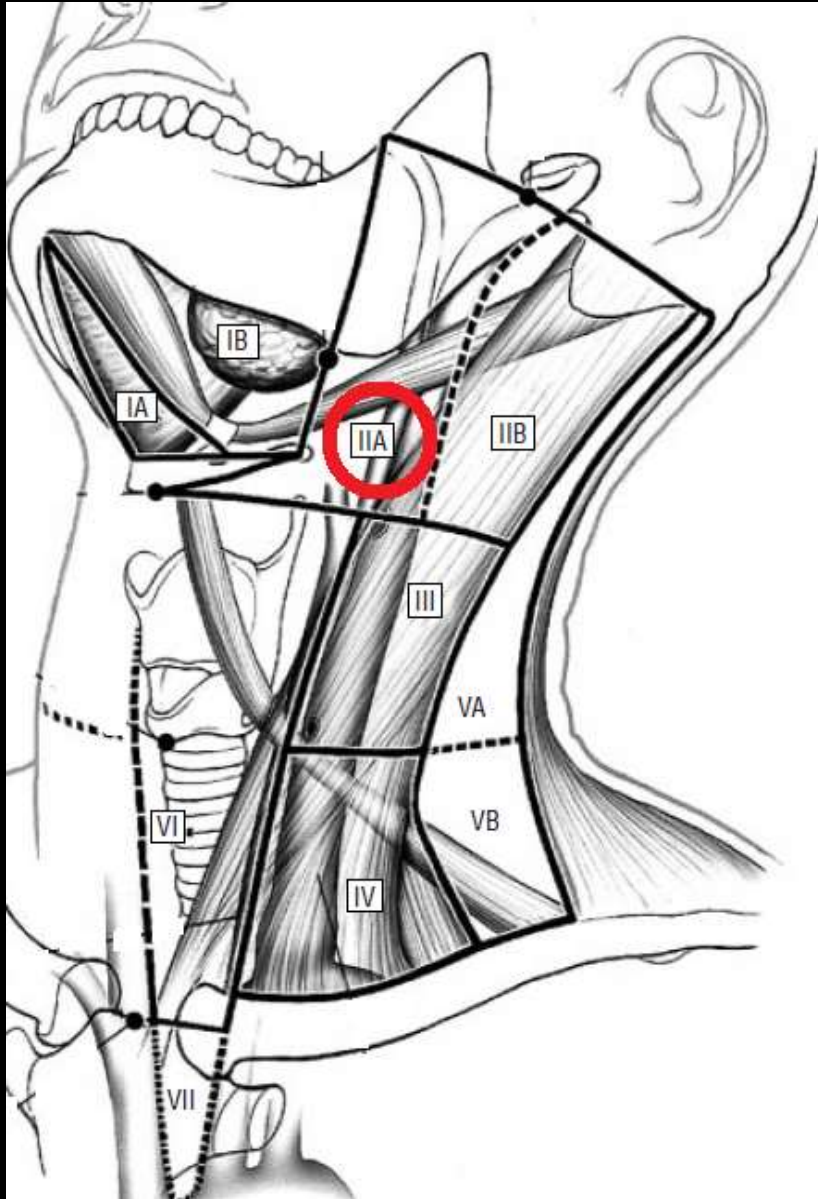


ULTRAZVUKOVÉ VYŠETŘENÍ KRČNÍCH LYMFATICKÝCH UZLIN

Radka Šlaisová

Klinika radiologie a nukleární medicíny FN Brno a LF MU
zastupující přednosta: doc. MUDr. Marek Mechl, Ph.D., MBA

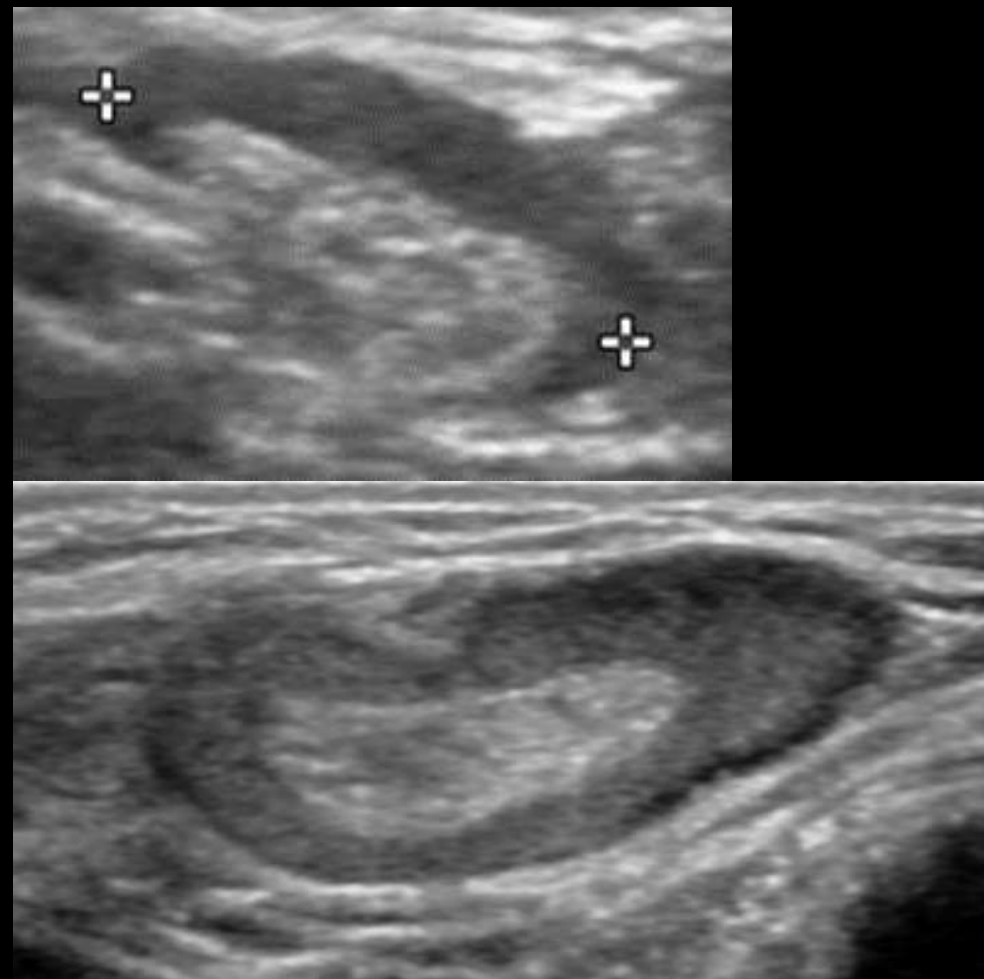
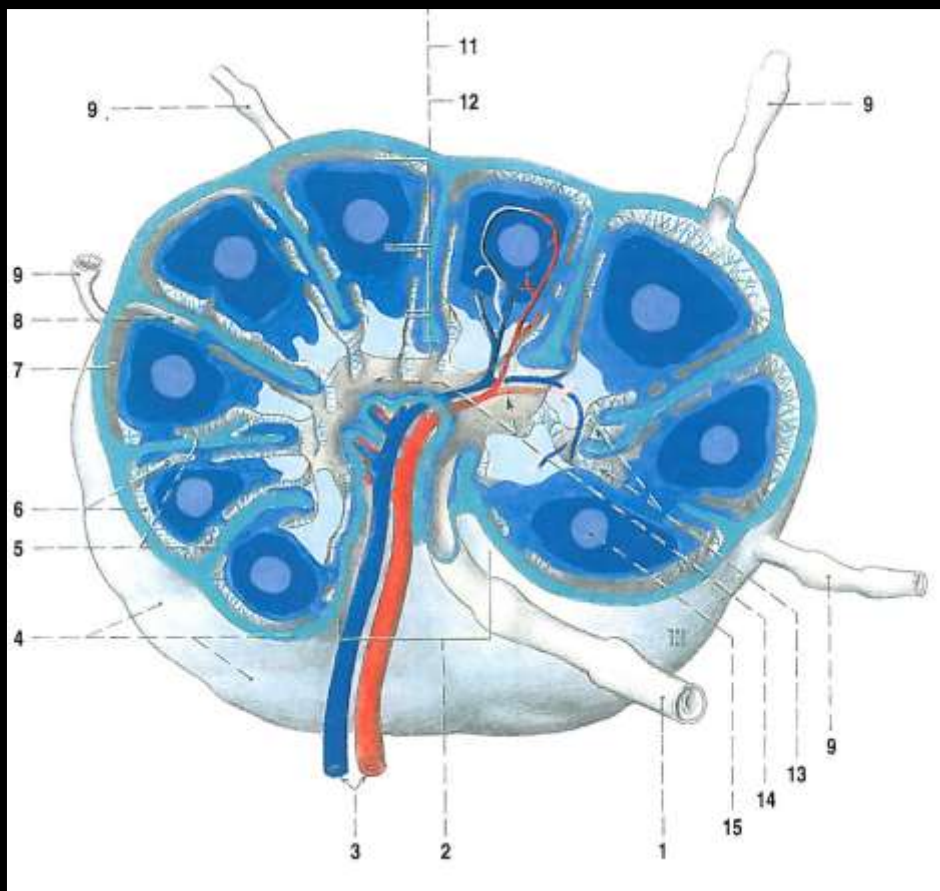
- Metoda první volby při podezření na lymfadenopatii
- Lineární vysokofrekvenční sondy, detailní zhodnocení echostruktury – benigní vs maligní etiologie



