

ULTRAZVUKOVÉ VYŠETŘENÍ PERIFERNÍCH LYMFATICKÝCH UZLIN - BENIGNÍ A MALIGNÍ PROCESY

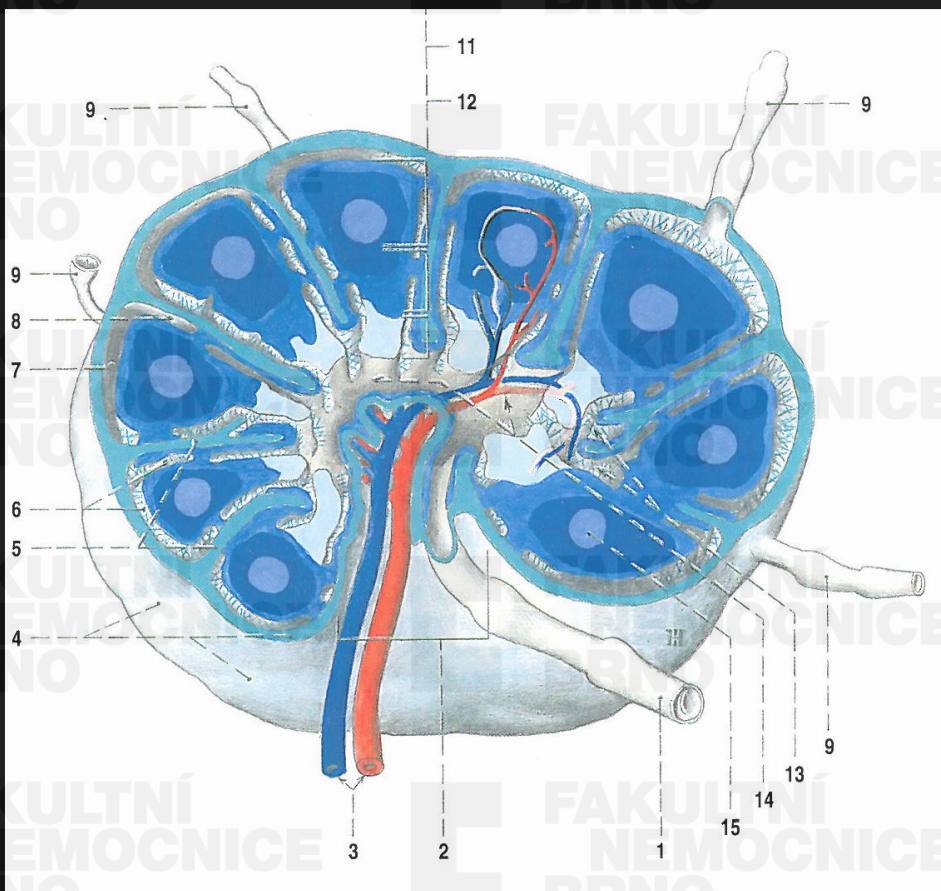
Radka Šlaisová

Klinika radiologie a nukleární medicíny FN Brno a LF MU

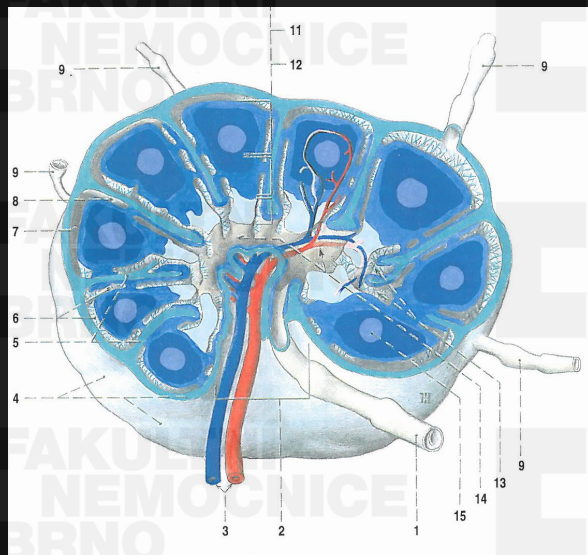
- Metoda volby při podezření na periferní lymfadenopatii
- Lineární vysokofrekvenční sondy, detailní zhodnocení echostruktury
 - benigní vs maligní etiologie
- Velikost, tvar
- Echogenita
- Ohraničení
- Nekrózy
- Kalcifikace
- Vaskularizace

Dudea SM, Lenghel M, Botar-Jid C, et al. Ultrasonography of superficial lymph nodes: benign vs. malignant. Med Ultrason. 2012 Dec;14(4):294-306.

