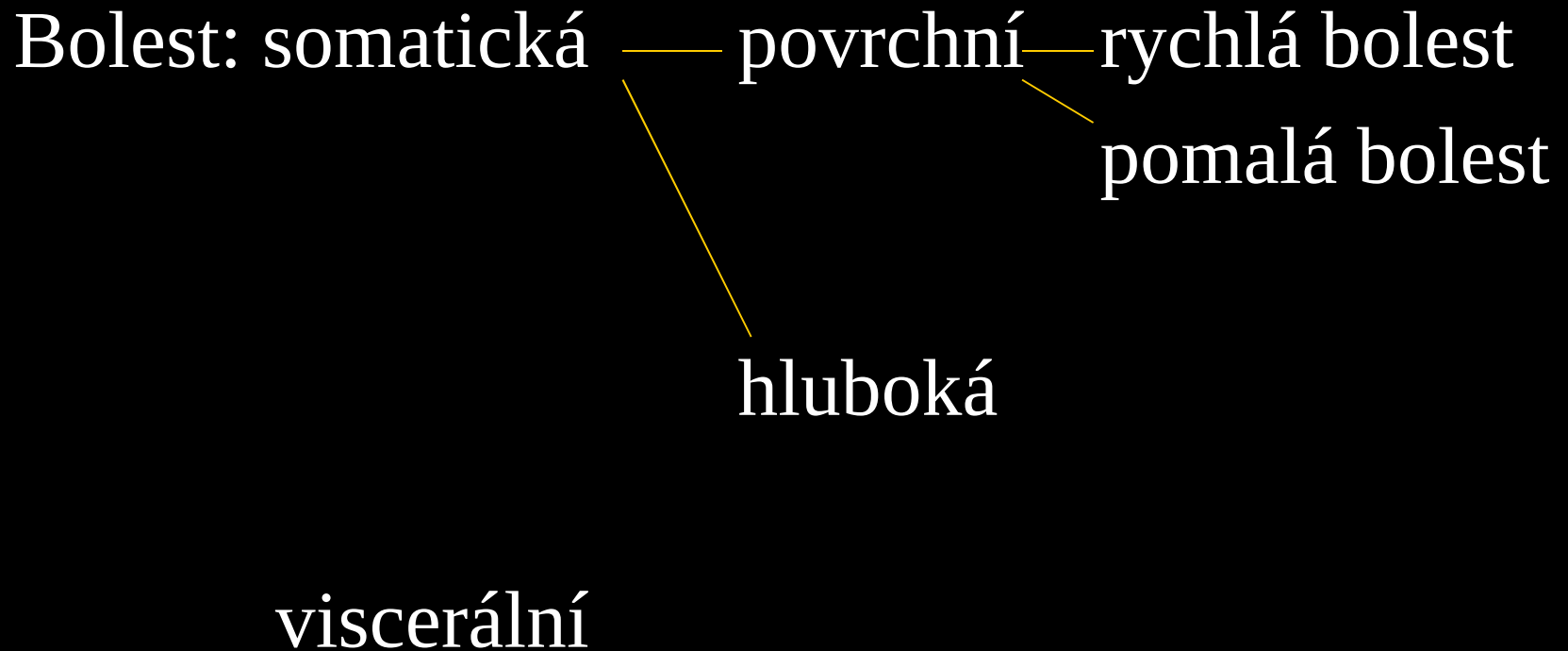


Perkutánní neurolýzy

Křístek J.