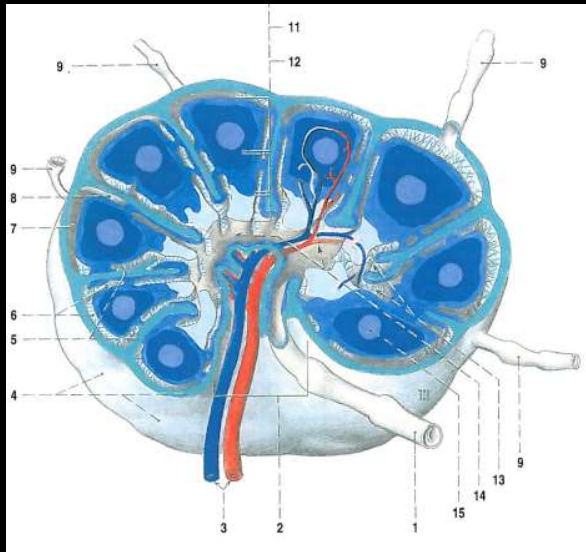
Som PM, Curtin HD, Mancuso AA. An imaging-based classification for the cervical nodes designed as an adjunct to recent clinically based nodal classifications. Arch Otolaryngol Head Neck Surg. 1999;125(4):388-96.

- Velikost, tvar
- Echogenita
- Ohraničení
- Nekrózy
- Kalcifikace
- Vaskularizace

Normální LU

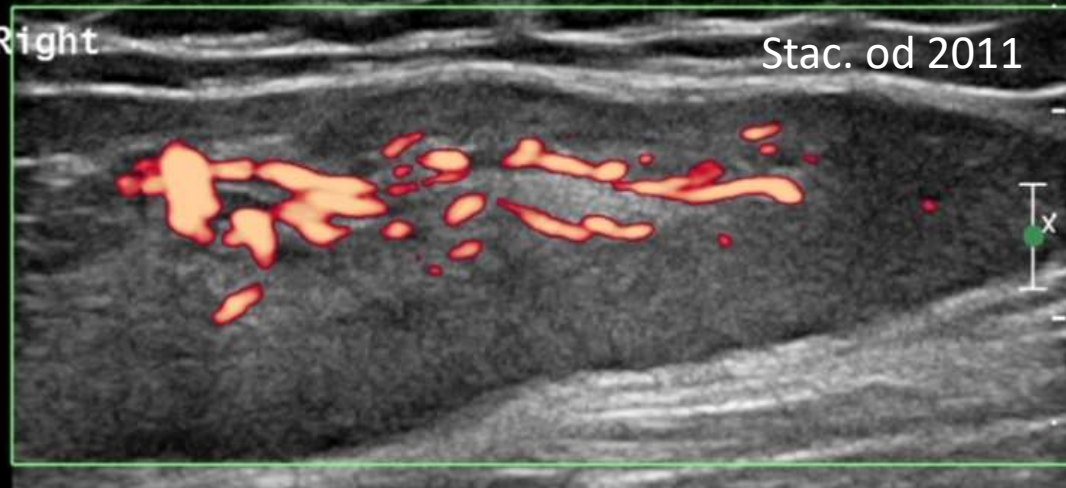


- Čihák R. Anatomie 3. 1., Praha: Grada Publishing 1997, str.172. ISBN 80-7169-140-2.