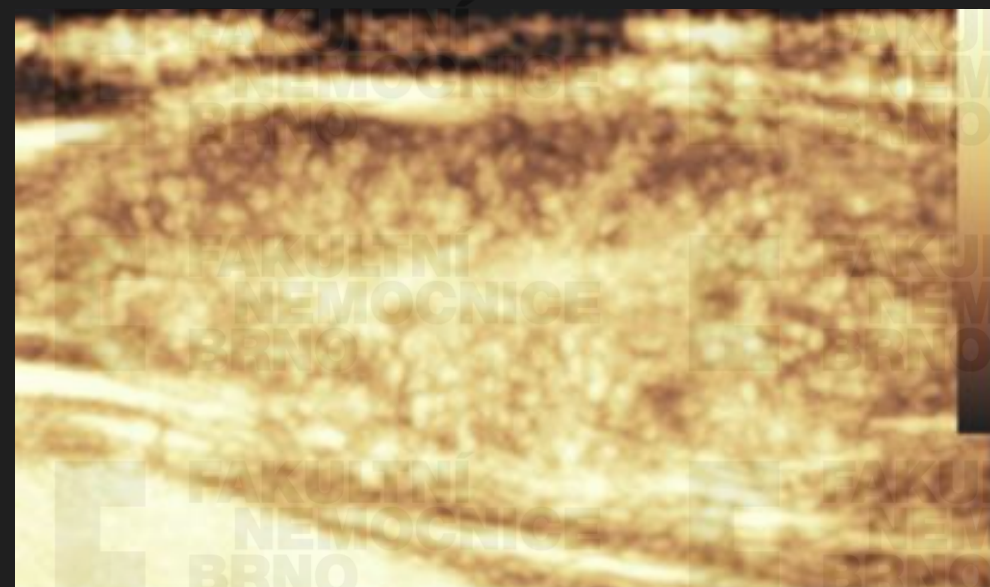
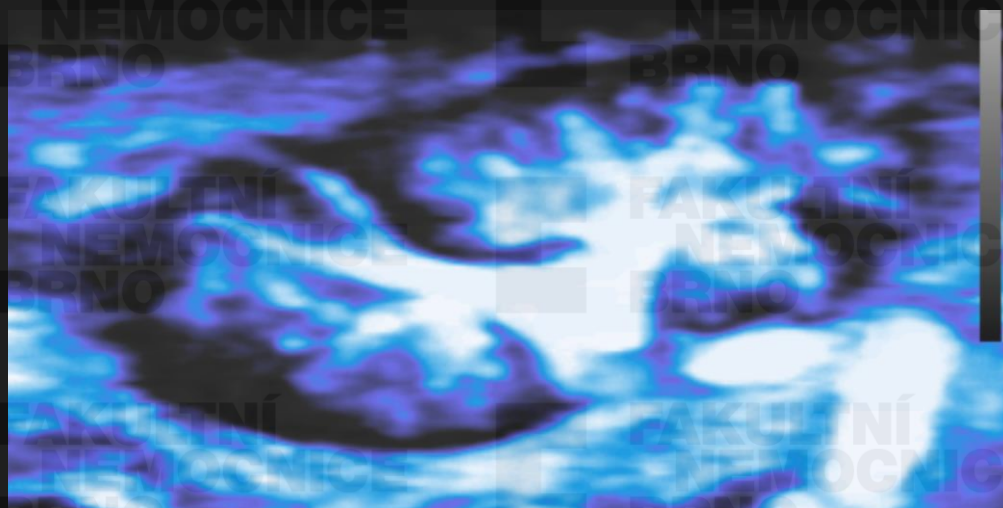
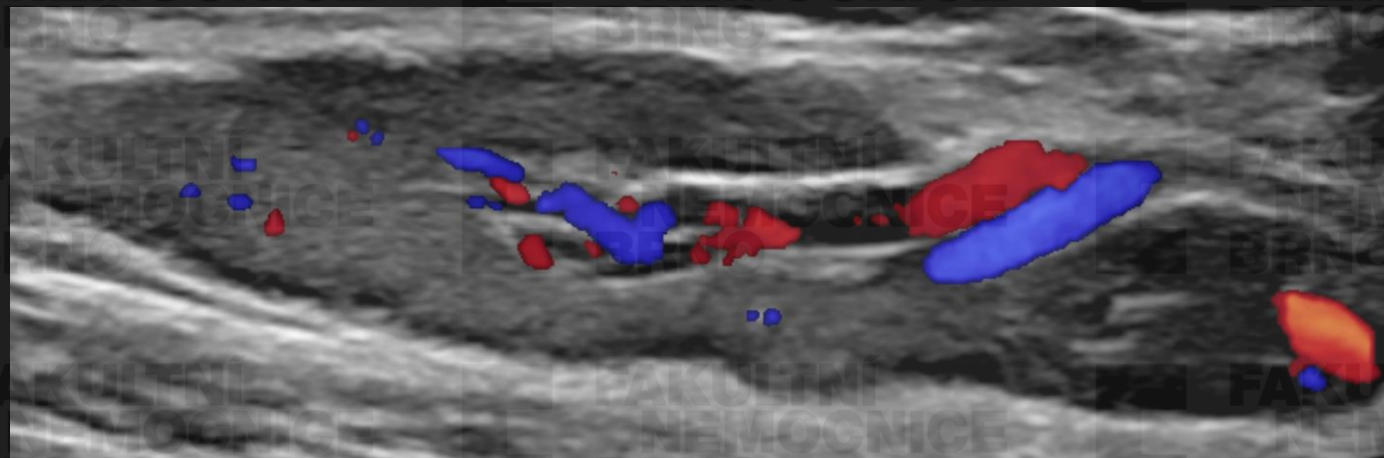
Normální LU



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

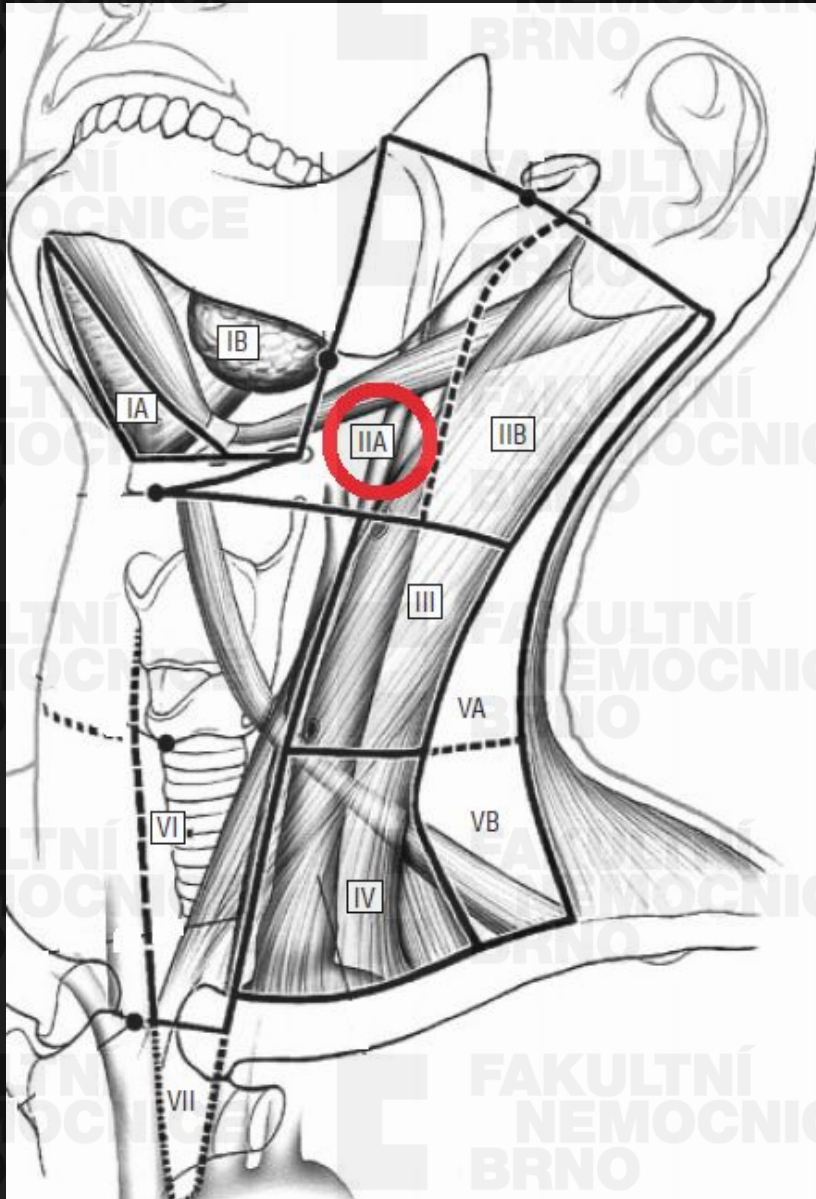


- Čihák R. Anatomie 3. 1., Praha: Grada Publishing 1997, str.172. ISBN 80-7169-140-2.



