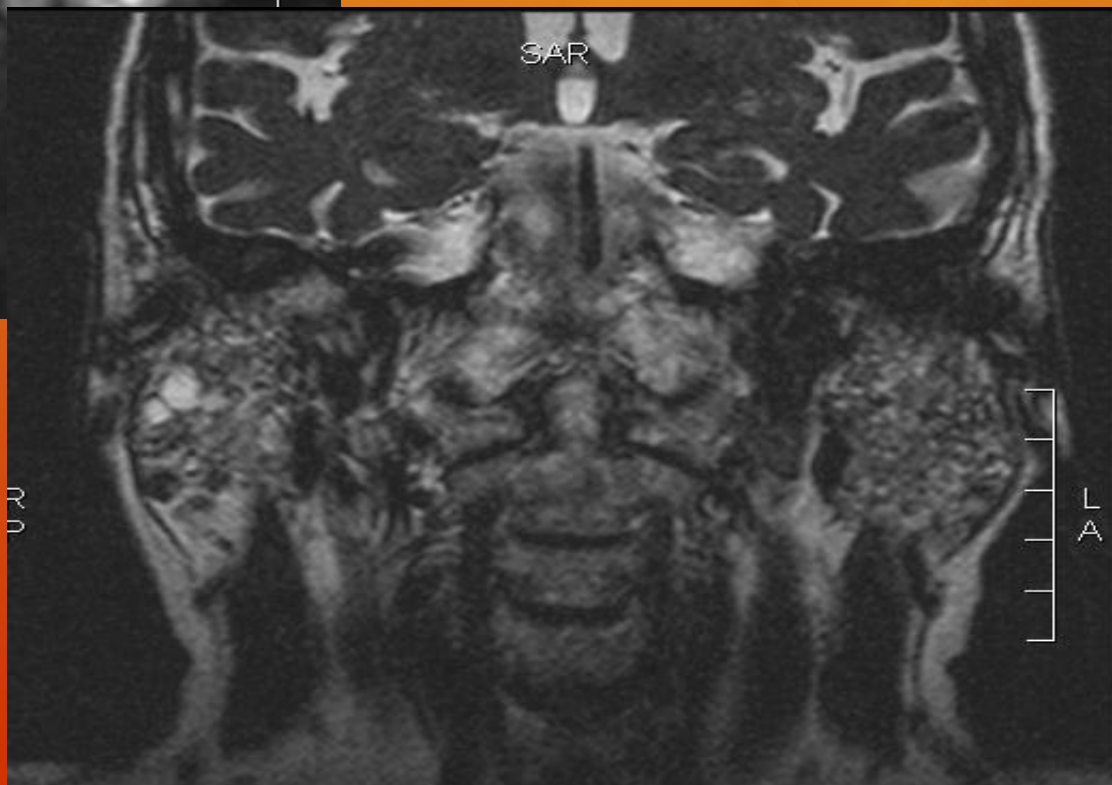
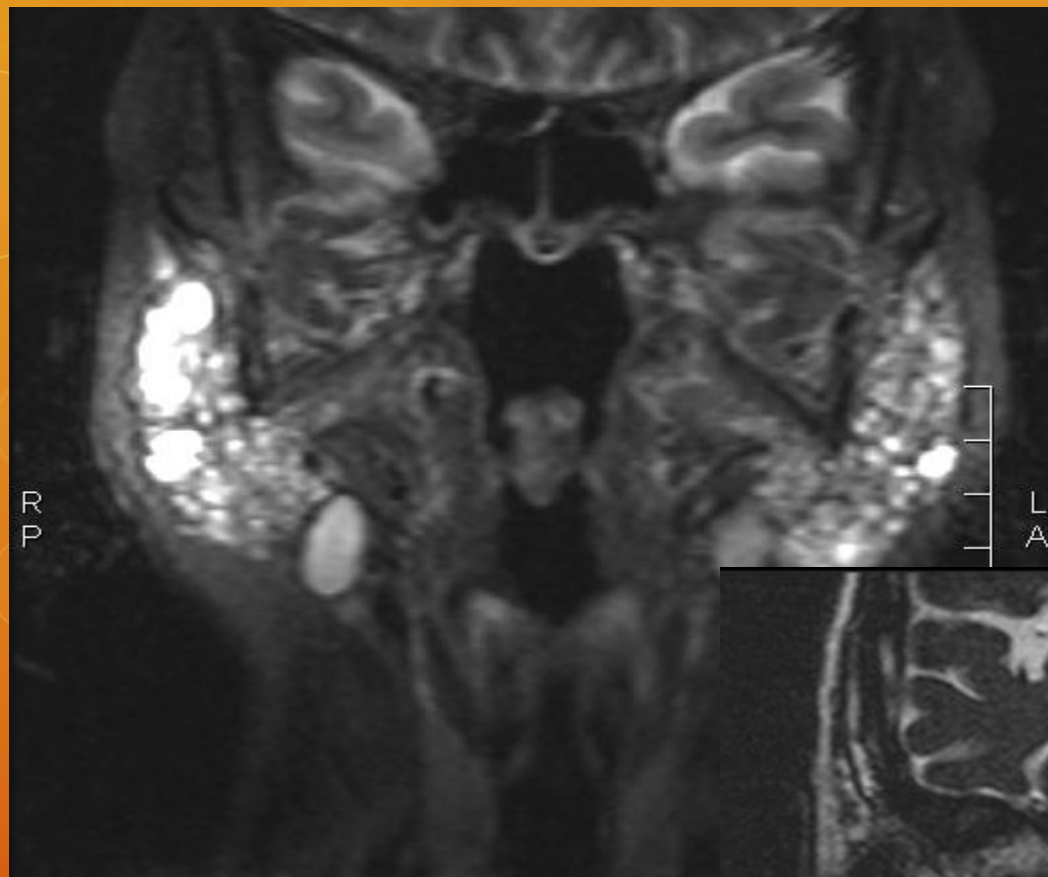
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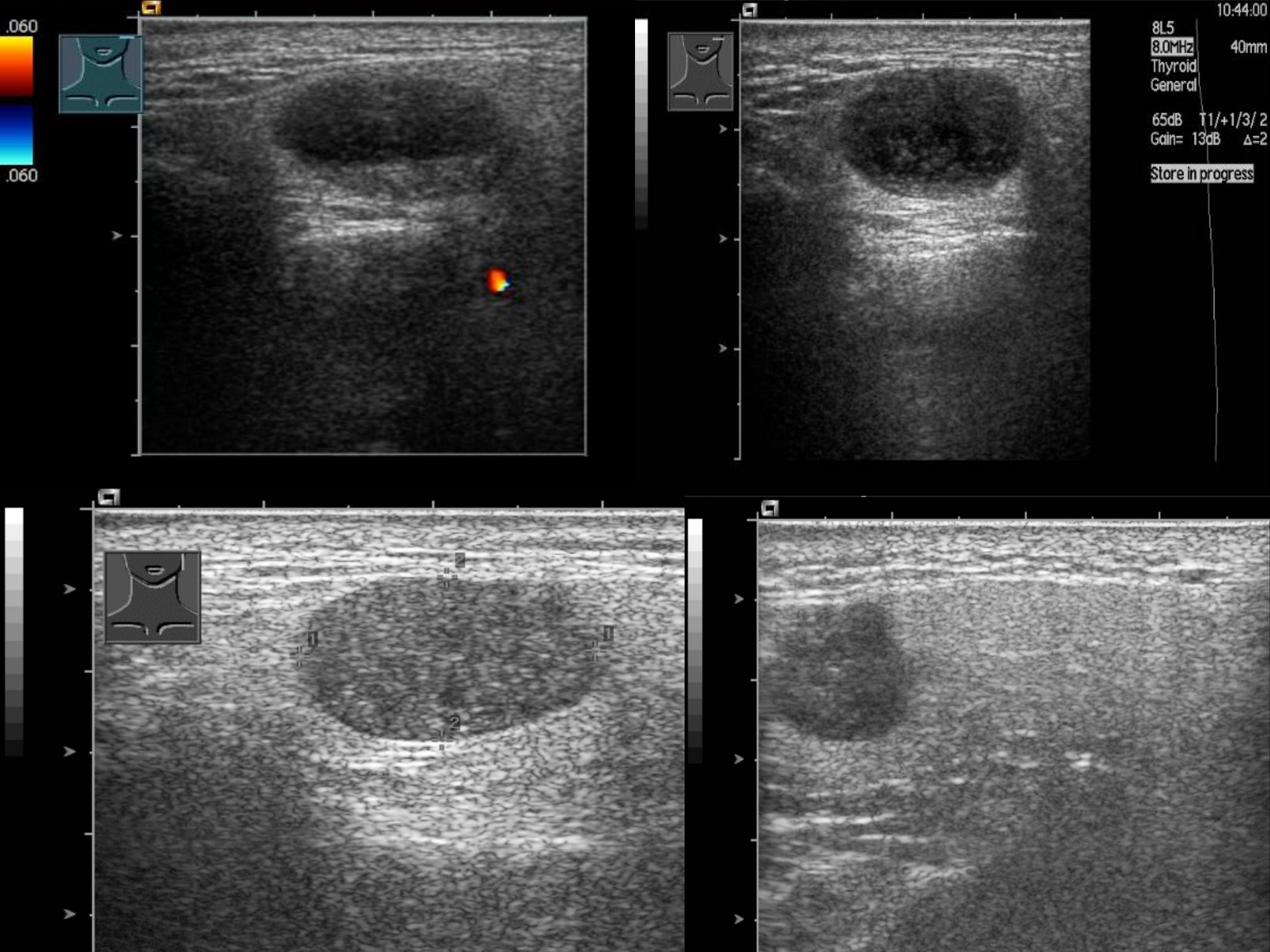