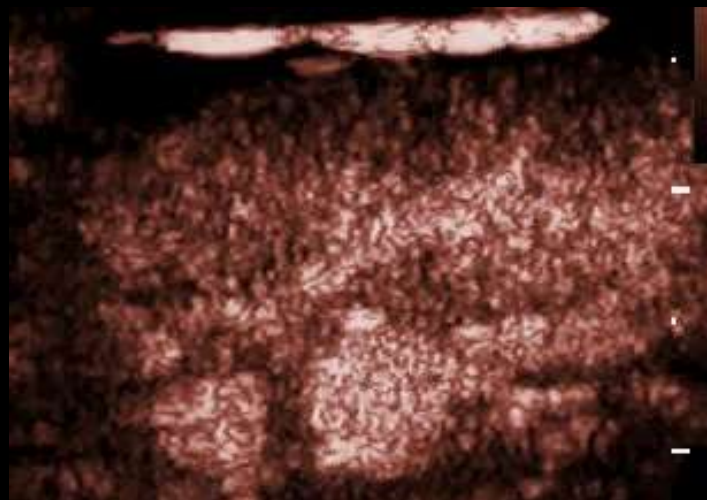
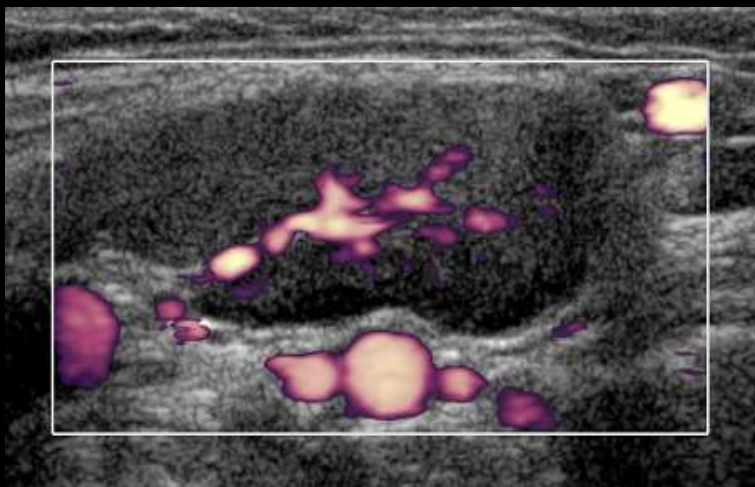


Right

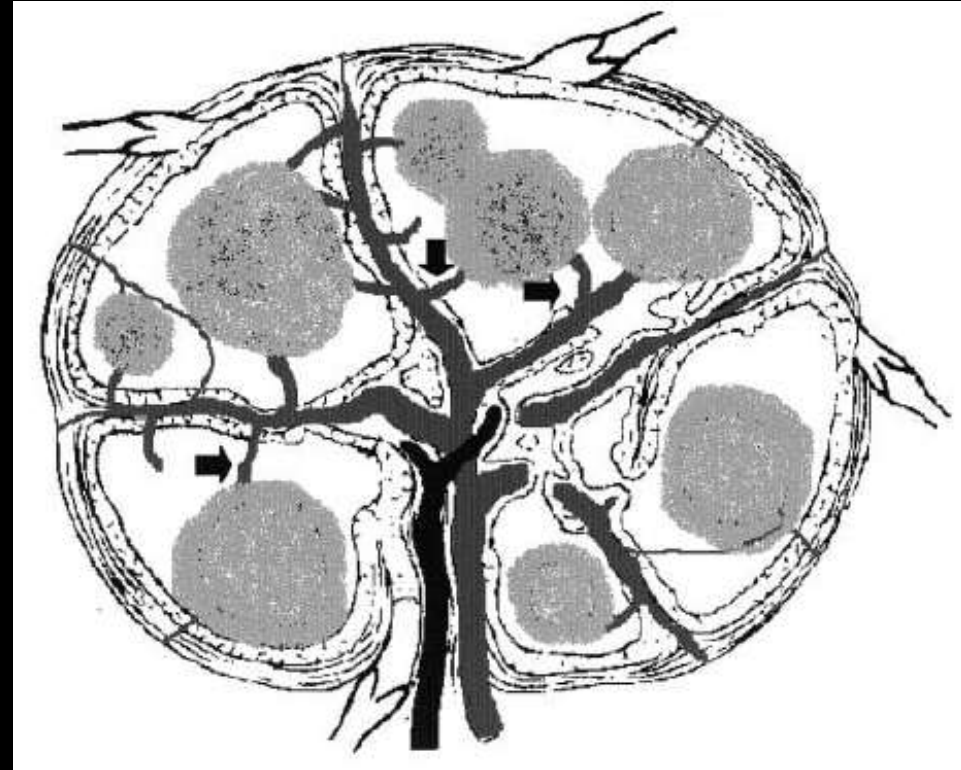
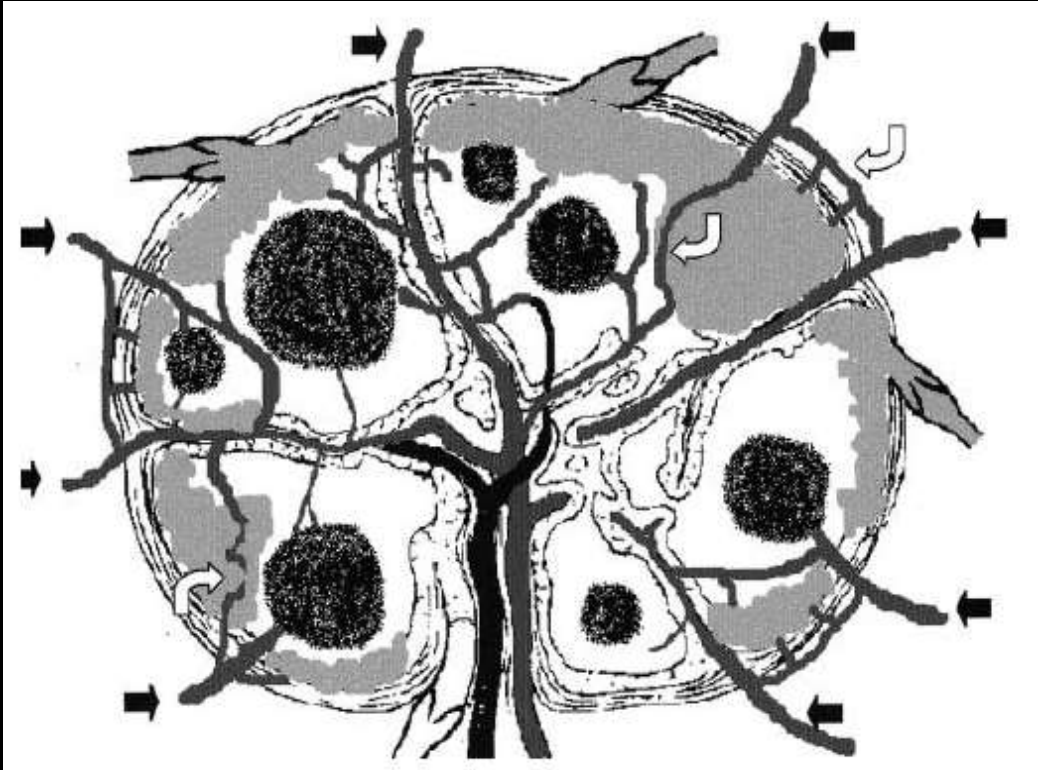
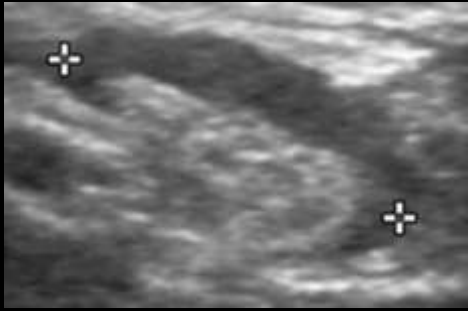
Stac. od 2011



Čihák R. Anatomie 3. 1., Praha:
Grada Publishing 1997, str.172.
ISBN 80-7169-140-2.