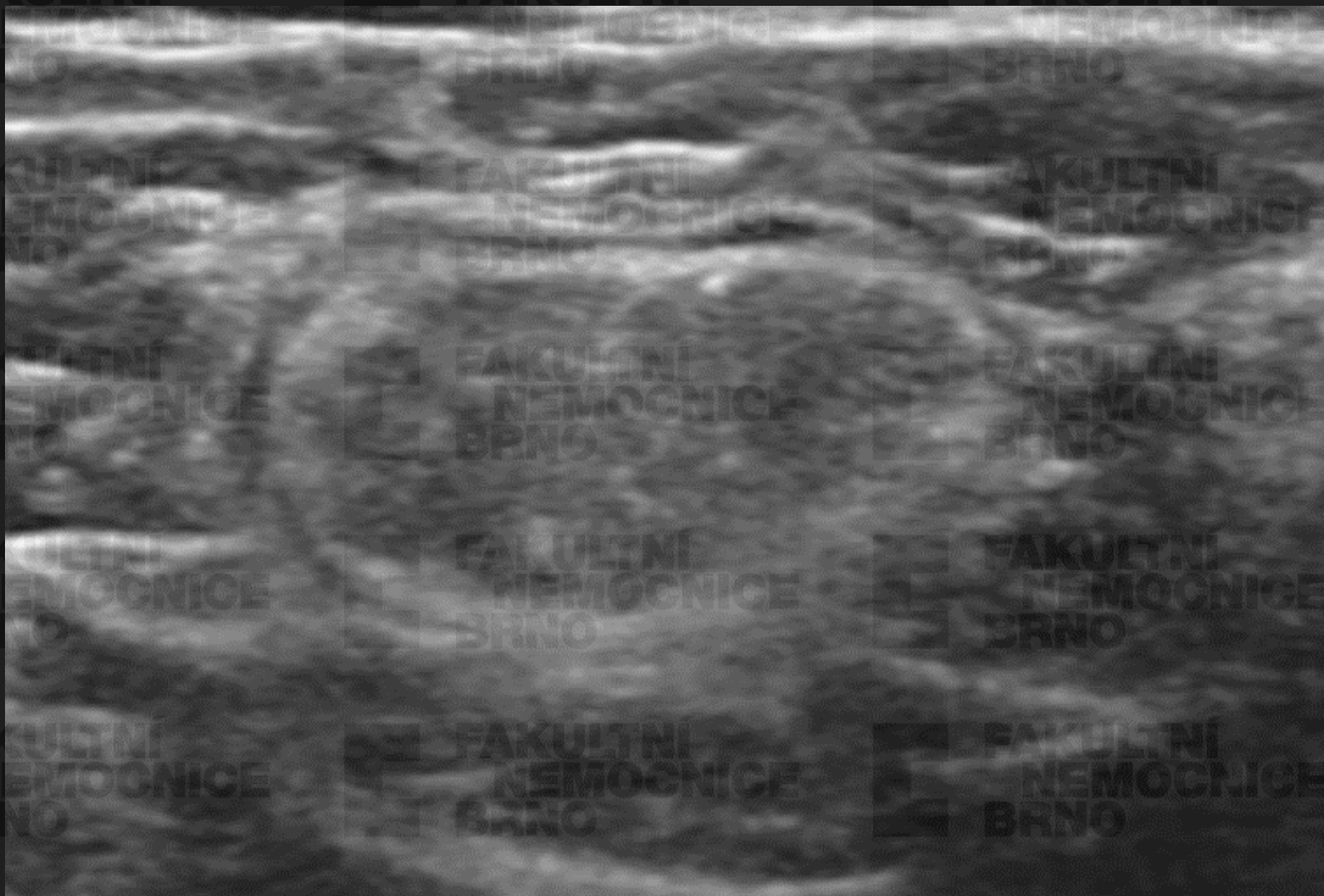
Velikost uzlin

- lokalita
- věk



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.