Gn 32
D 4.0
AO% 100
E
Frq 6.3
T 12
L/A 3/4
PRF 0.10
AO% 100



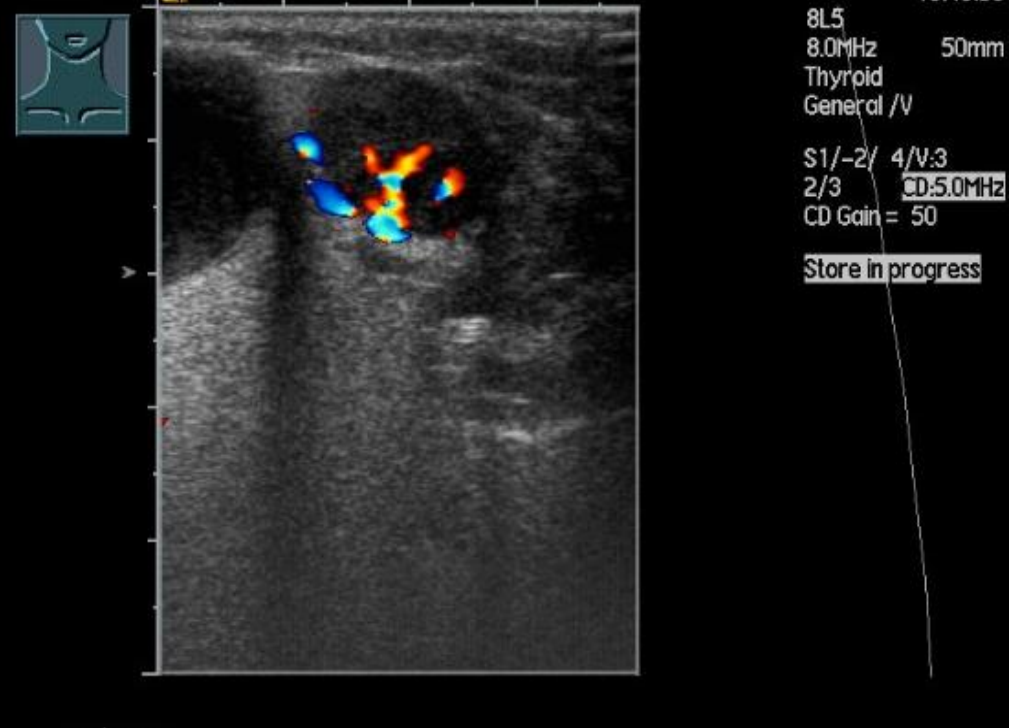
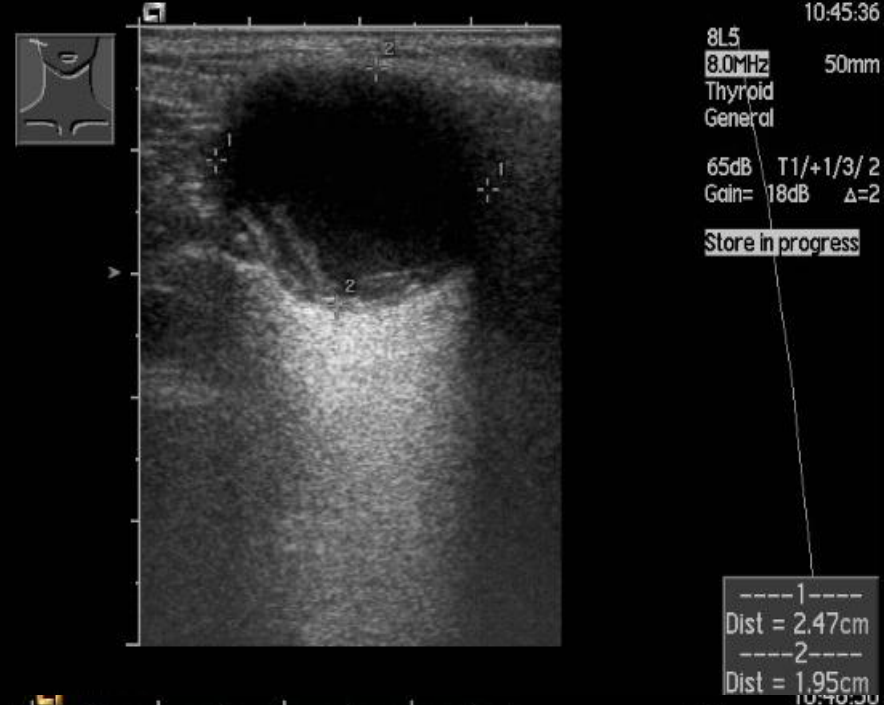


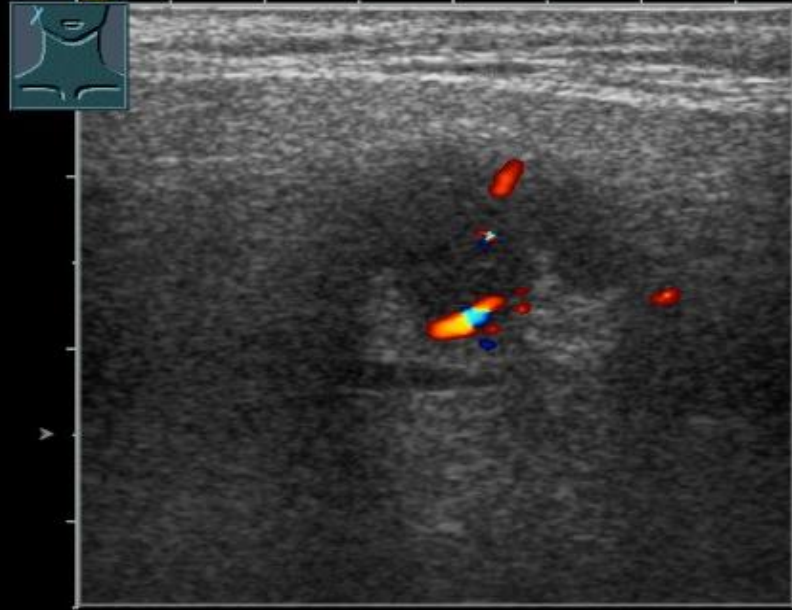
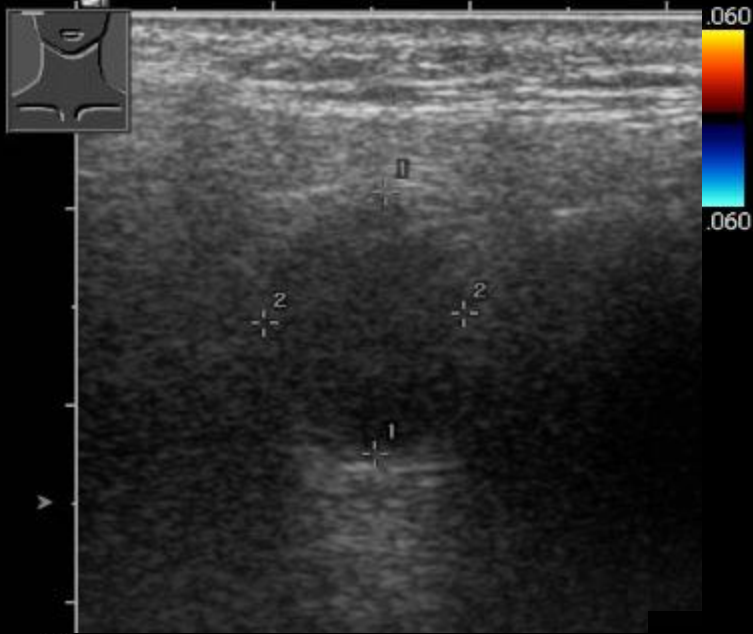