Oddělení zobrazovacích metod
SurGal Clinic, Brno

Bolest



Bolest

Bolest: somatická — povrchní — rychlá bolest
pomalá bolest
hluboká

viscerální

Sympatikus/ parasympatikus

Sympatikus: fight or flight

Sympatikus/ parasympatikus

Sympatikus: fight or flight



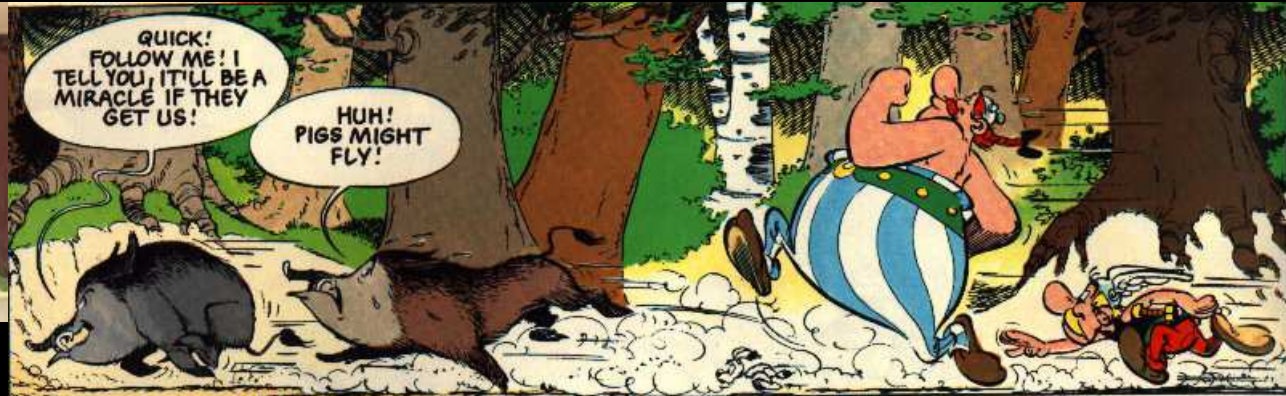
Sympatikus/ parasympatikus

Sympatikus: fight or flight



Sympatikus/ parasympatikus

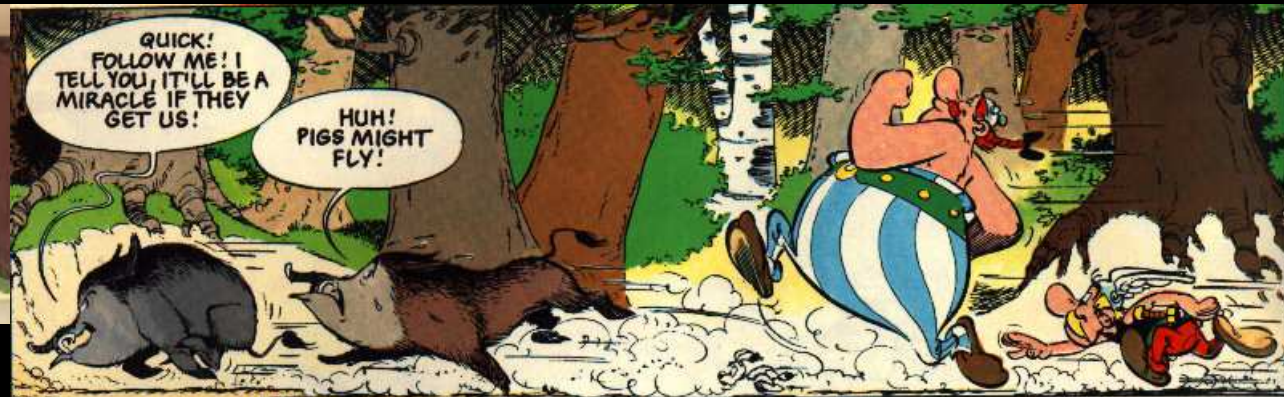
Sympatikus: fight or flight



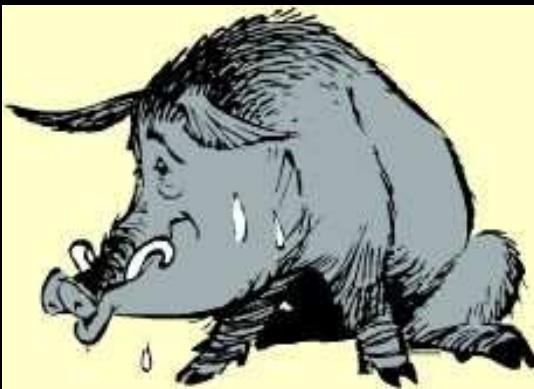
Parasympatikus: rest and digest

Sympatikus/ parasympatikus

Sympatikus: fight or flight



Parasympatikus: rest and digest

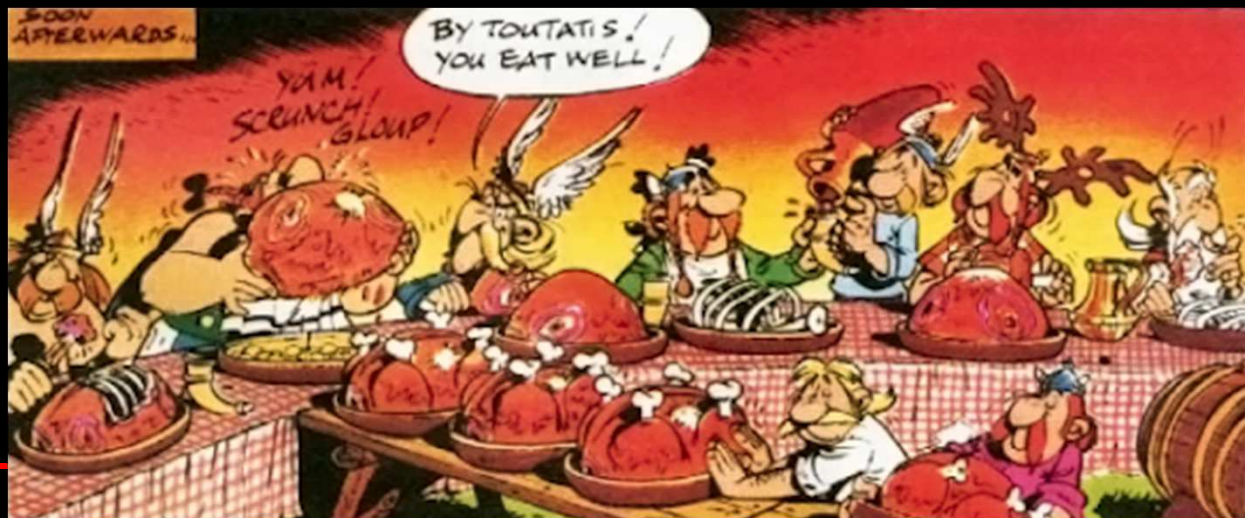


Sympatikus/ parasympatikus

Sympatikus: fight or flight



Parasympatikus: rest and digest



Anatomical Differences in Sympathetic and Parasympathetic Divisions

Come from different regions of the CNS

- **Sympathetic**—from the **thoracolumbar** region
- **Parasympathetic**—from the **craniosacral** region