Lipomatozní přestavba

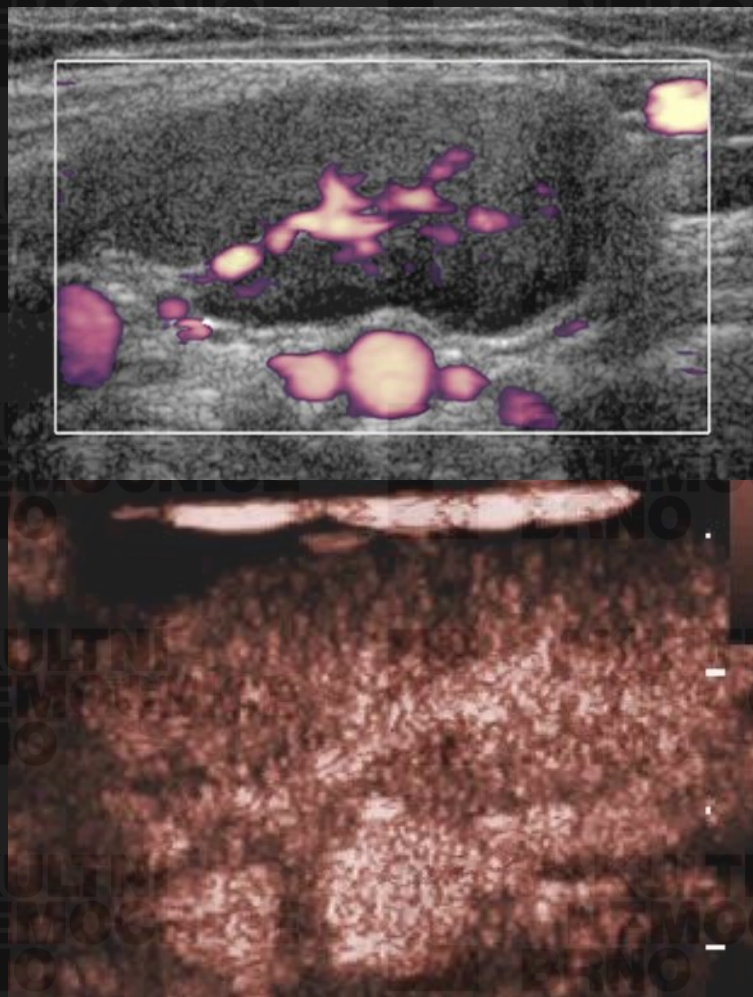


Dg. spinoCa kůže
vel. 30x15 mm
stac. od r. 2016

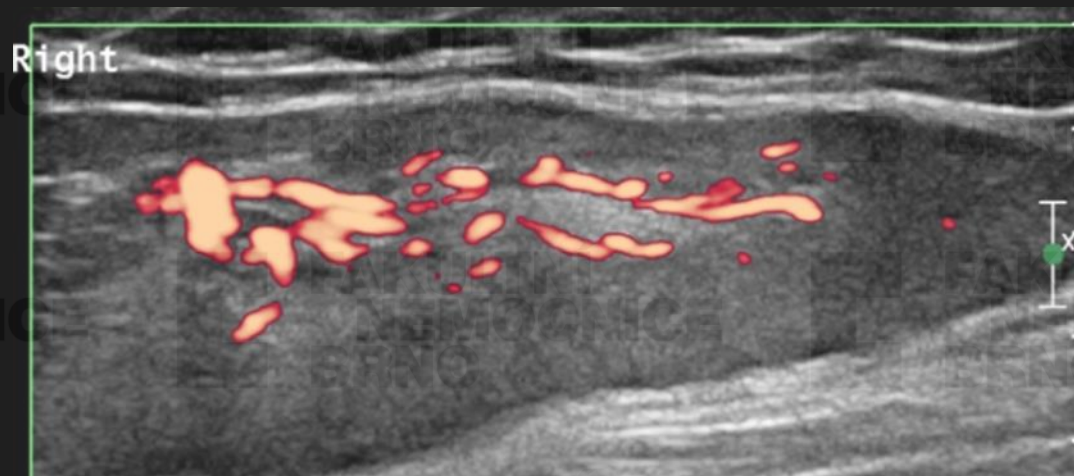
Reaktivní lymfadenopatie



- imunitní stimul ze spádové oblasti
- systémové choroby



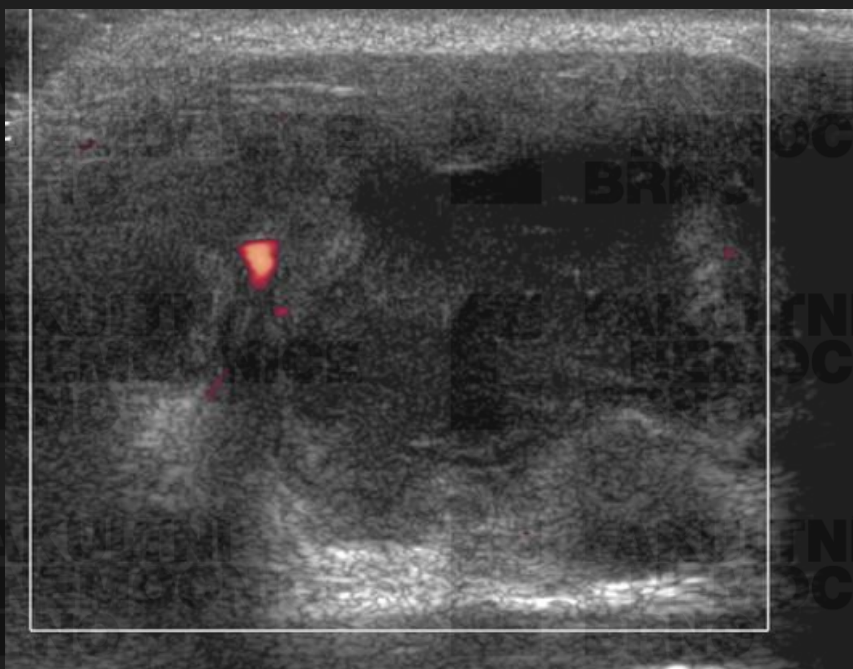
Sinusová histiocytóza



Chron. žilní insuficience, trofické změny kůže
tříselná LU délky 55 mm, stac. od r. 2011

Bakteriální lymfadenitidy

- Stafylokoky, streptokoky
- Bartonelóza – axilární, epitrochleární, krční, tříselné LU
- Tularémie – axilární, epitrochleární, krční, tříselné LU
- TBC – krční (sk II, V), axilární