Benigní tumory (adenomy)

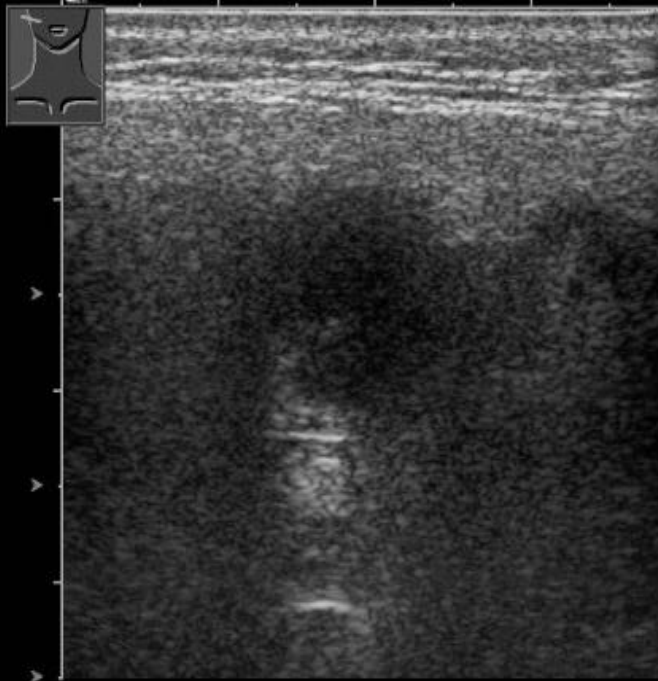
- Pleomorfní adenom (myxochondroepiteliom)
- Warthinův tumor (cyst/adenolymfom)
- Bazocelulární adenom
- Onkocytom (onkocytární adenom)
- Cystadenom
- Duktální papilom





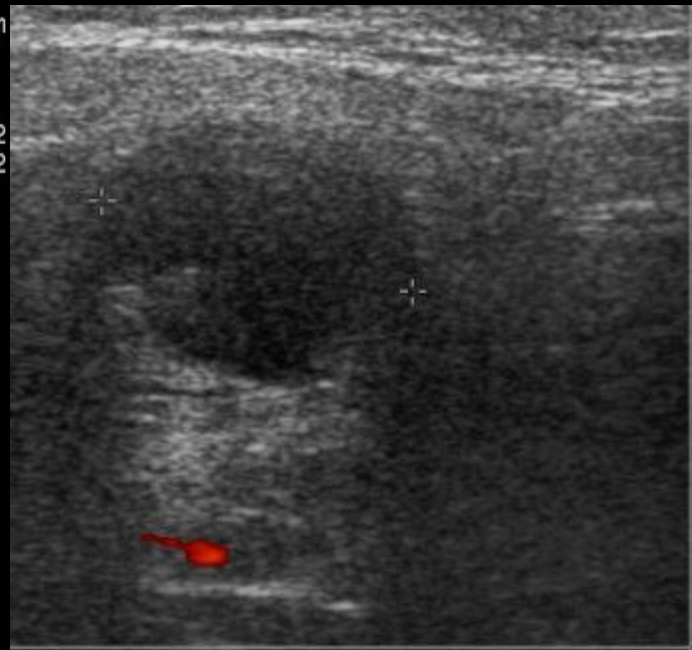
11:08:04 #67
8L5 35mm
8.0MHz
Thyroid
General /V
S1/-2/ 4/V:3
2/3 CD:5.0MHz
CD Gain = 50

Store in progress



11:10:11
8L5 35mm
8.0MHz
Thyroid
General /V
65dB T1/+1/3/2
Gain= 15dB Δ=2

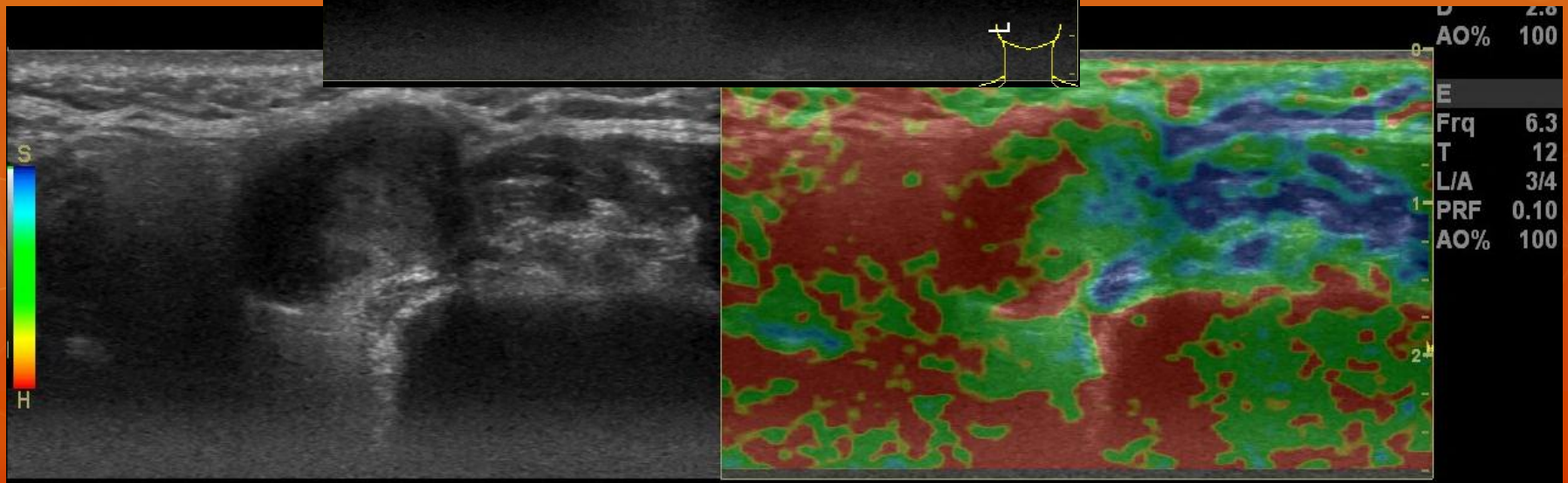
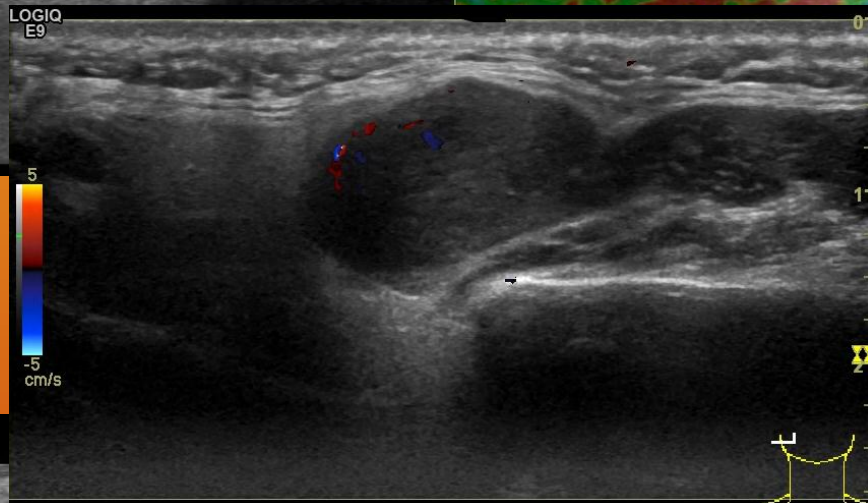
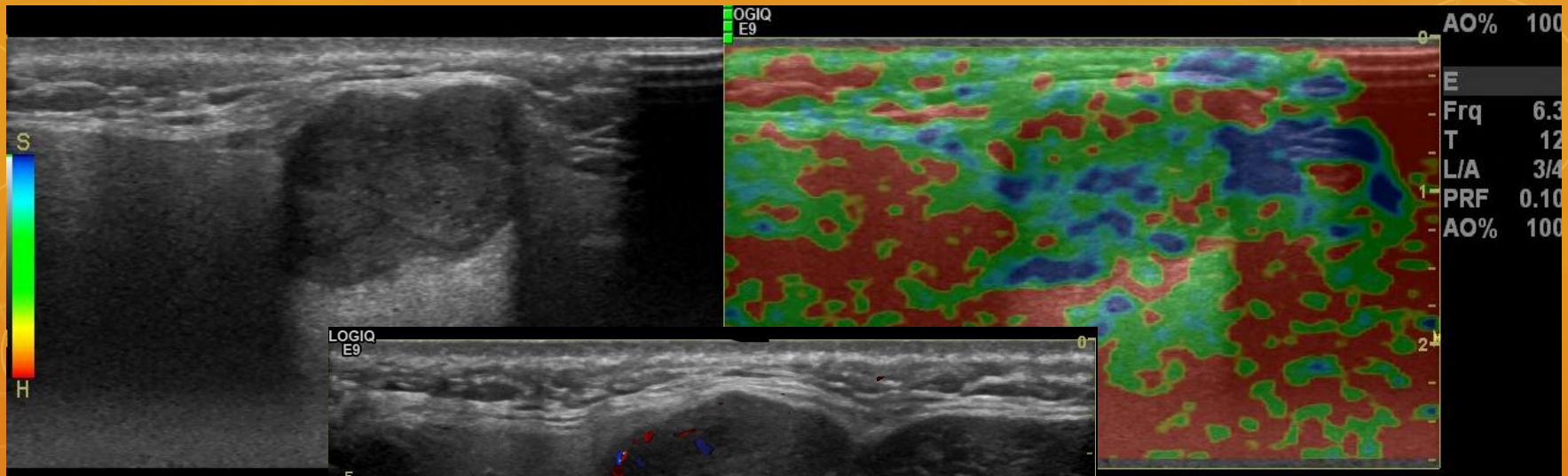
Store in progress