Differing locations of ganglia

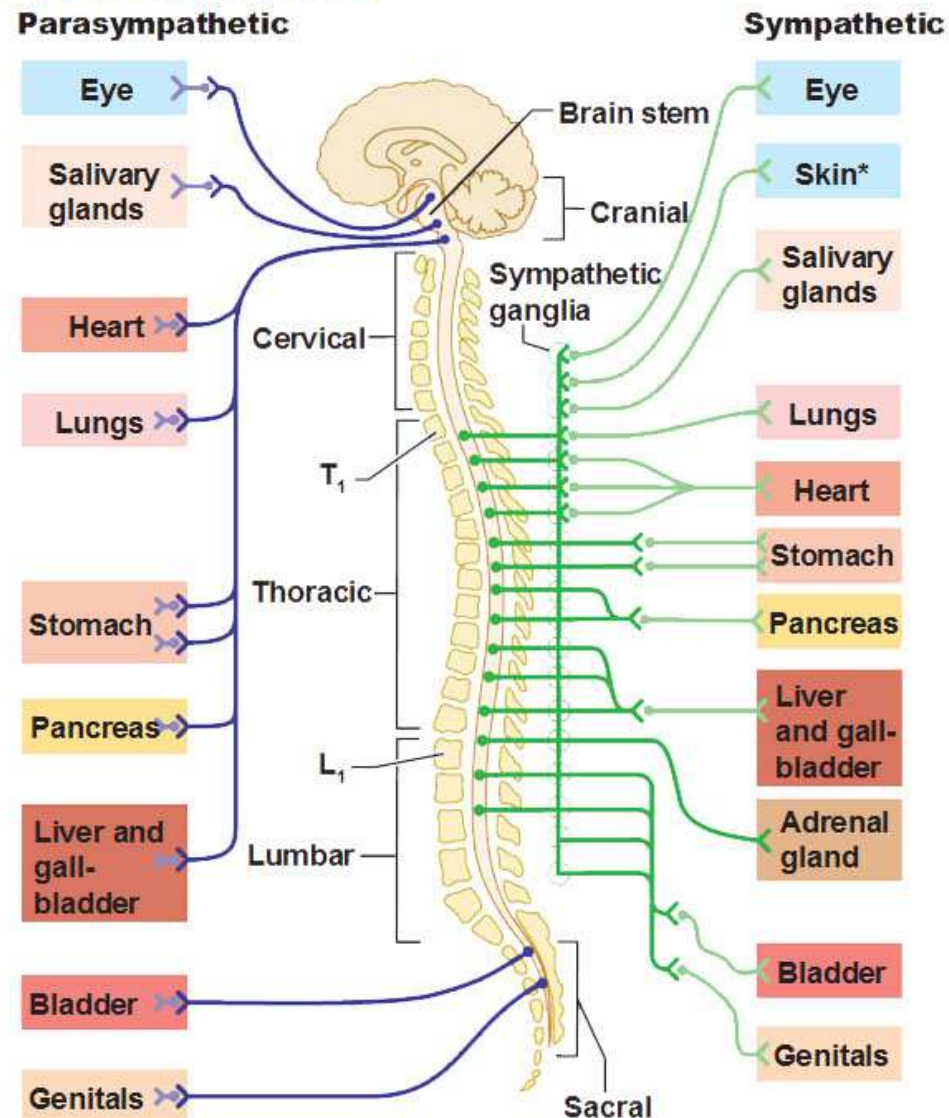
- Sympathetic – close to spinal cord in a chain
- Parasympathetic – close to target organs

Differing lengths of *postganglionic* fibers

- Sympathetic – Long
- Parasympathetic – Short

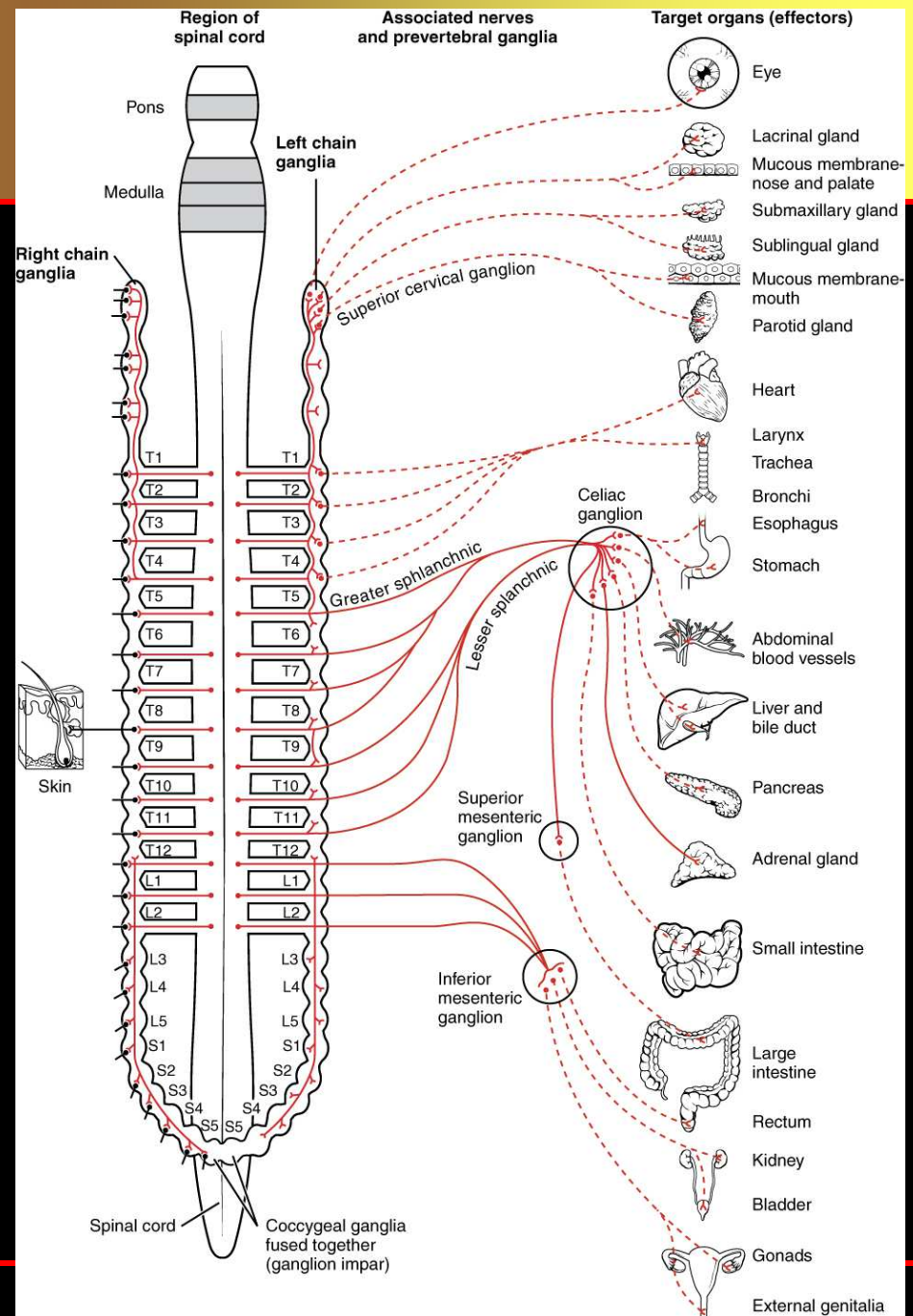
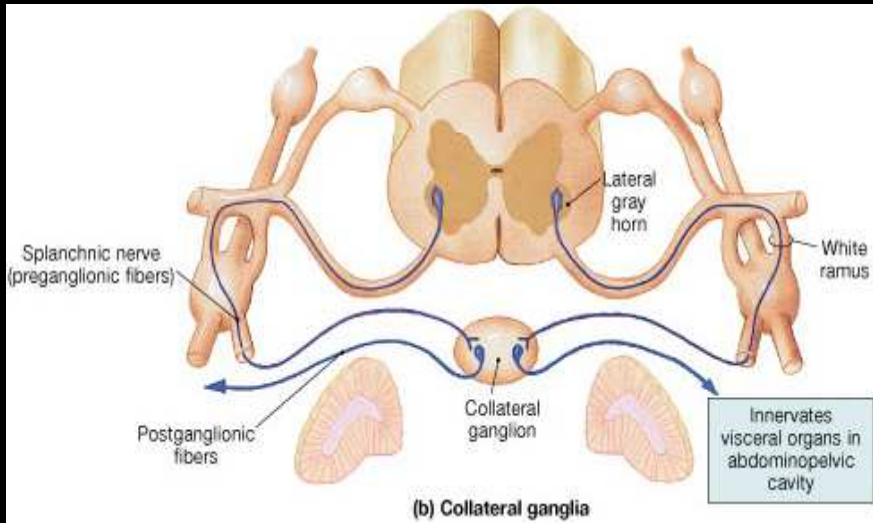
Postganglionic branching