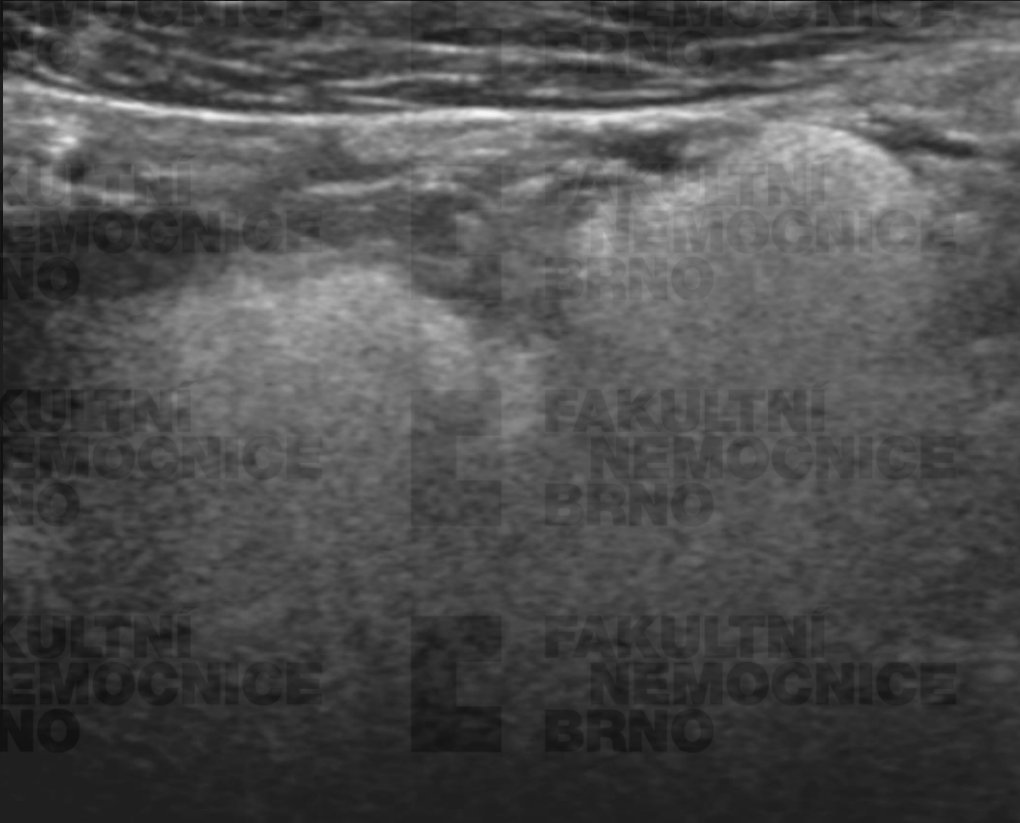


TBC

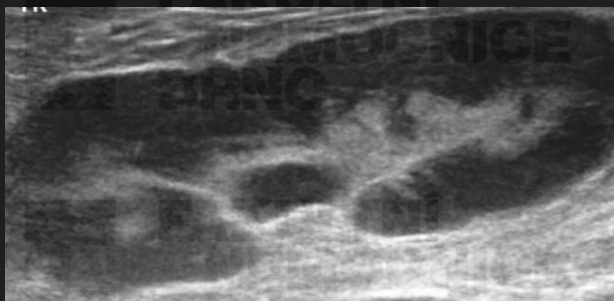


Tularémie

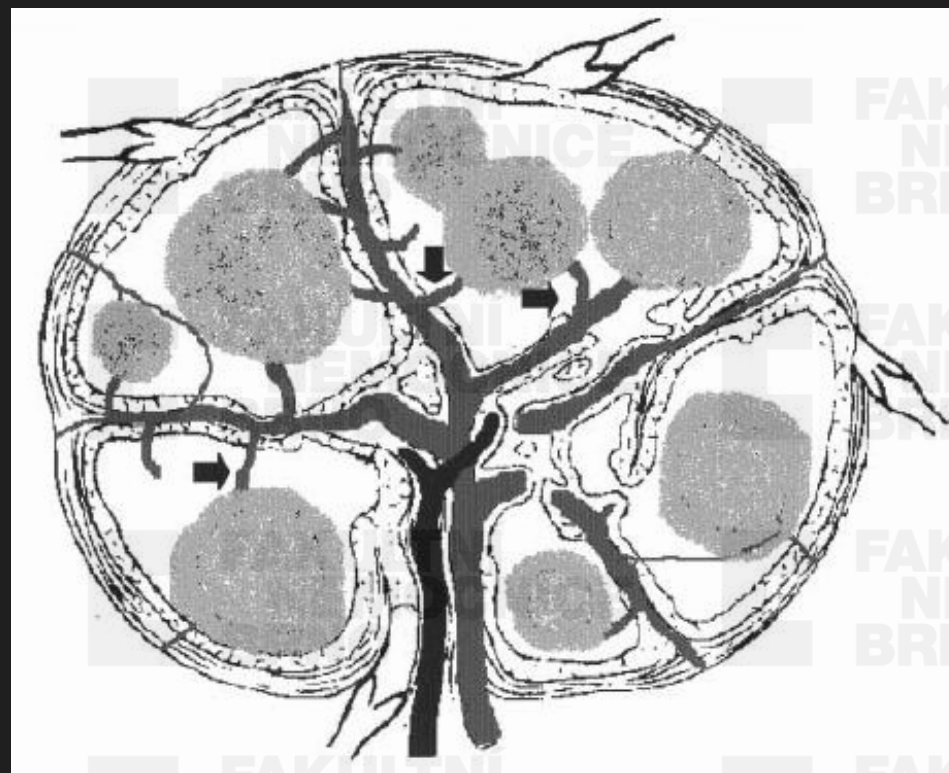
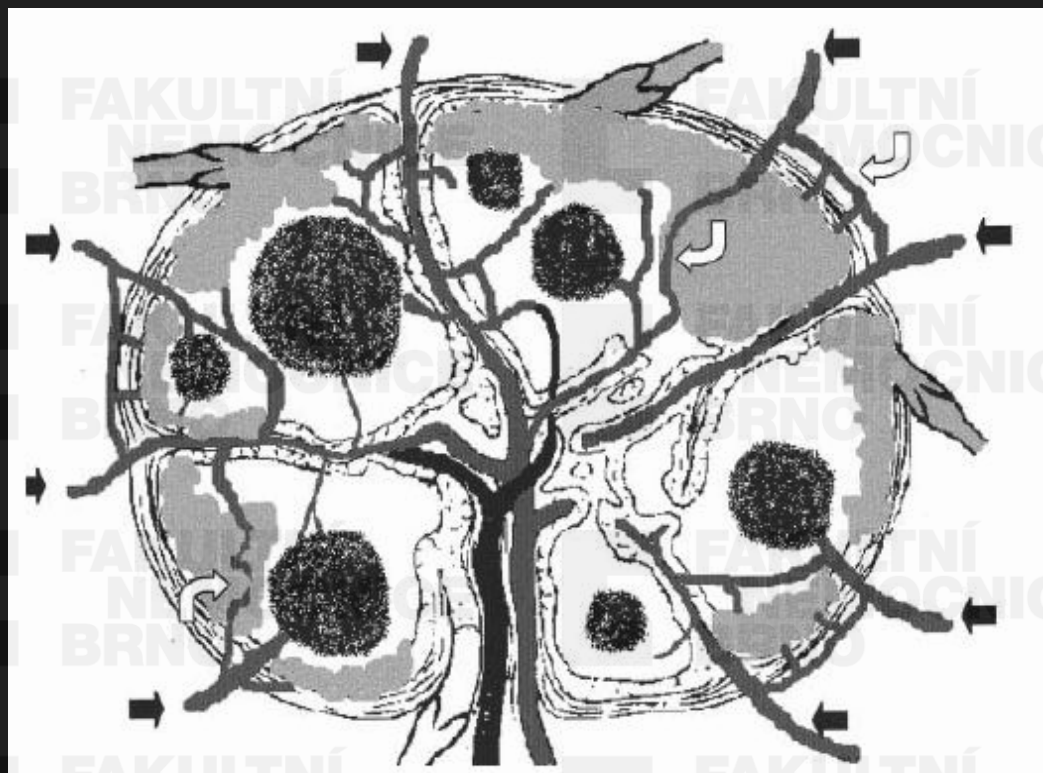
Silikonová lymfadenopatie



- Axily
- Nadklíčky



DLBCL
LT index



- 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

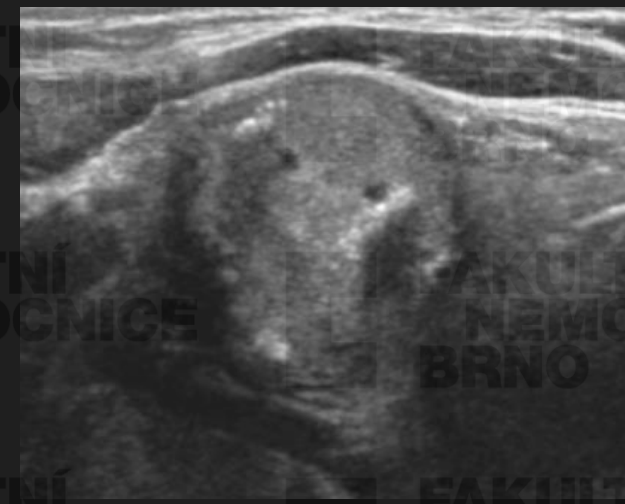
Echogenita, nekrózy



DLBCL



SpinoCa dutiny ústní, patrové tonsily



Papilární ca štítnice

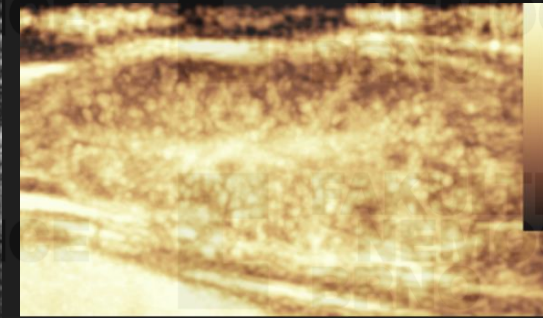
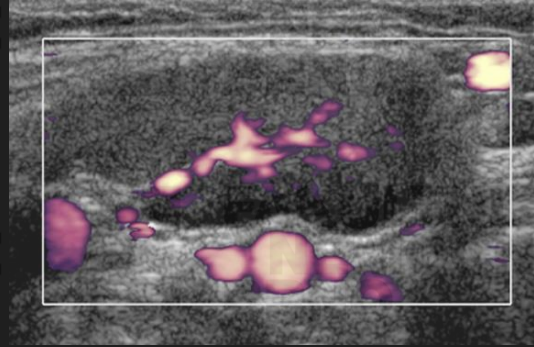


High grade B lymfom, NOS

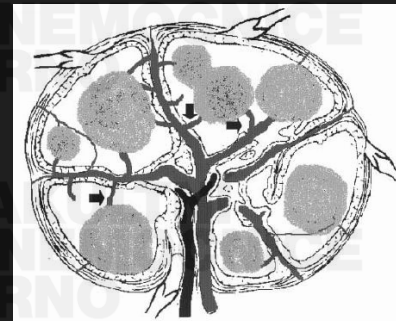
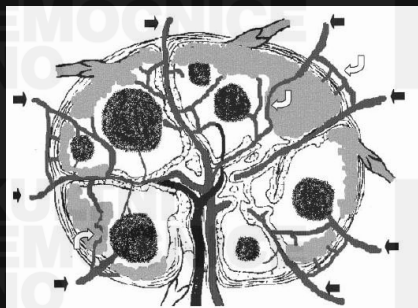


Vaskularizace

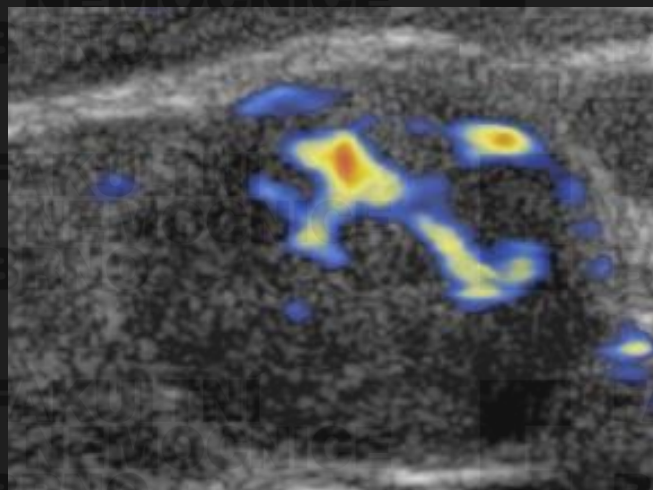
- Odtlačení intranodálních cév
- Avaskulární intranodální okrsky
- Akcesorní hilové cévy
- Subkapsulární cévy v periferii