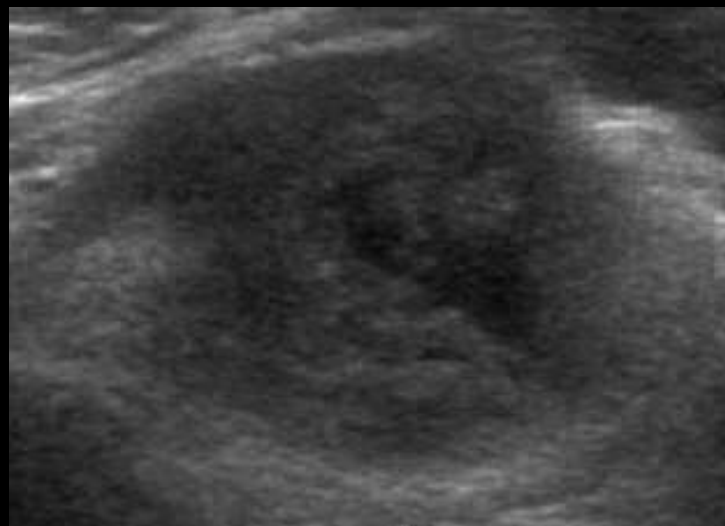


Sinusová histiocytóza

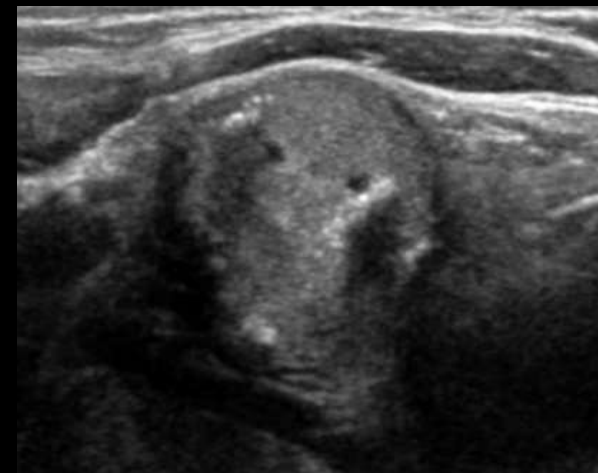


- Giovagnorio F, Galluzzo M, Adreoli Ch, et al. Color Doppler Sonography in the Evaluation of Superficial Lymphomatous Lymph Nodes. *J Ultrasound Med* 2002, 21:403-408

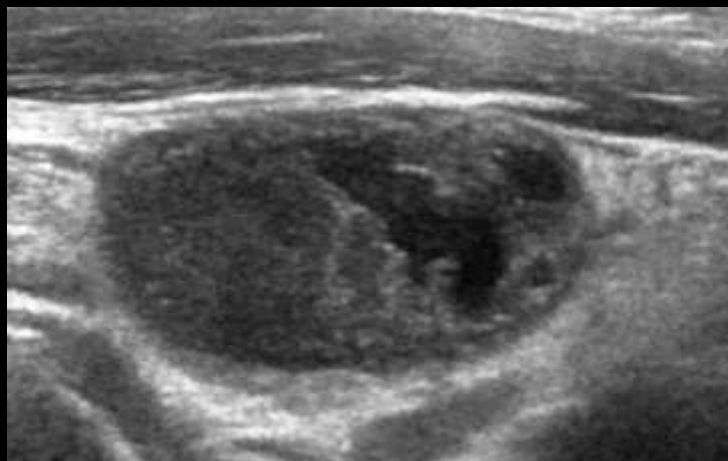
Echogenita, nekrózy



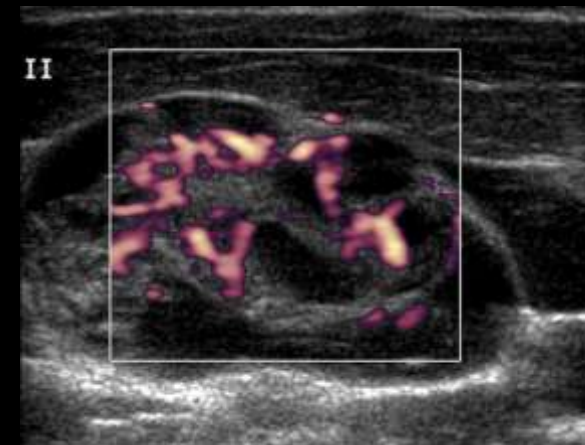
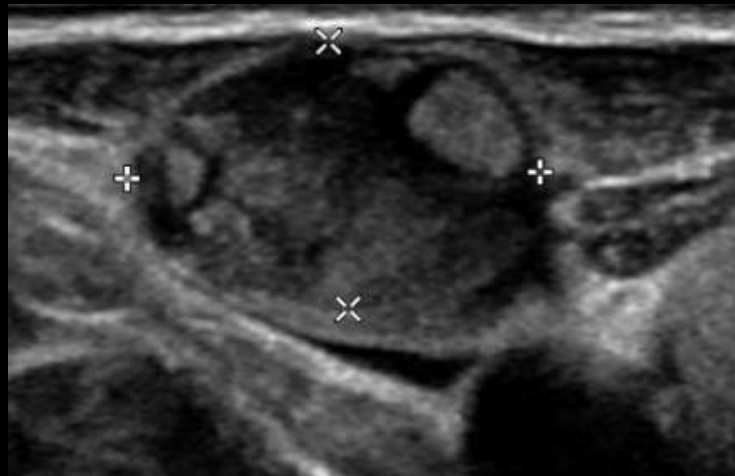
spinoCa dutiny ústní, patrové tonsily