- Sympathetic – lots, so that multiple organs can be mobilized at once
- Parasympathetic – very little branching

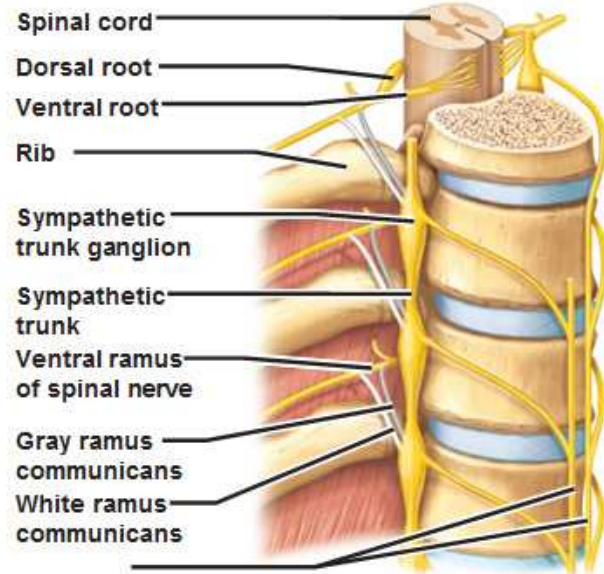


Sympatikus

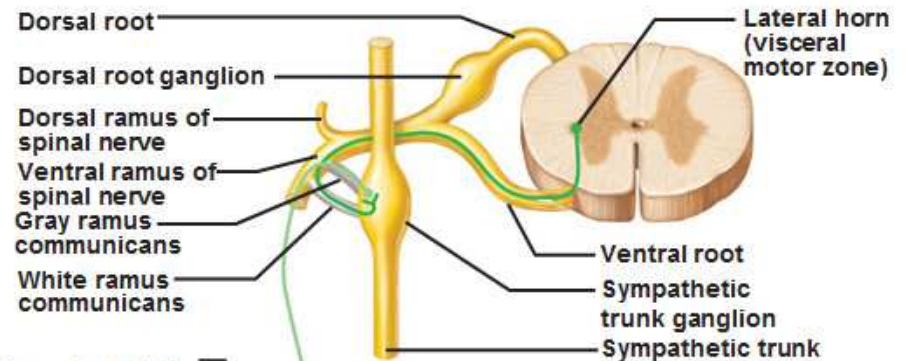
Pomalá viscerální bolest



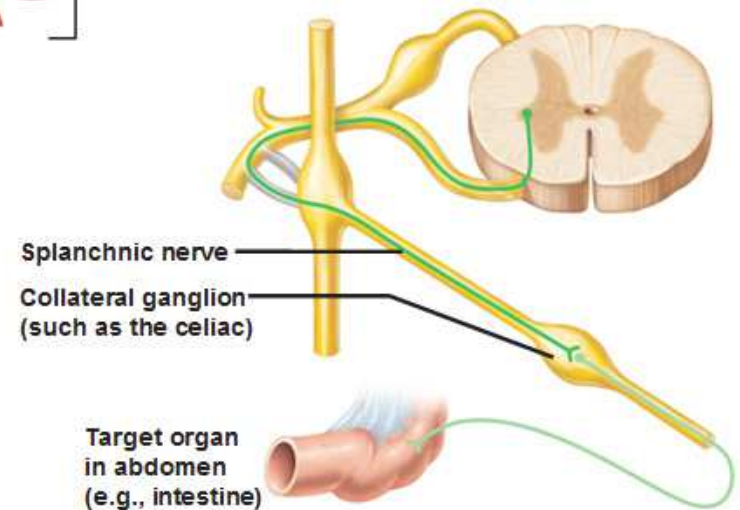
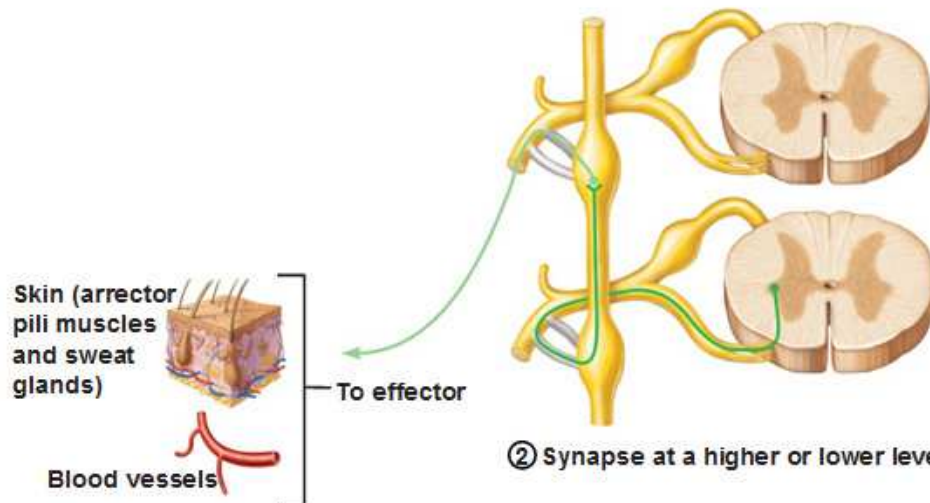
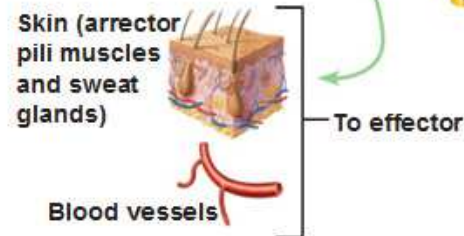
Sympathetic Chain