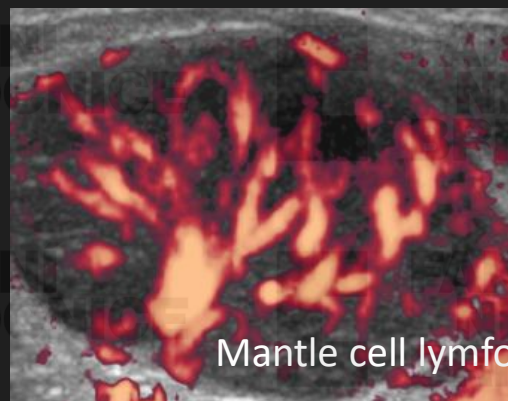
- *Tschammler A, Ott G, Schang T, et al. Lymphadenopathy: differentiation of benign from malignant disease- color Doppler US assessment of intranodal Angioarchitecture. Radiology 1998;208:117-123*
- *Bialek EJ, Jakubowski W, Szczepanik AB, et al. Vascular patterns in superficial lymphomatous lymph nodes: 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.*



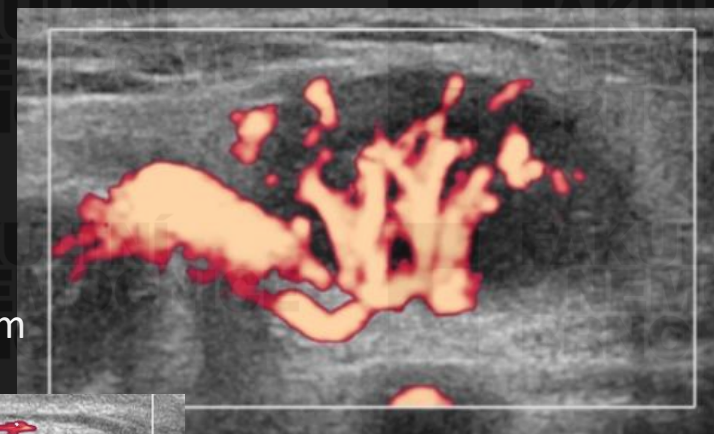
- Giovagnorio F, Galluzzo M, Adreoli Ch, et al. Color Doppler Sonography in the Evaluation of Superficial Lymphomatous Lymph Nodes. J Ultrasound Med 2002, 21:403-408



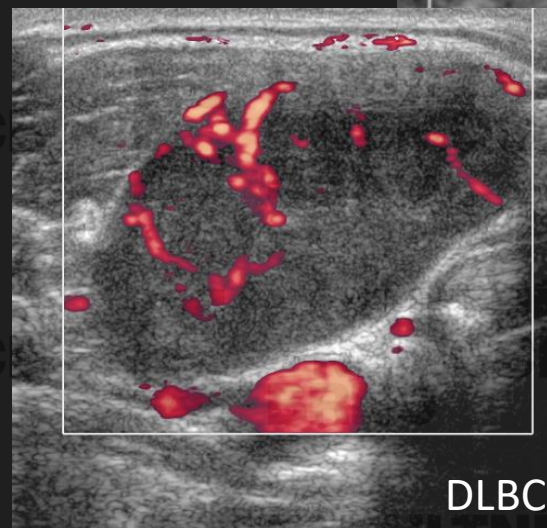
SpinoCa plic



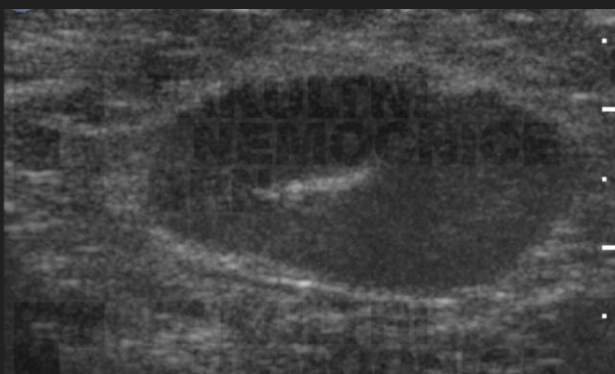
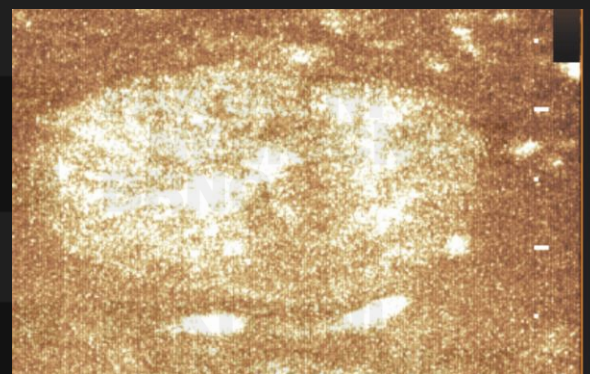
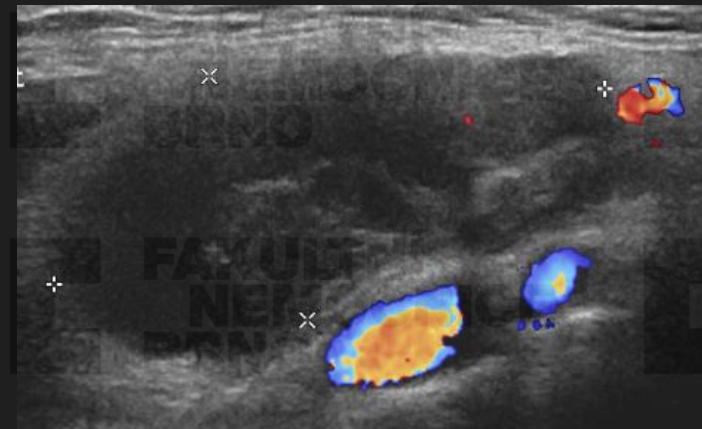
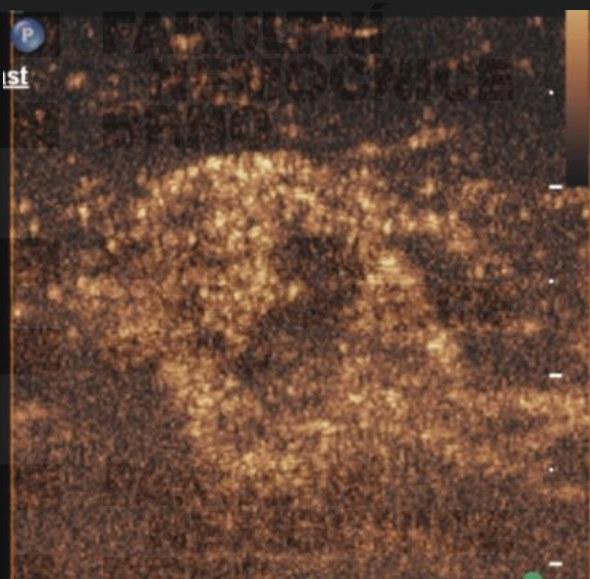
Mantle cell lymphom