papilární ca štítnice

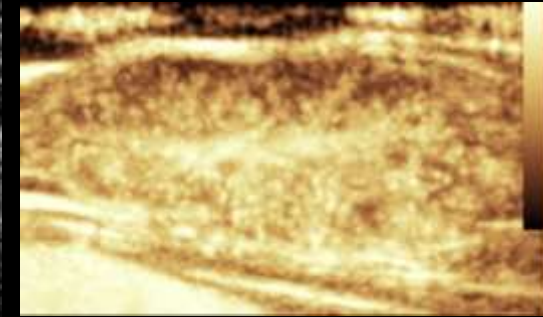
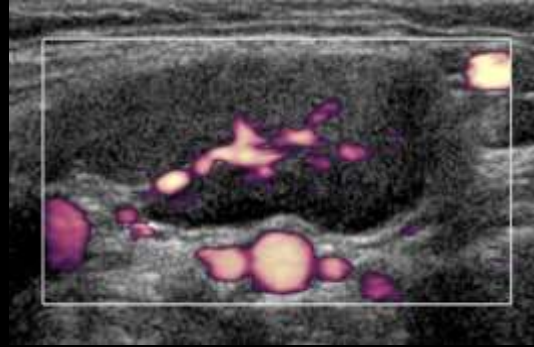


nasofaryngeální ca

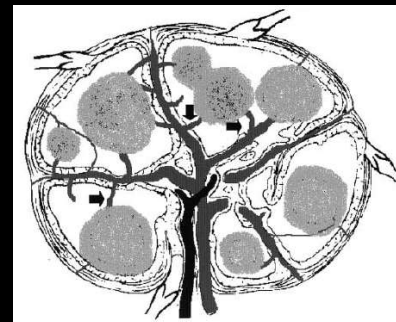
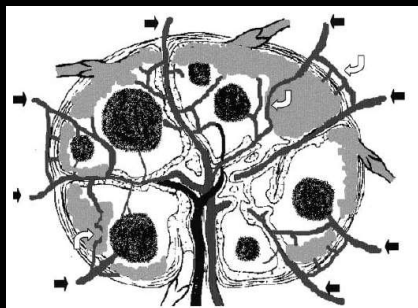


Vaskularizace

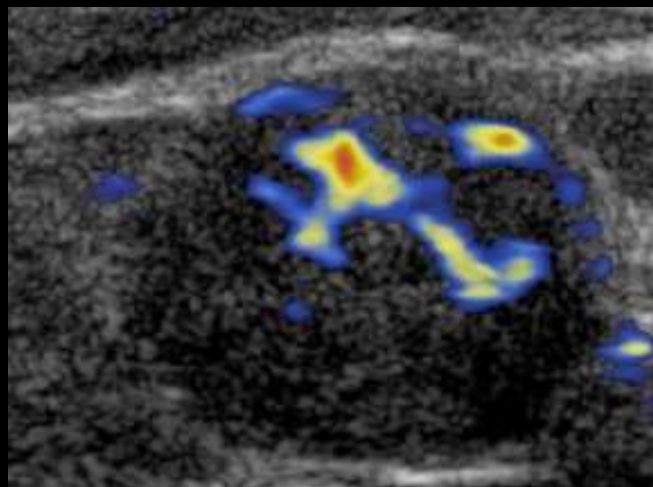
- Odtlačení intranodálních cév
- Avaskulární intranodální okrsky
- Akcesorní hilové cévy
- Subkapsulární cévy v periférii



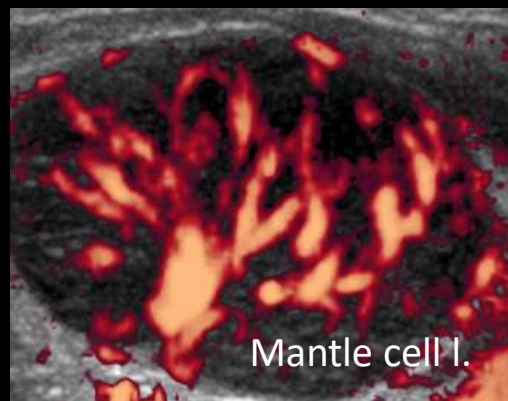
- *Tschammler A, Ott G, Schang T, et al. Lymphadenopathy: differentiation of benign from malignant disease- color Doppler US assessment of intranodal Angioarchitecture. Radiology 1998;208:117-123*
- *Bialek EJ, Jakubowski W, Szczepanik AB, et al. Vascular patterns in superficial lymphomatous lymph nodes: A detailed sonographic analysis. Journal of Ultrasound 2007;10:128-134.*
- **CEUS – hypovaskularizované uzliny – nehomogenní syčení**
- *Jin Y., He YS., Zhang MM et al. Value of contrast-enhanced ultrasonography in the differential diagnosis of enlarged lymph nodes: a meta-analysis of diagnostic accuracy studies. Asian Pac J Cancer Prev, 2015;16(6): 2361-2368.*



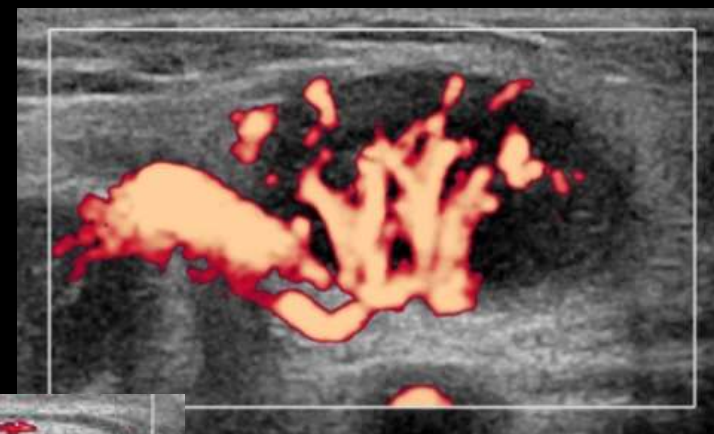
- Giovagnorio F, Galluzzo M, Adreoli Ch, et al. Color Doppler Sonography in the Evaluation of Superficial Lymphomatous Lymph Nodes. *J Ultrasound Med* 2002, 21:403-408