8L5 35mm
8.0MHz
Thyroid
General /V
S1/-2/ 4/V:3
2/3 CD:5.0MHz
CD Gain = 50

Store in progress

$\Delta \bar{V} = 0.00\text{m/s}$
Dist = 1.645cm

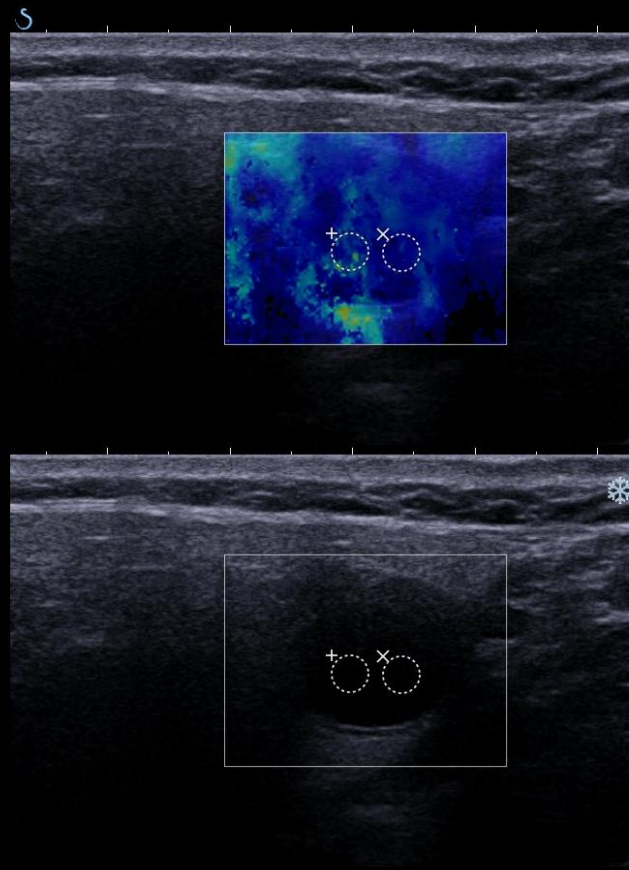
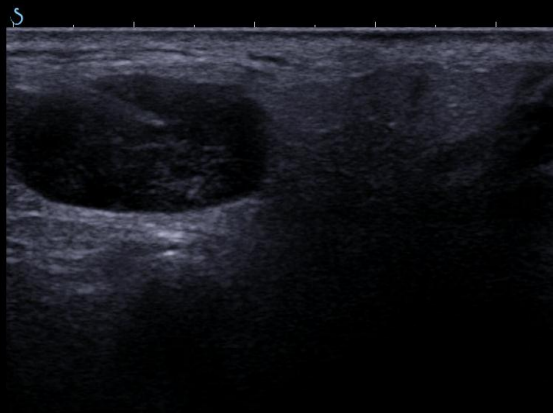