(a) Location of the sympathetic trunk



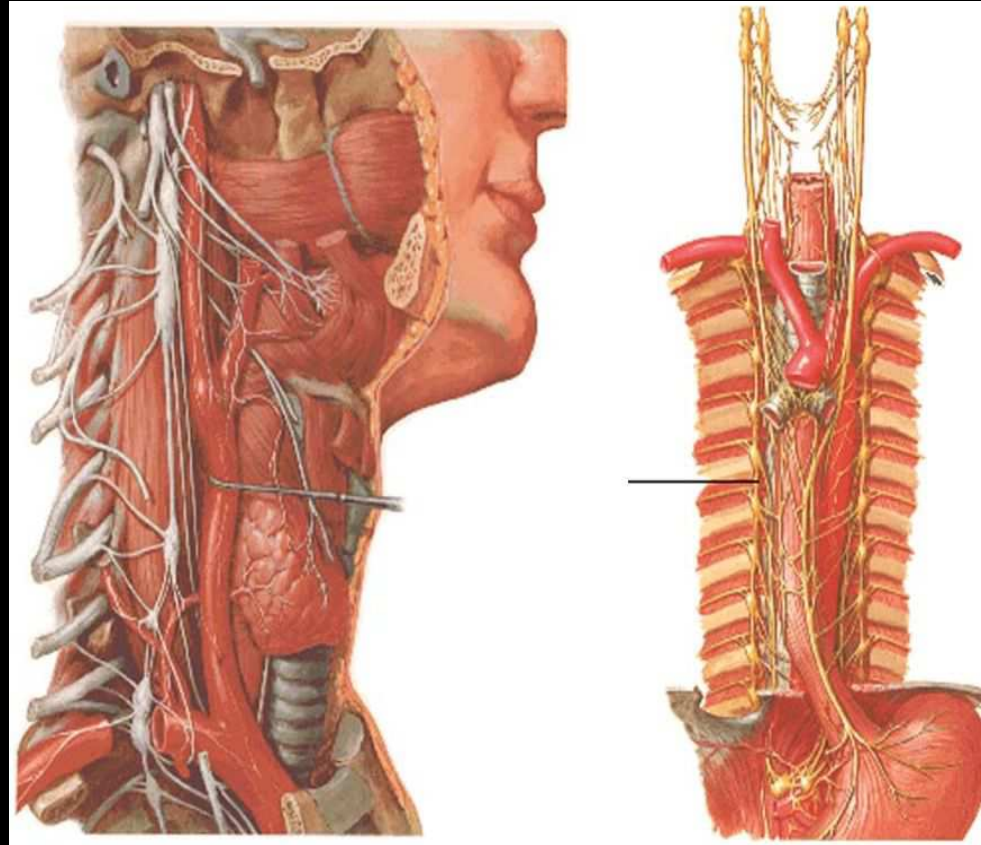
① Synapse at the same level



(b) Three pathways of sympathetic innervation

Farmakologické blokády, neurolýzy

- Ggl. Stellatum
- Ggl. Coeliacum
- Ggl. Hypogastricum
sup.
inf.
- Ggl. Impar
- A další...



Farmakologické blokády, neurolýzy

Obecné principy:

- Spolupráce s algeziologem, paliativní amb.
- Přesná diagnóza
- Punkce + ověření pozice jehly
- Farmakologický blok/ test
- Neurolýza : chem., RFA, ...

Farmakologické blokády, neurolýzy

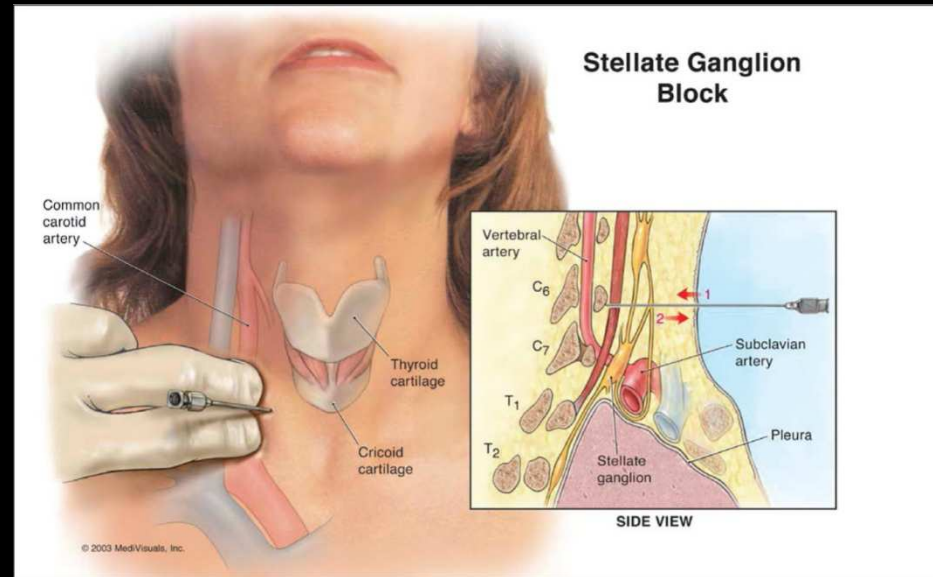
Obecné principy:

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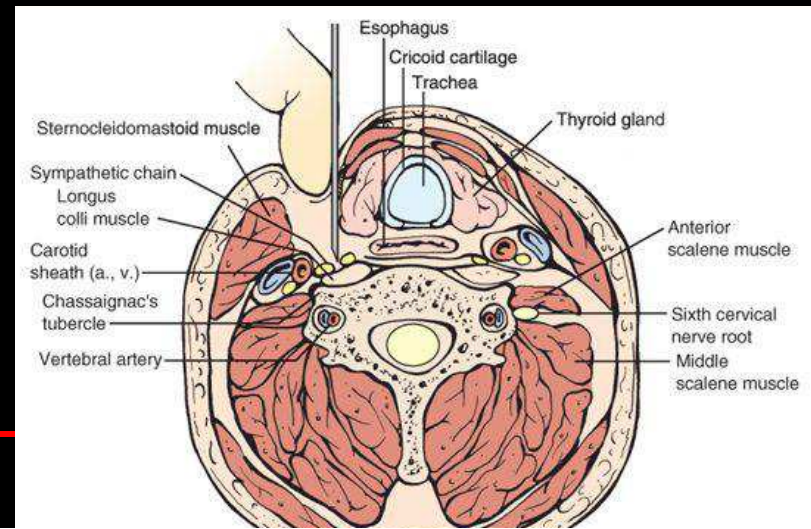
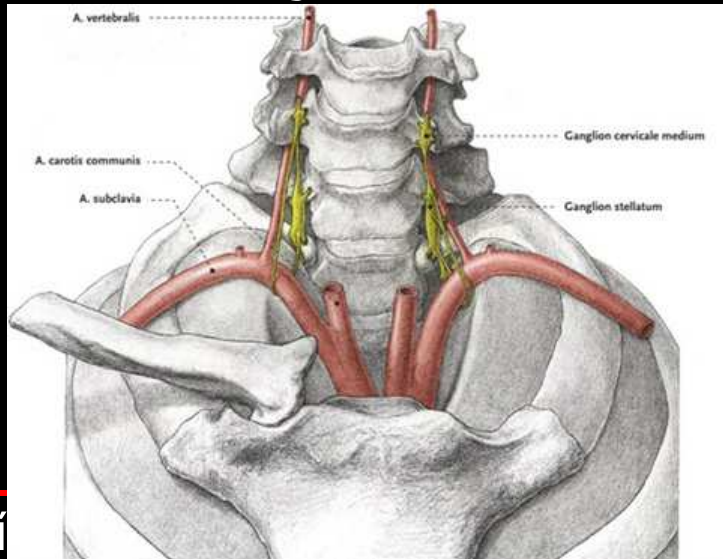
PRIMUM NON NOCERE!

Ggl. stellatum

- Anatomie
- Bolestivé expanze ramena a HKK, Raynaud, popáleniny, omrzliny, cévní insuf.



Hickey, et al.: Stellate Ganglion Block for the Treatment of Posttraumatic Stress Disorder. *Psychiatric Annals* Feb 2013 - Volume 43 · Issue 2: 87-92



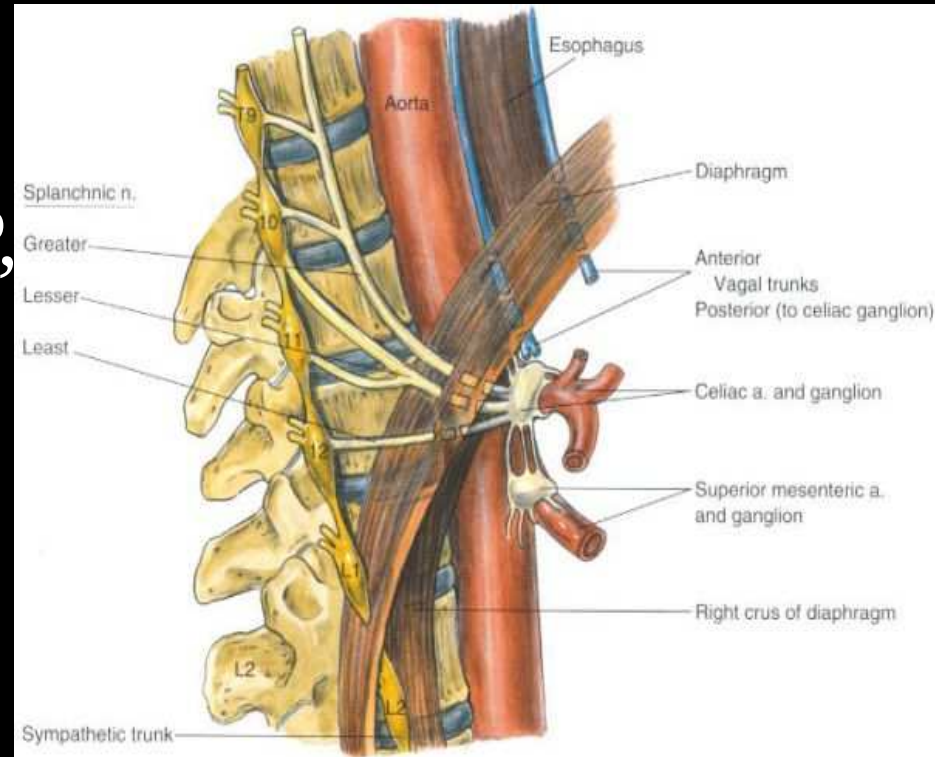
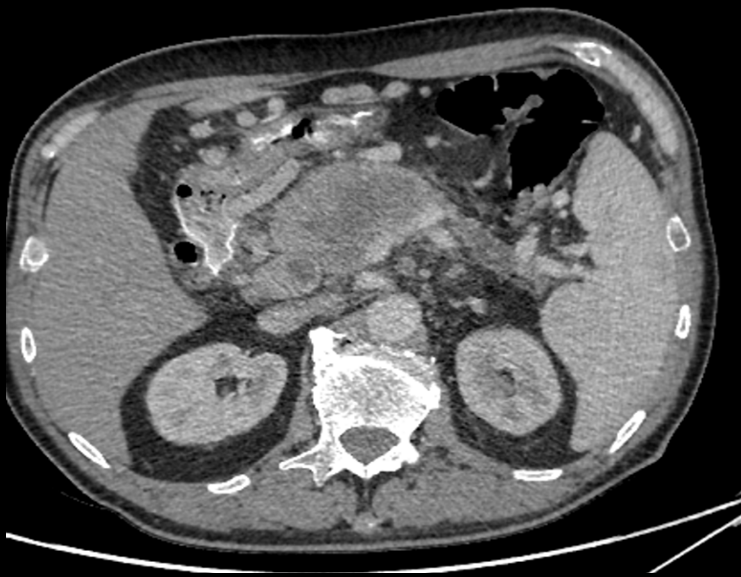
Ggl. stellatum