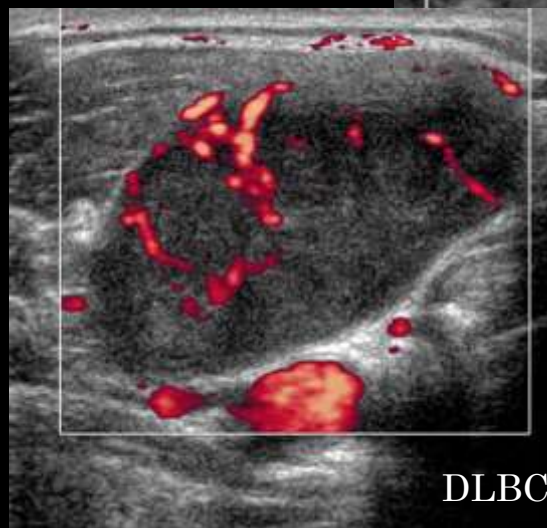
SpinoCa plic



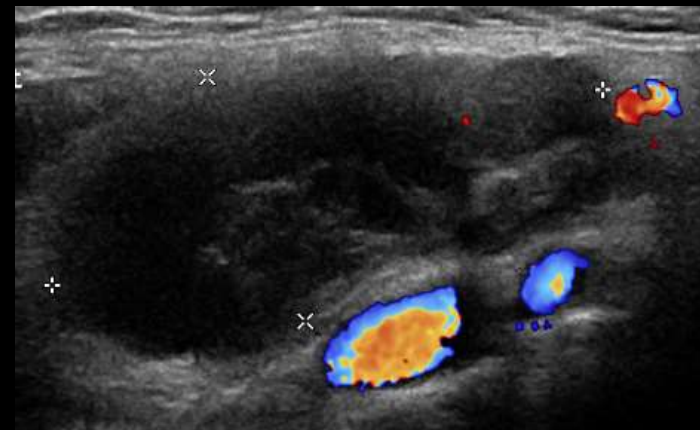
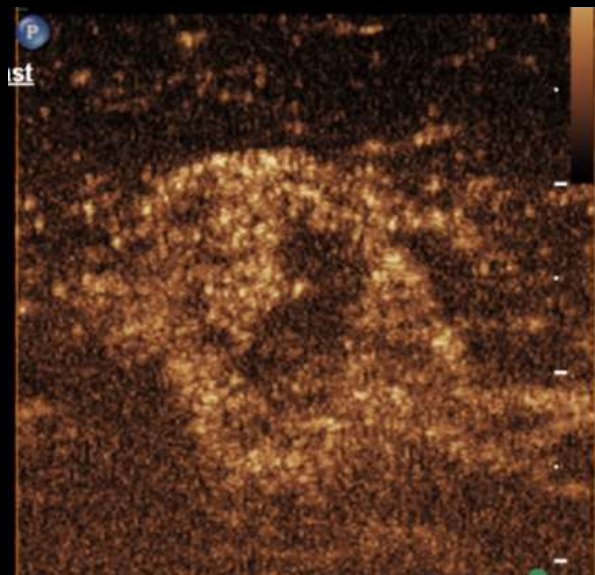
Mantle cell l.



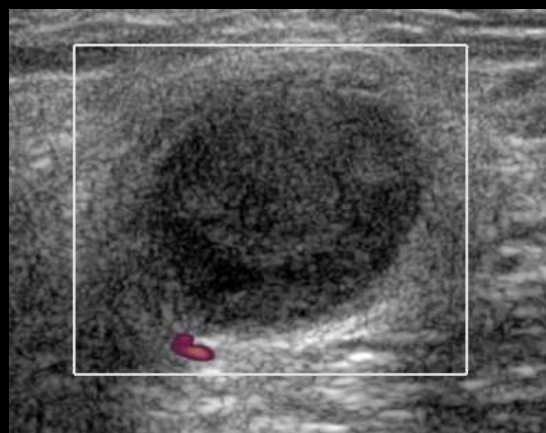
Periferní T lymfom



DLBCL



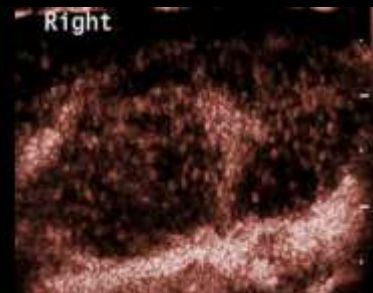
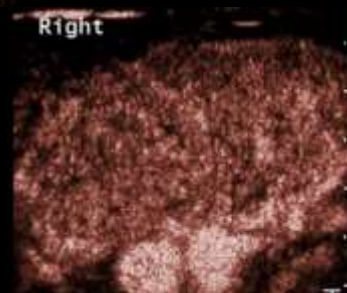
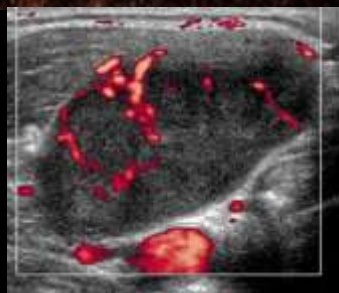
spinoCa jazyka



Ca nejasného origa



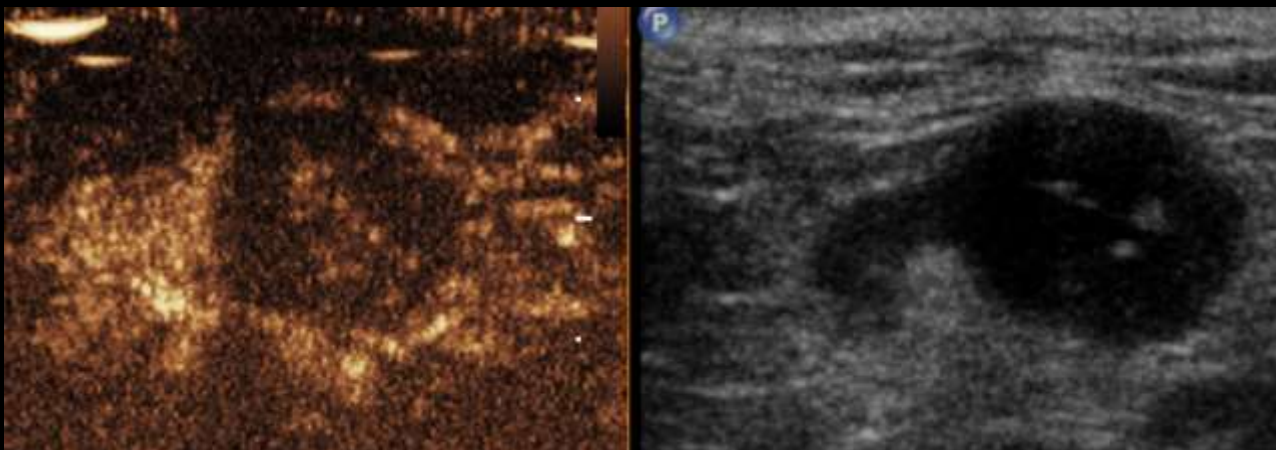
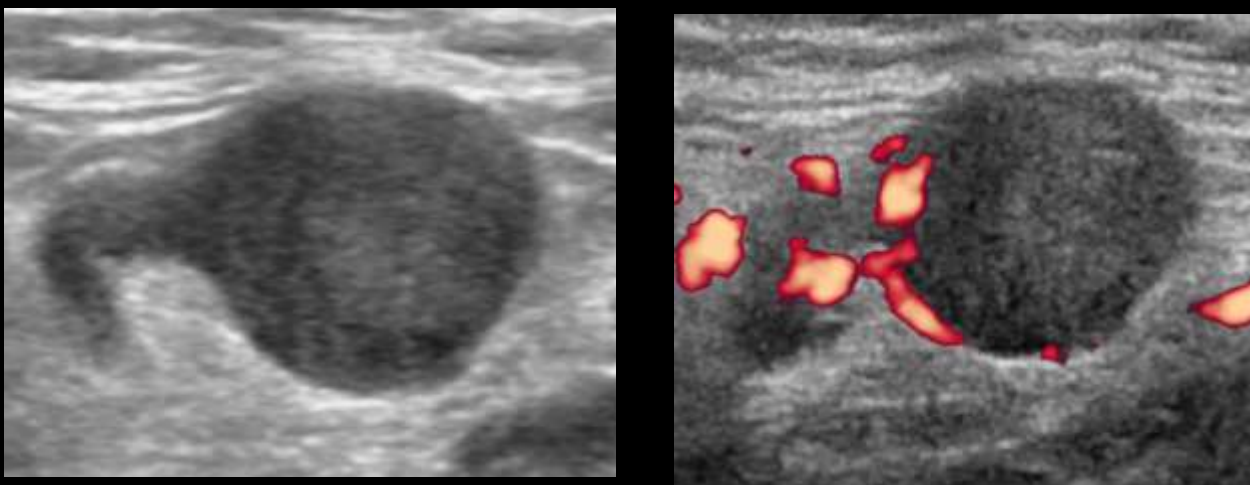
spinoCa patrové tonsily