B
Gen/Med
M 5/69 dB/Mod
T 1540 m/s
SC/SR 2
G 47 %
Fr. 51 Hz
Z 105 %



B
Gen/Med
M 5/69 dB/Mod
T 1540 m/s
SC/SR 2
G 47 %
Fr. 51 Hz

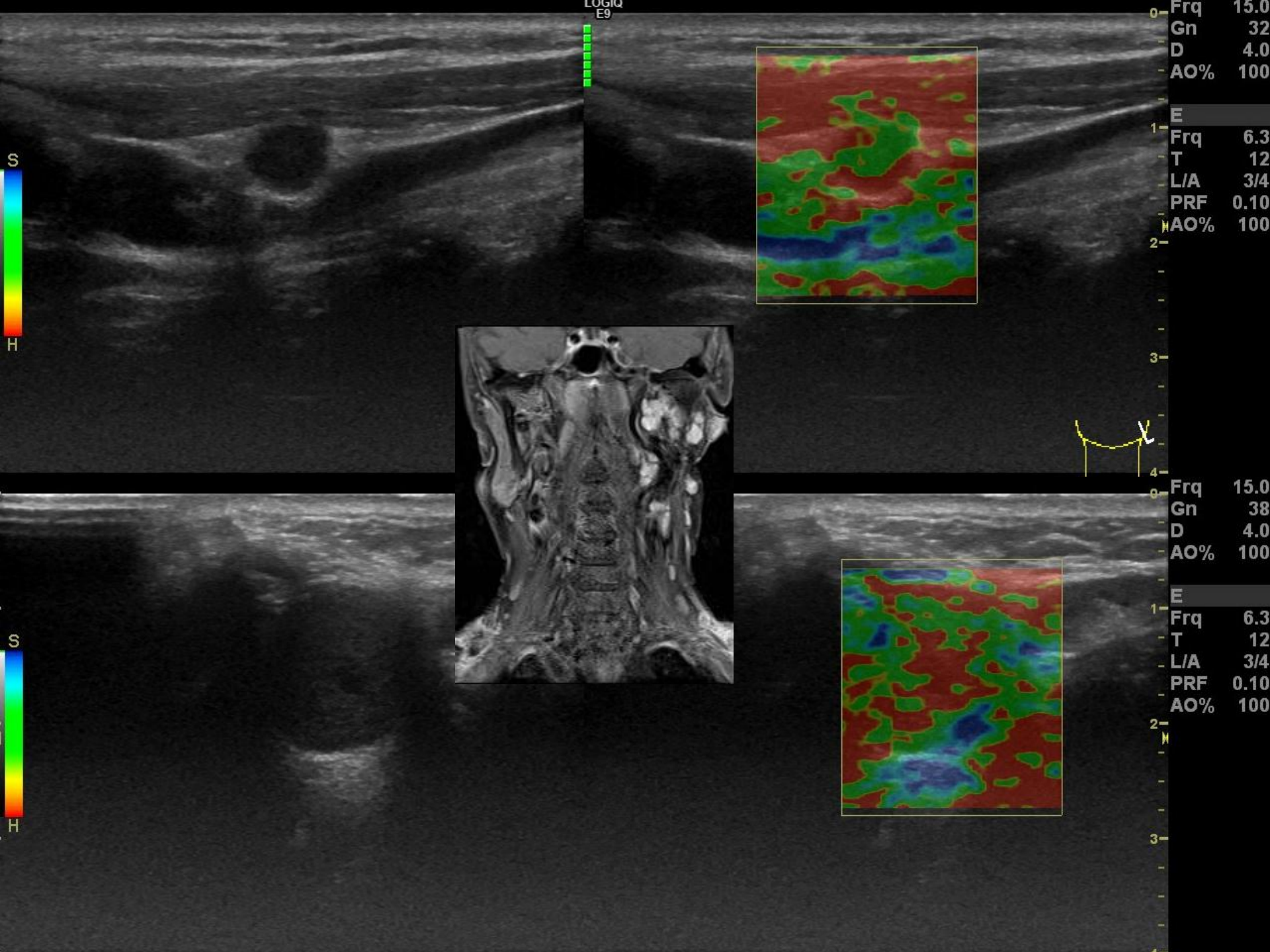
Z 105 %



+180 kPa
144
108
72
36
0

+Q-Box™
Mean 34.5 kPa
Min 17.1 kPa
Max 47.2 kPa
SD 6.0 kPa
Diam 3.0 mm

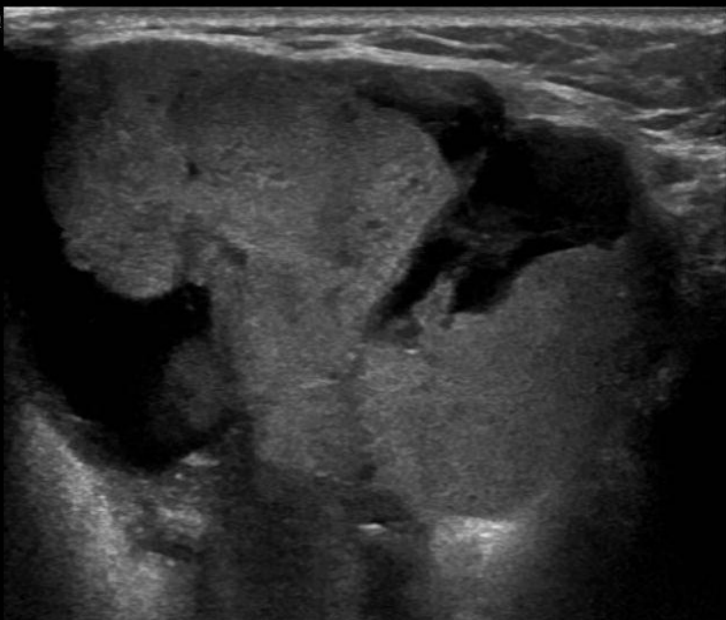
XQ-Box™
Mean 20.7 kPa
Min 12.8 kPa
Max 35.0 kPa
SD 4.5 kPa
Diam 3.0 mm



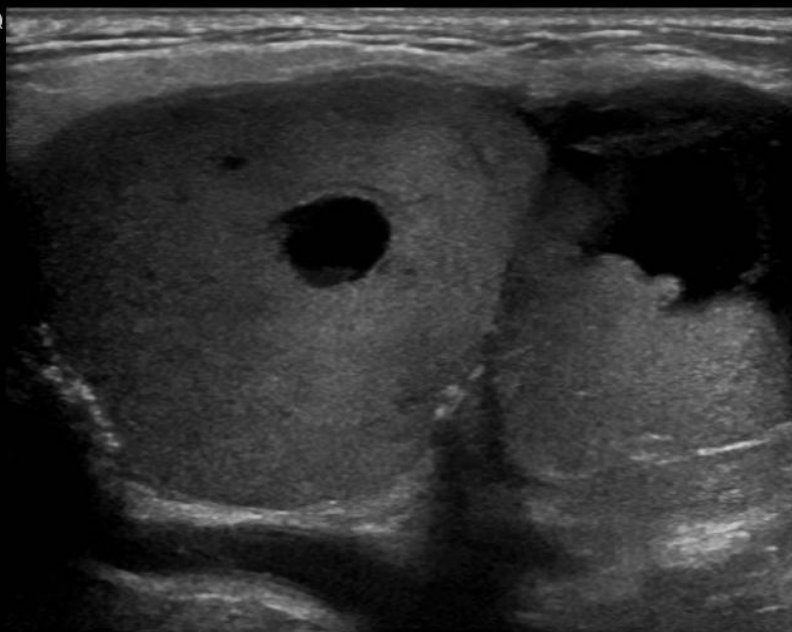
Karcinomy

- Acinocelulární karcinom
- Mukoepidermoidní karcinom
- Adenoidně cystický karcinom
- Onkocytární karcinom
- Karcinom v pleomorfním adenomu
- Dlaždicobuněčný karcinom
- Nediferencovaný karcinom
- Duktální vývodový karcinom

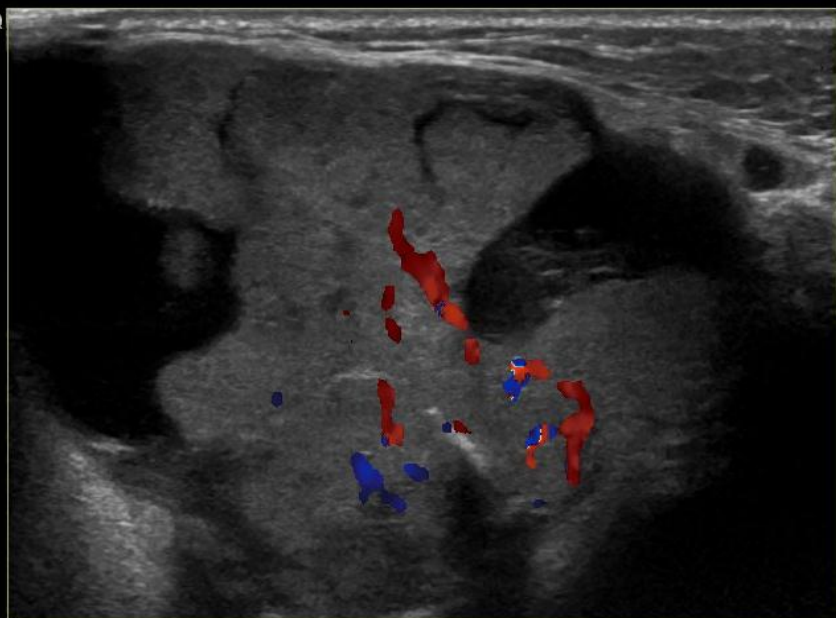
LOGIQ
E9



LOGIQ
E9

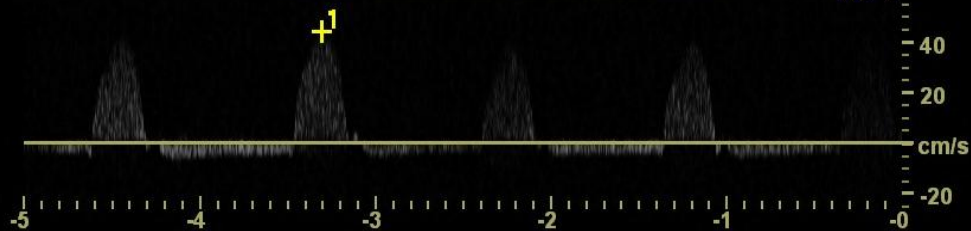
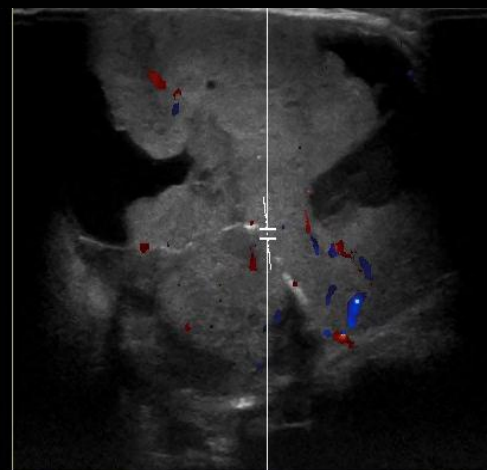