- Lok. anestezie 5-7ml
- Jehla 22-25G
- 1-3ml ředěné KL
- 5-7 ml bipuvacaine (Marcaine)



Ggl. coeliacum

- Anatomie
- Bolestivé expanze RP, pankreatitis.



Ggl. coeliacum

- Lok. anestezie 20ml
- Jehla 22G
- 5ml ředěné KL
- 10 ml bipuvacaine (Marcaine)
- (kortikoid)
- (10 ml 98% etanol)
- (RFA 80°C, 1 min)

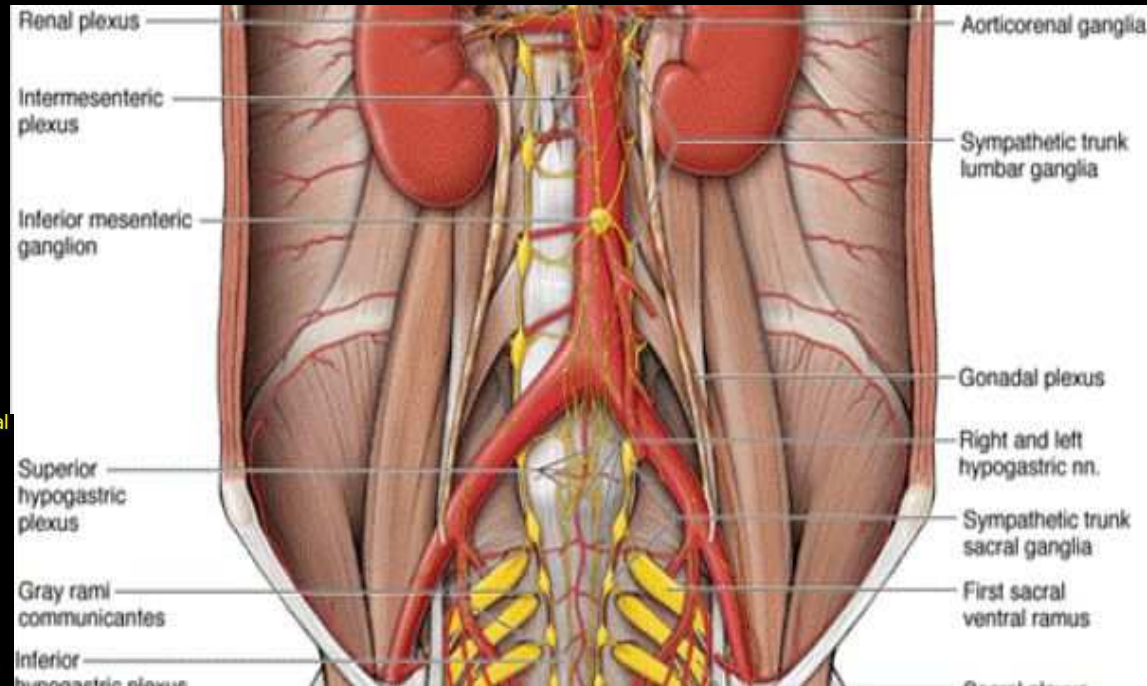


Ggl. Hypogastricum inf.

- Bolesti pánevních orgánů
- Postradiační bolesti
- Herpes zoster

P

SurGal

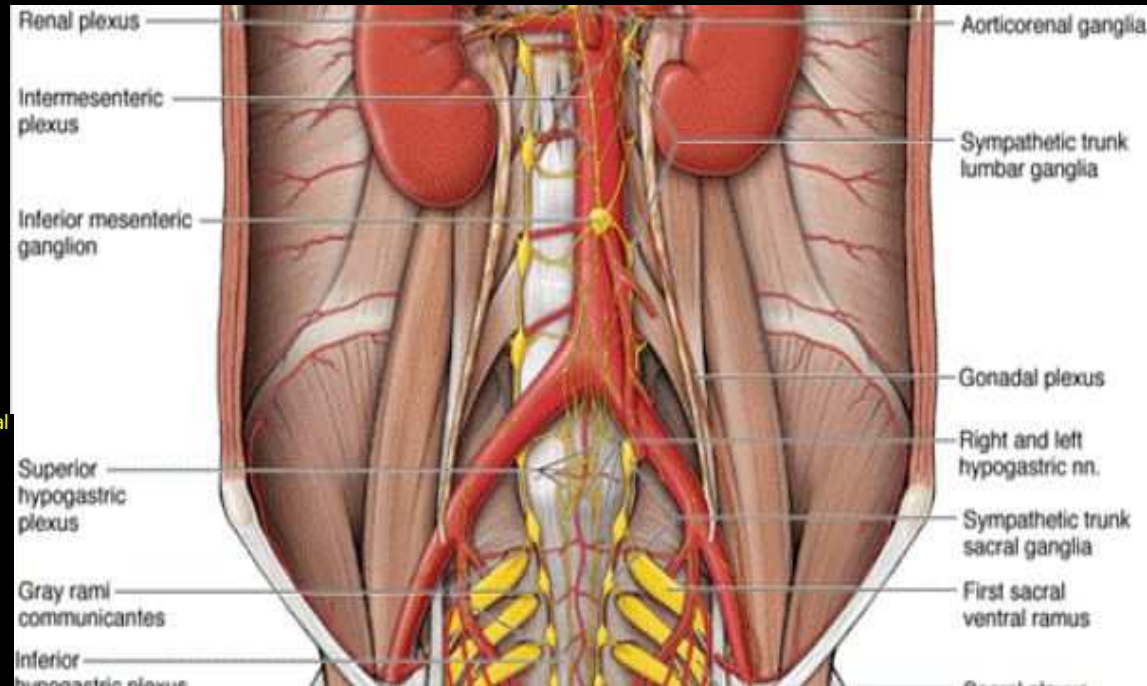


Ggl. Hypogastricum inf.