DLBCL

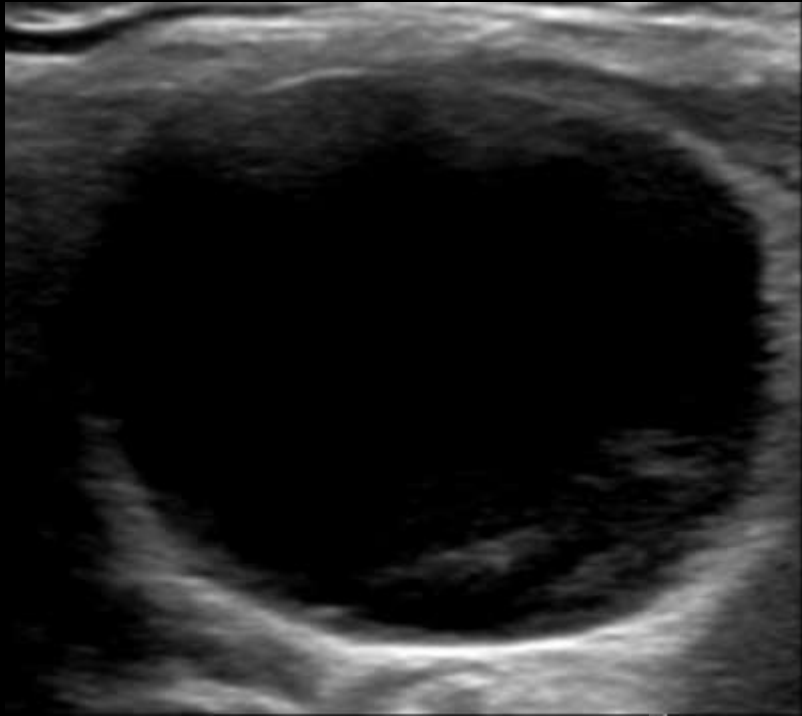
Fokální kortikální hypertrofie

- Hyperechogenní centrum zachované u maligních uzlin
- Vassallo P, Wernecke K, Roos N, et al. Differentiation of benign from malignant superficial lymphadenopathy: the role of high-resolution US. Radiology 1992;183:215-220.

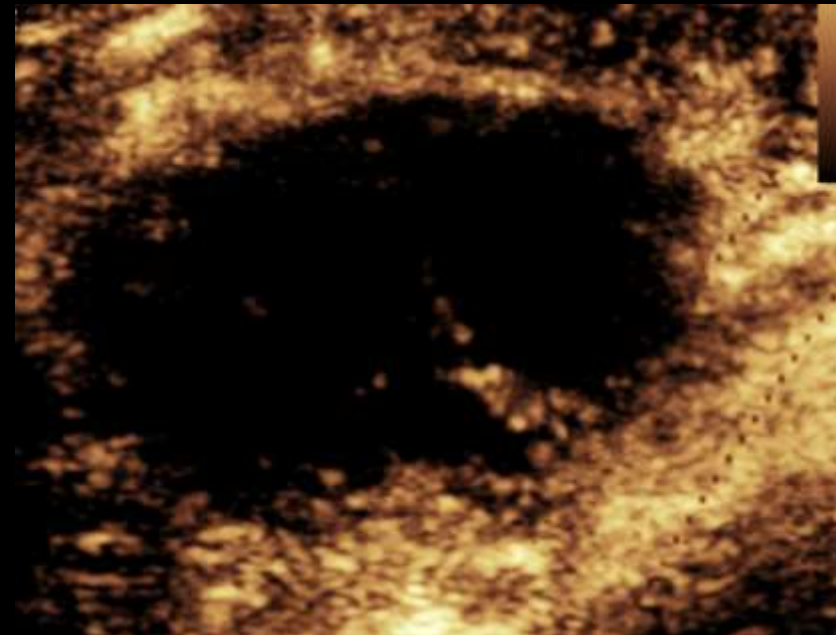
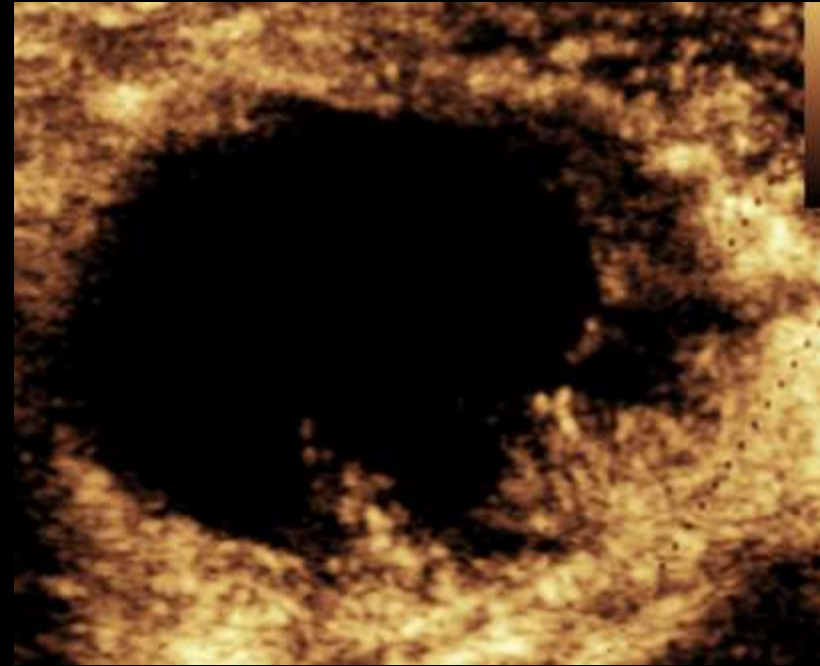
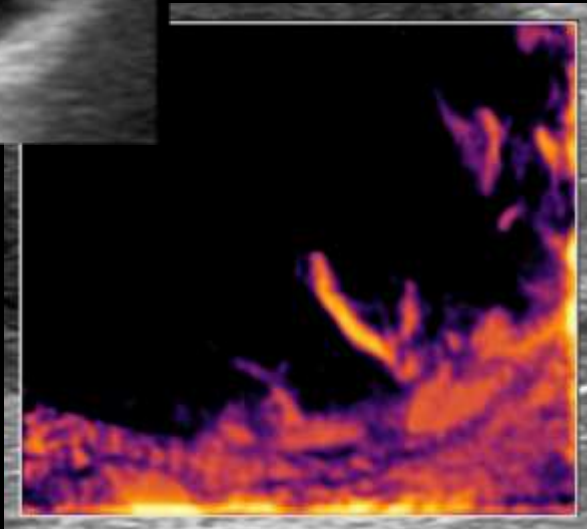