Periferní T lymfom

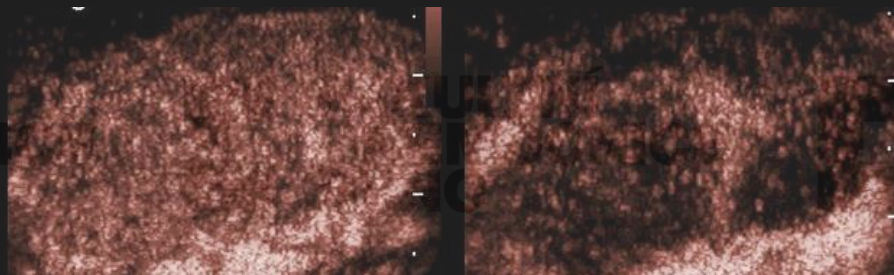
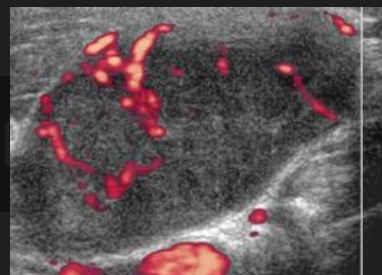


DLBCL



NLPHL

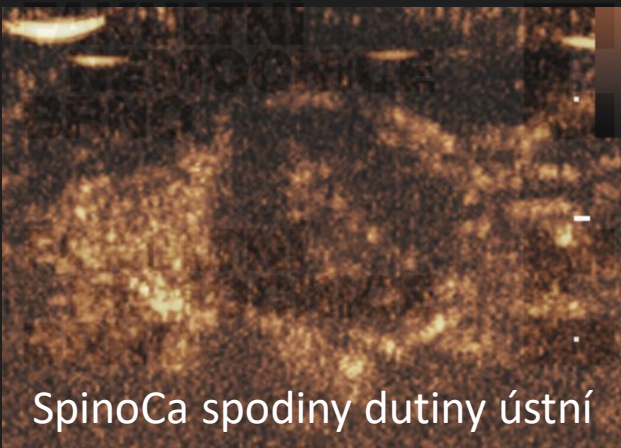
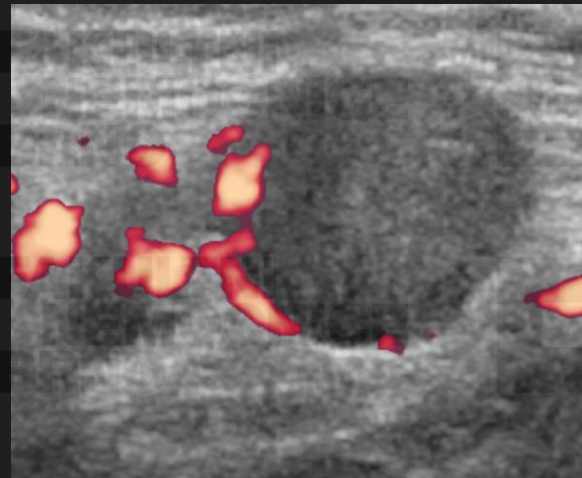
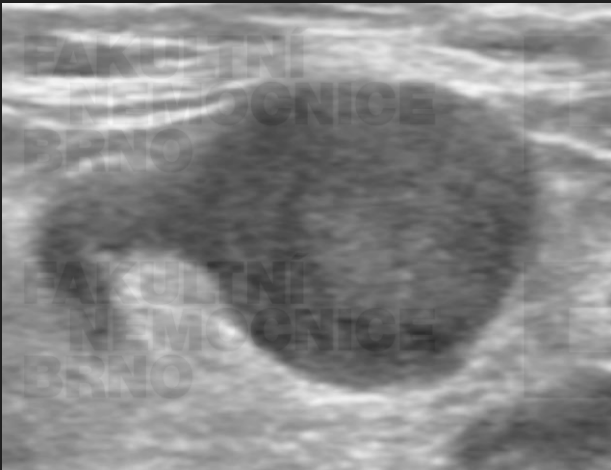
SpinoCa patrové tonsily



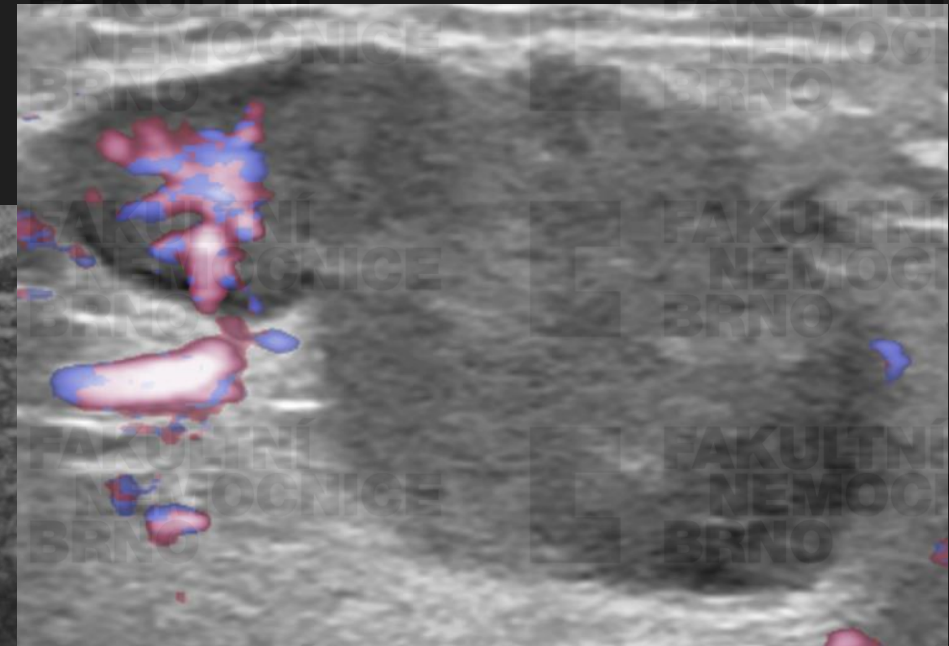
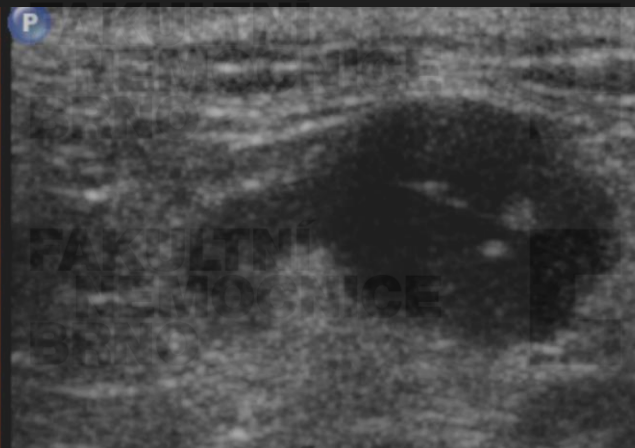
DLBCL