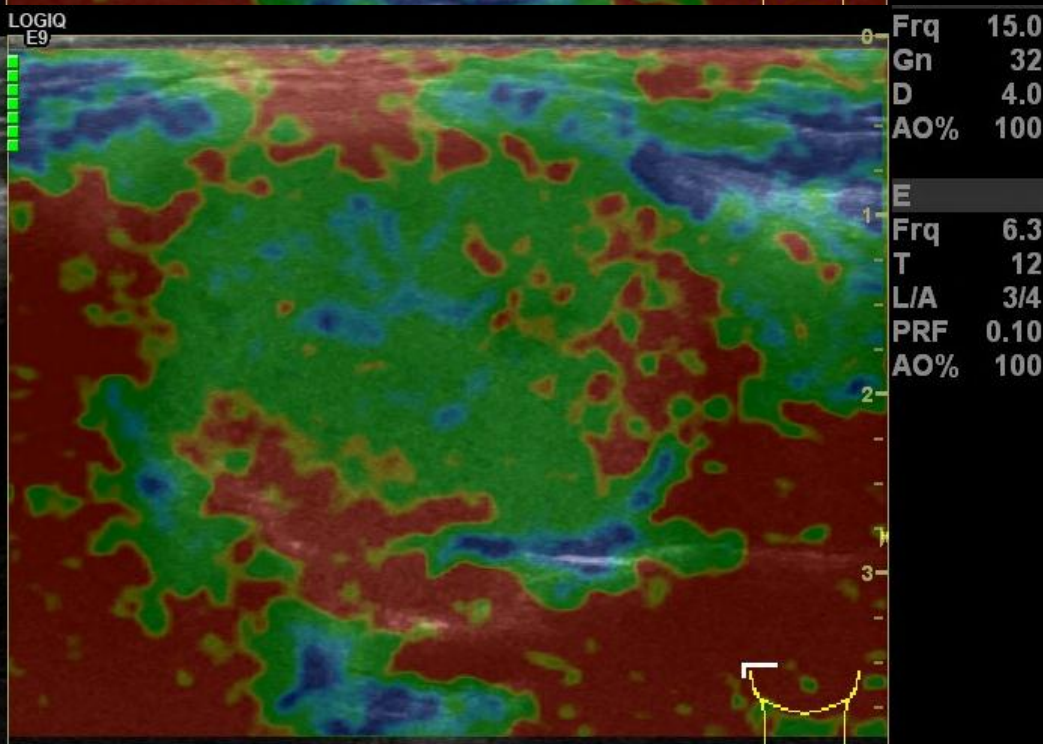
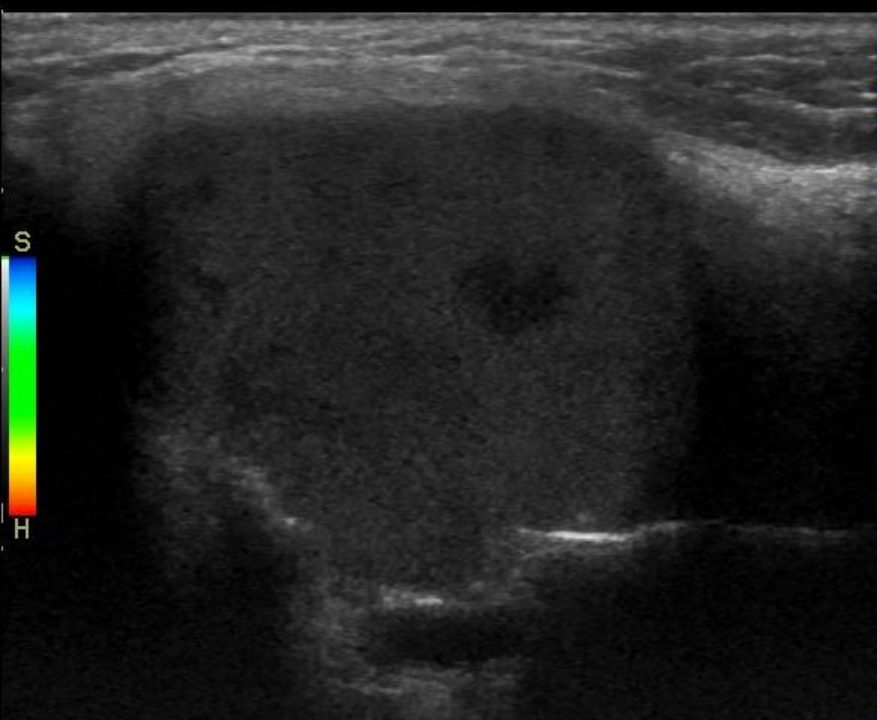
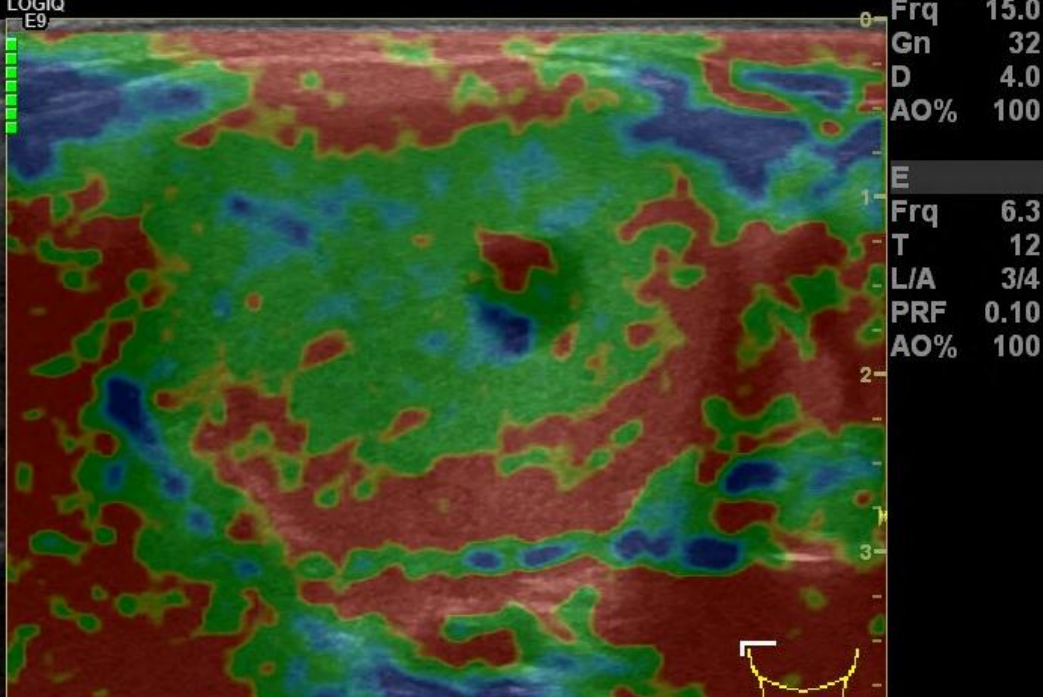
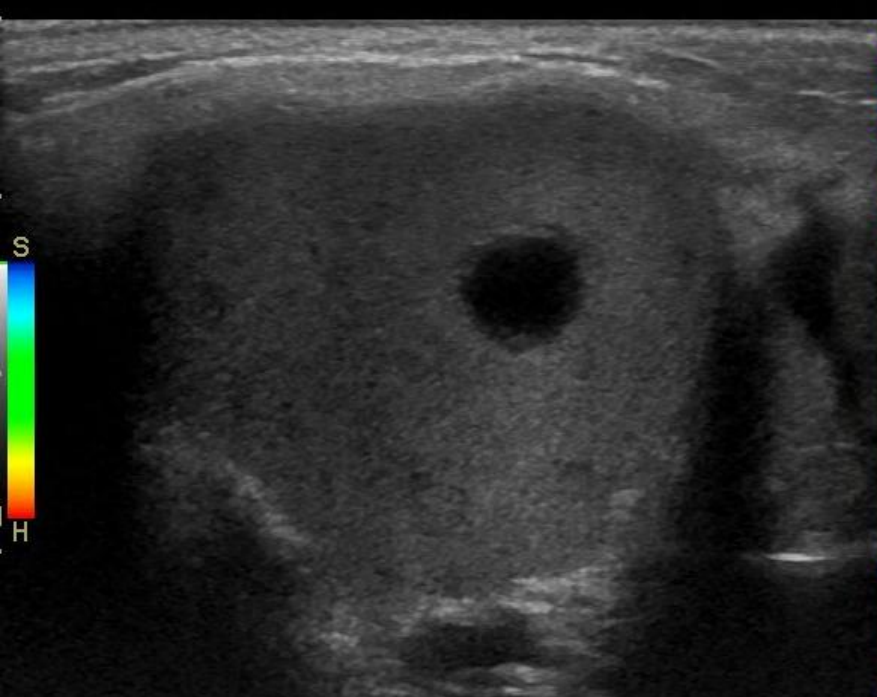
LOGIQ
E9