spinoCa spodiny dutiny ústní

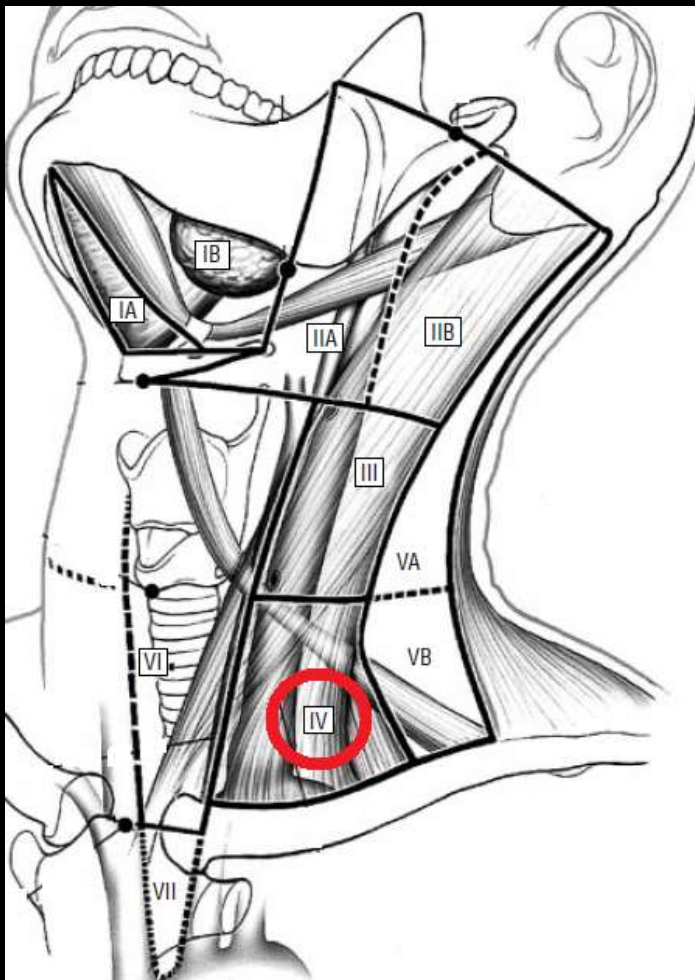
Cystická metastáza



spinoCa patrové
tonsily

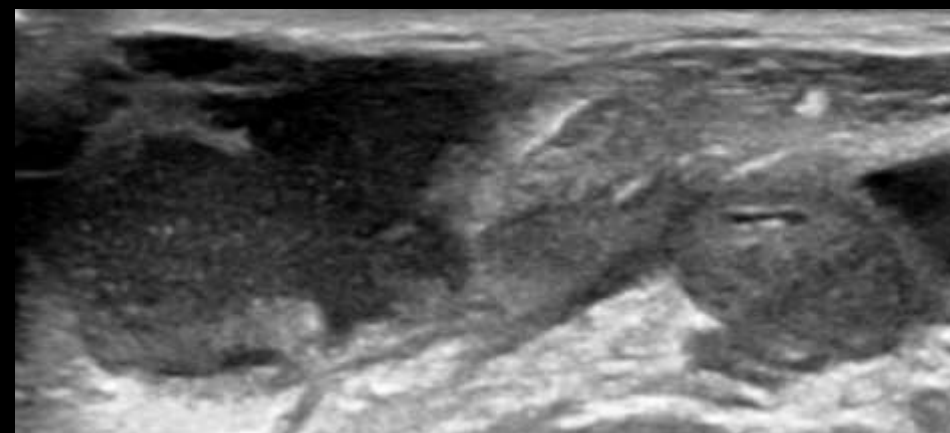
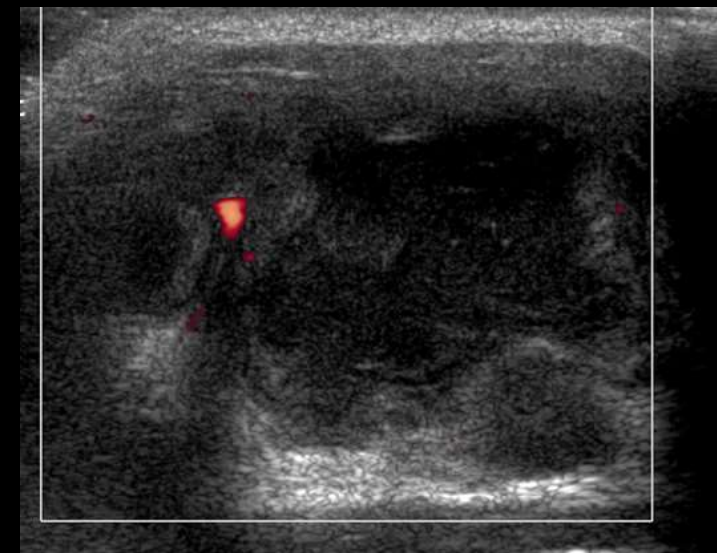


Supraklavikulární lymfadenopatie Virchowova uzlina



- metastázy
infradiafragmatických
tumorů
- lymfomy

TBC



Som PM, Curtin HD, Mancuso AA. An imaging-based classification for the cervical nodes designed as an adjunct to recent clinically based nodal classifications. Arch Otolaryngol Head Neck Surg. 1999;125(4):388-96.

Známky nádorové infiltrace

- Snížený LT index
- Fokální kortikální hypertrofie
- Excentrická dislokace hyperechogenního centra
- Absence centrálního typu vaskularizace, **neovaskularizace**
- Přítomnost nekróz, cystických okrsků
- Neostré ohraničení uzliny bez průvodní periadenitidy
- **CEUS** – nehomogenní syčení

Děkuji za pozornost