Fokální kortikální hypertrofie, extrakapsulární šíření

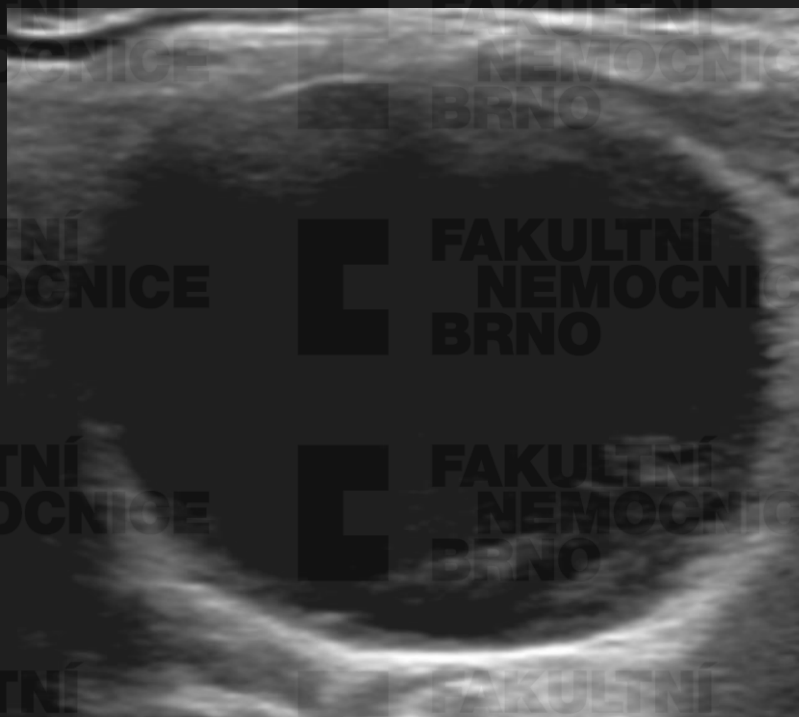
- Hyperechogenní centrum zachované u maligních uzlin
- Vassallo P, Wernecke K, Roos N, et al. Differentiation of benign from malignant superficial lymphadenopathy: the role of high-resolution US. Radiology 1992;183:215-220.



SpinoCa spodiny dutiny ústní

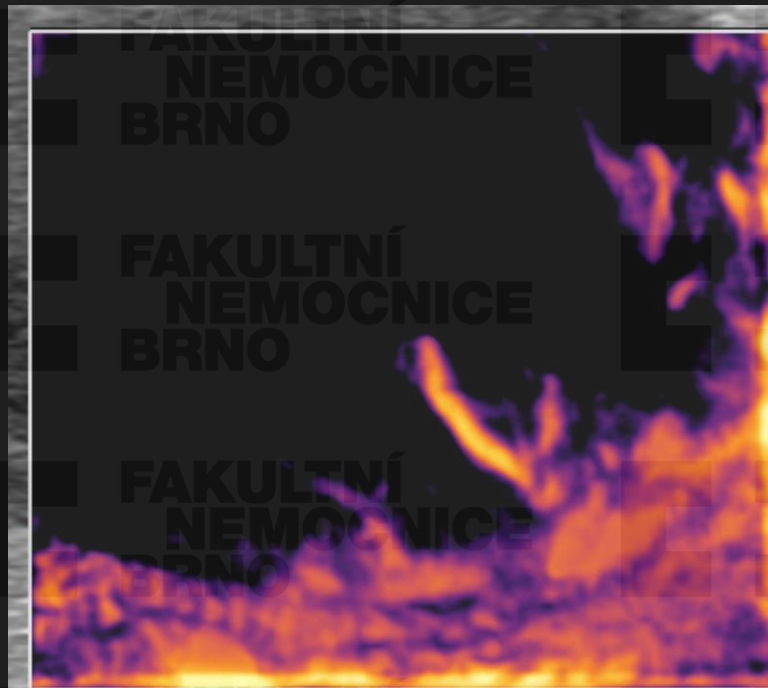


Cystická metastáza



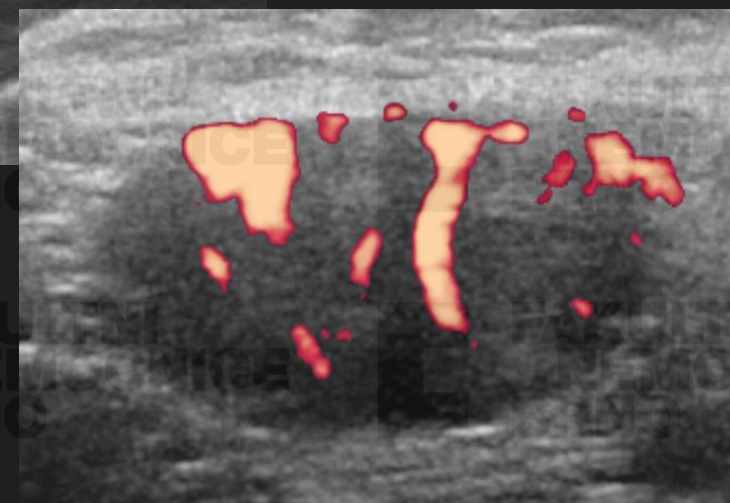
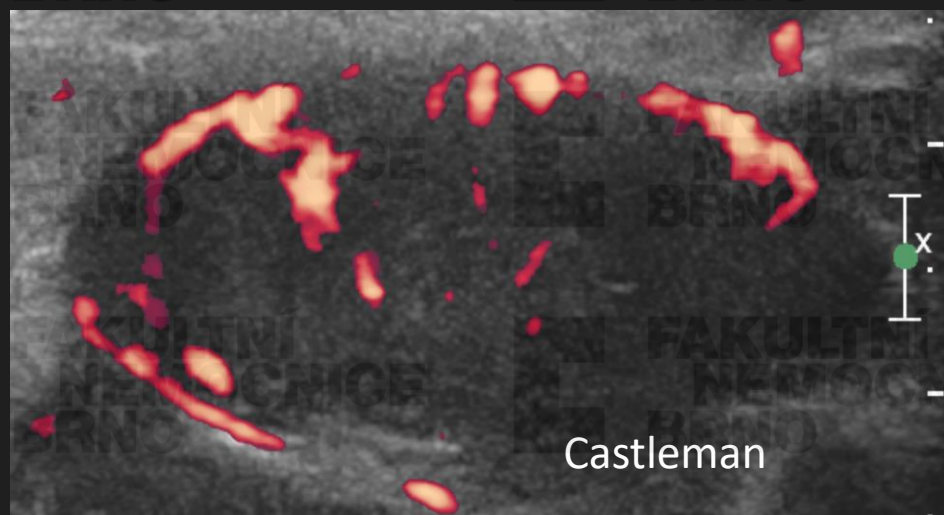
SpinoCa patrové tonsily p16+
HPV infekce

Mouawad F, Rysman B, Russ G, et al. Cystic form of cervical lymphadenopathy. Guidelines of the French Society of Otorhinolaryngology - Head and Neck Surgery (SFORL). Part 1: Diagnostic procedures for lymphadenopathy in case of cervical mass with cystic aspect. Eur Ann Otorhinolaryngol Head Neck Dis. 2019 ;136(6):489-496.



Castlemanova choroba

Progresivní transformace zárodečných center



Li J, Wang J, Yang Z, et al. Castleman disease versus lymphoma in neck lymph nodes: a comparative study using contrast-enhanced CT. *Cancer Imaging*. 2018;18(1):28.

Známky nádorové infiltrace

- Snížený LT index
- Fokální kortikální hypertrofie
- Excentrická dislokace hyperechogenního centra
- Přítomnost nekróz, cystických okrsků
- Neostré ohraničení uzliny bez průvodní periadenitidy
- Absence centrálního typu vaskularizace, **neovaskularizace**
- **CEUS** – nehomogenní sycení, wash-out
- *Benigní procesy imitující malignitu*

Děkuji za pozornost