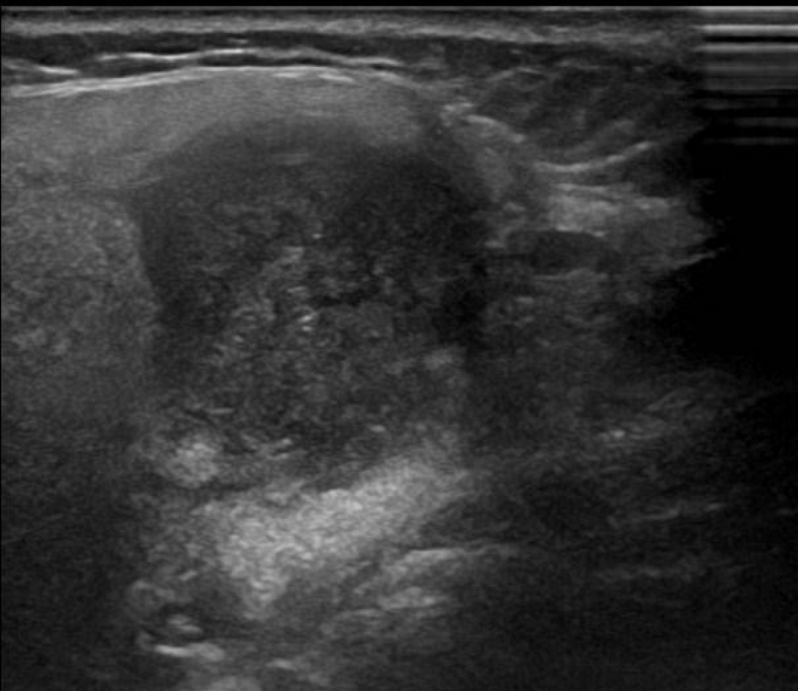
1 Vel 44.9 cm/s

E9

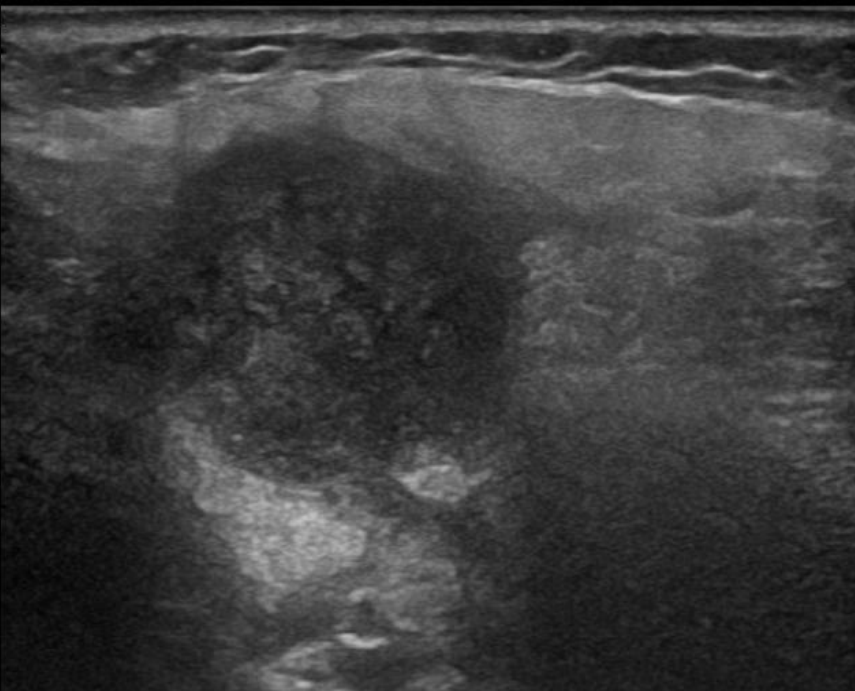




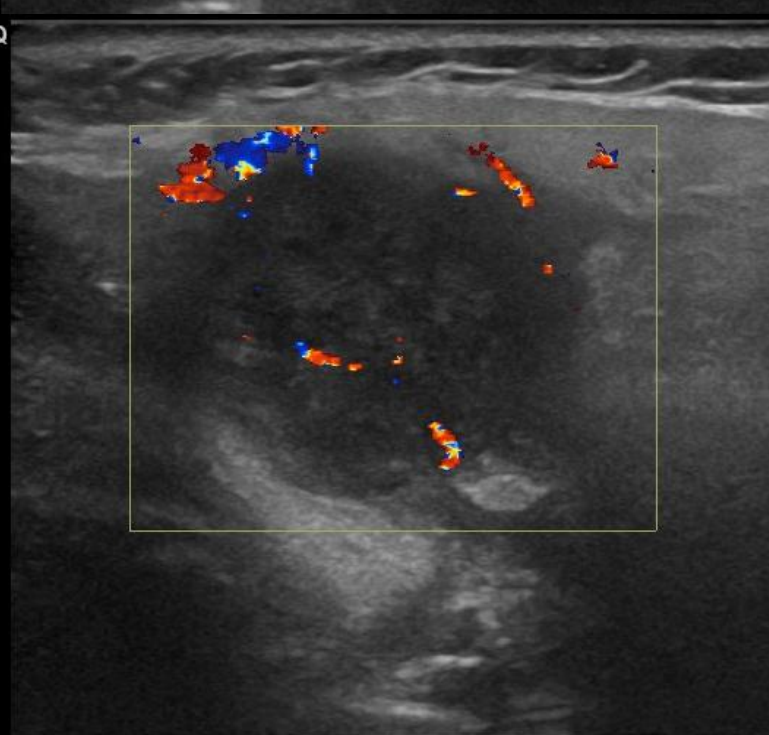
LOGIQ
E9



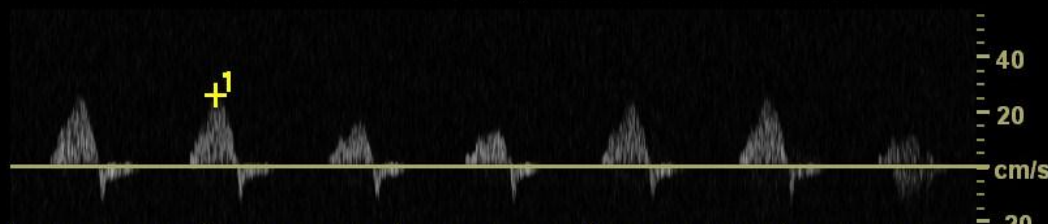
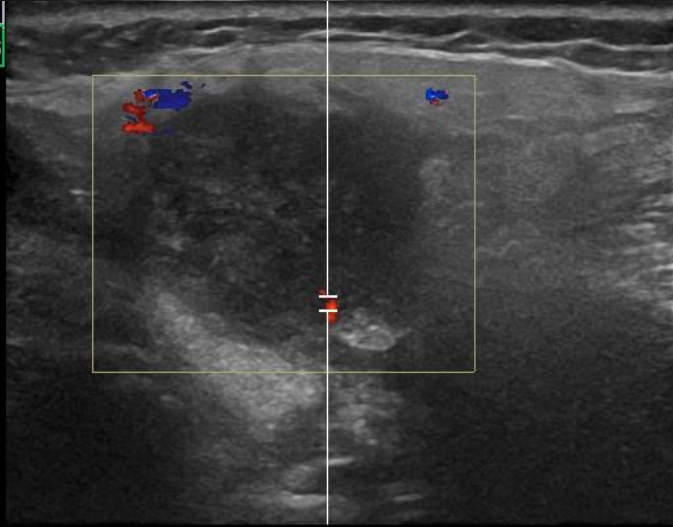
LOGIQ
E9

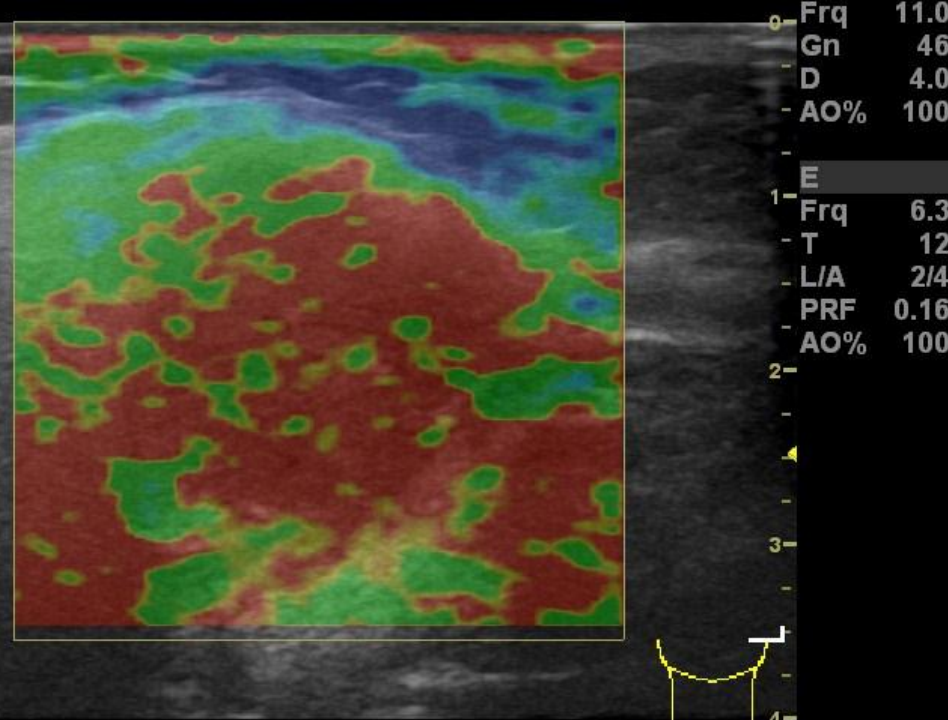
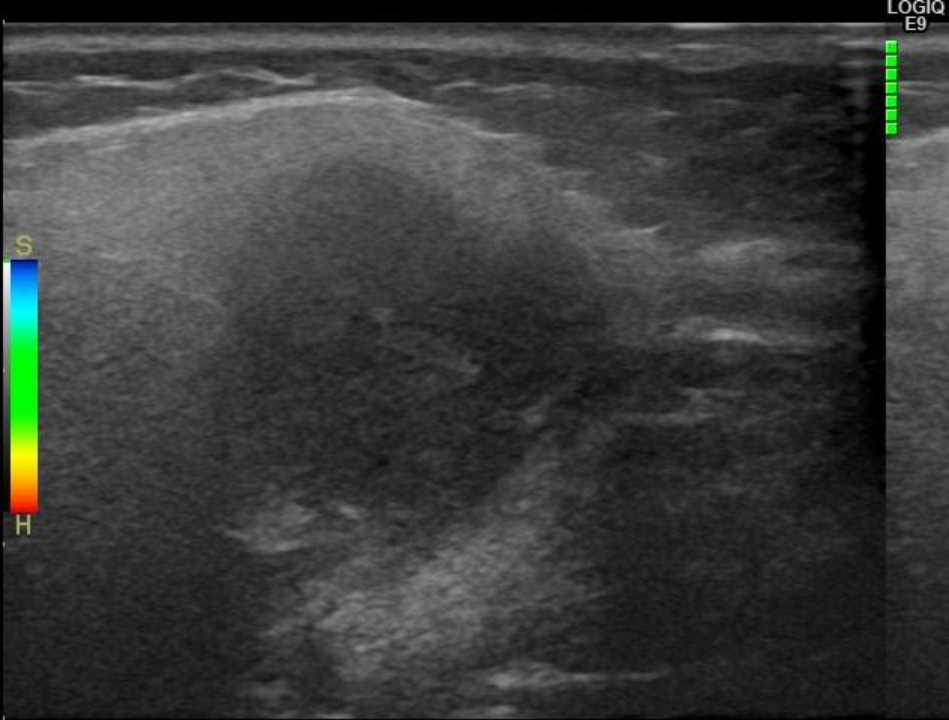
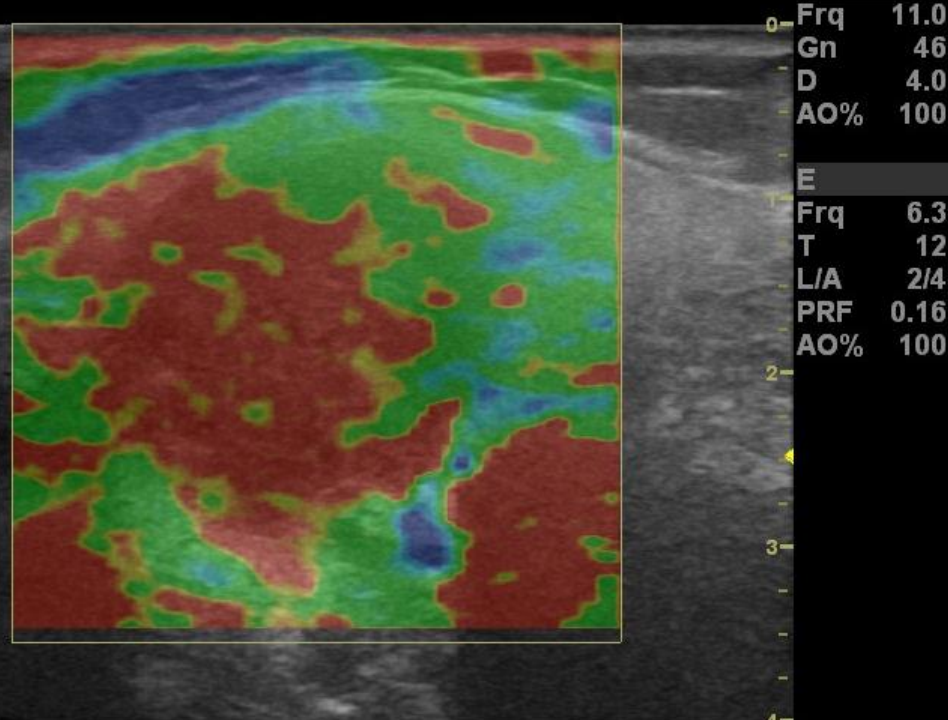
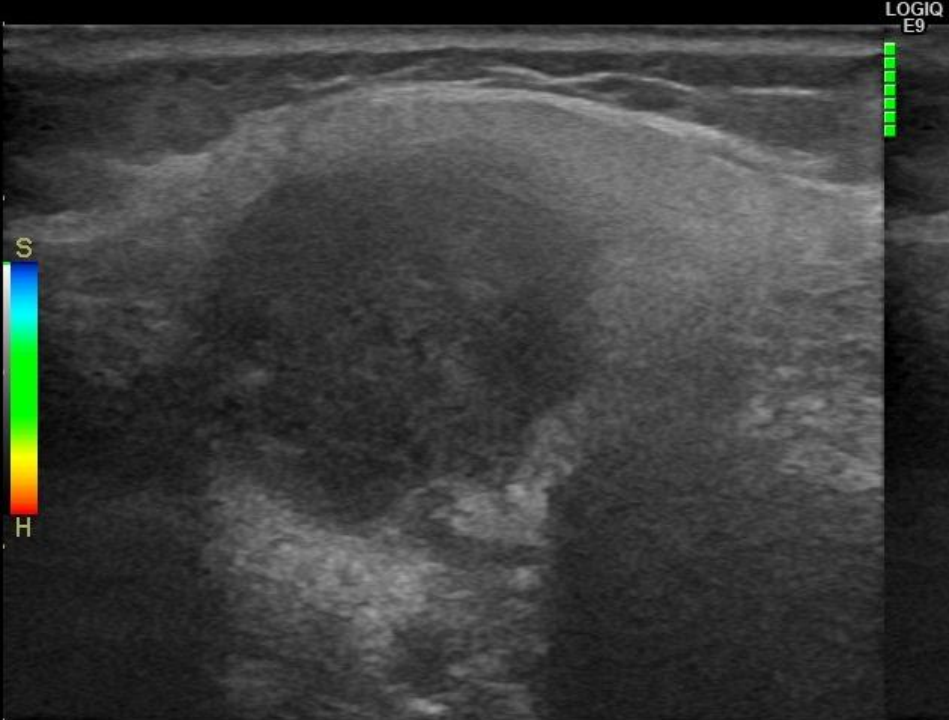


LOGIQ
E9



1 Vel 26.5 cm/s







Diagnostické algoritmy

- 1. Palpace, klinický obraz vyšetření
- 2. Ultrasonografie (triplexní) + sonoelastografie
- 3. MR velkých slinných žláz
- 4. US cílená cytologická punkce, core cut biopsie
- 5. PET – CT u vybraných onkologických onemocnění
- 5. Terapeutický postup (operační x konzervativní)

A PET-CT scan image of a human head and neck. The image shows a cross-section with various anatomical structures. Several bright yellow and white spots are visible, indicating areas of increased metabolic activity, which are characteristic of lymphoma. The text 'Spin: 0' and 'Tilt: 0' is visible in the top right corner.

Spin: 0
Tilt: 0

PET-CT

Lymfom příušních žláz

Chroby slinných žláz: Stárek I. a kol. , Grada, Praha 2000

Děkuji za pozornost, P.F. 2014