- Bolesti pánevních orgánů
- Postradiační bolesti
- Herpes zoster

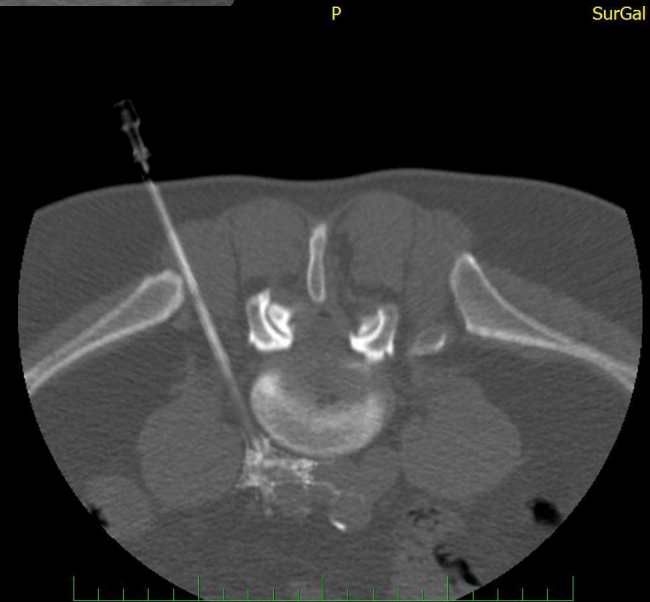
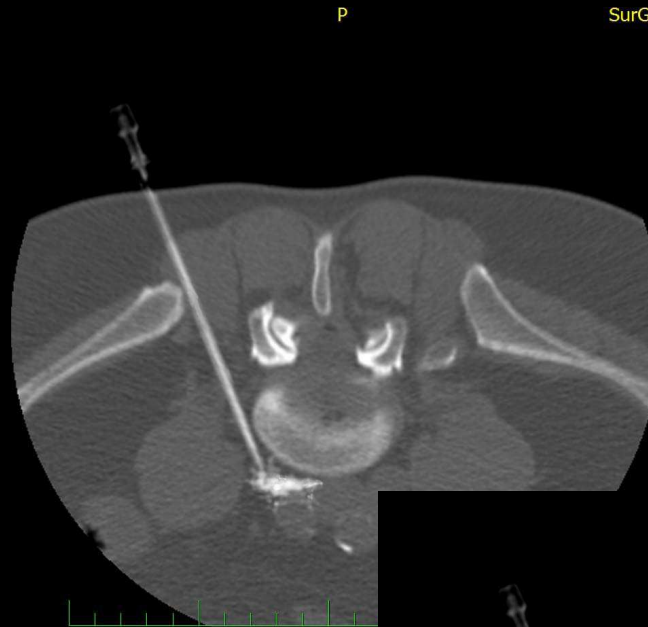
P

SurGal



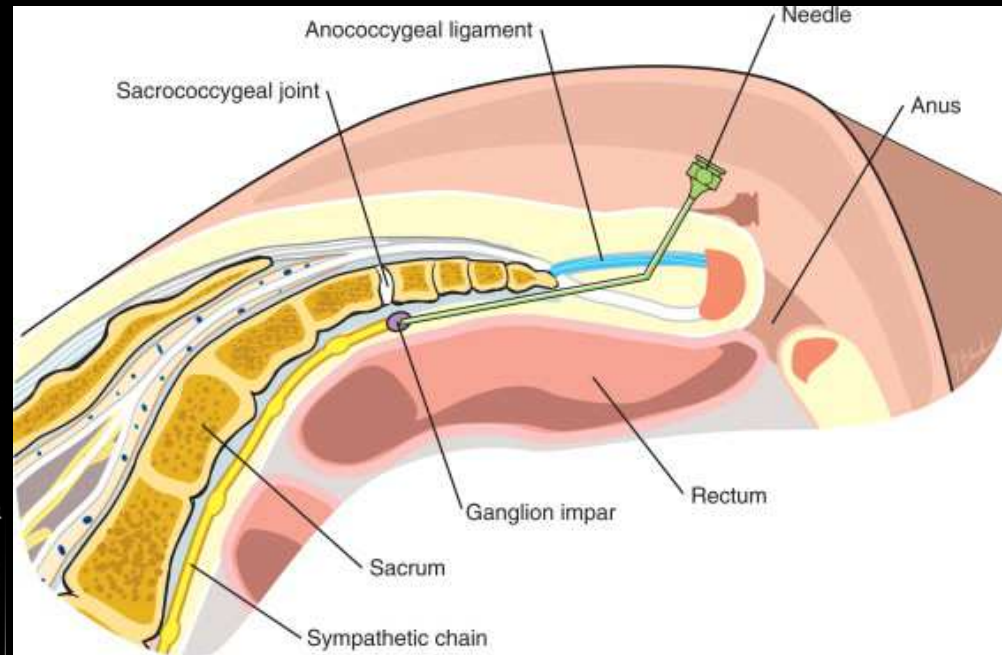
Ggl. Hypogastricum inf.

- Lok. anestezie 20ml
- Jehla 22 nebo 20G
- 3ml ředěné KL
- (kortikoid)
- 10 ml bipuvacaine (Marcaine)
- (10-15 ml 98% etanol)
- (RFA 80°C, 1 min)



Ggl. impar

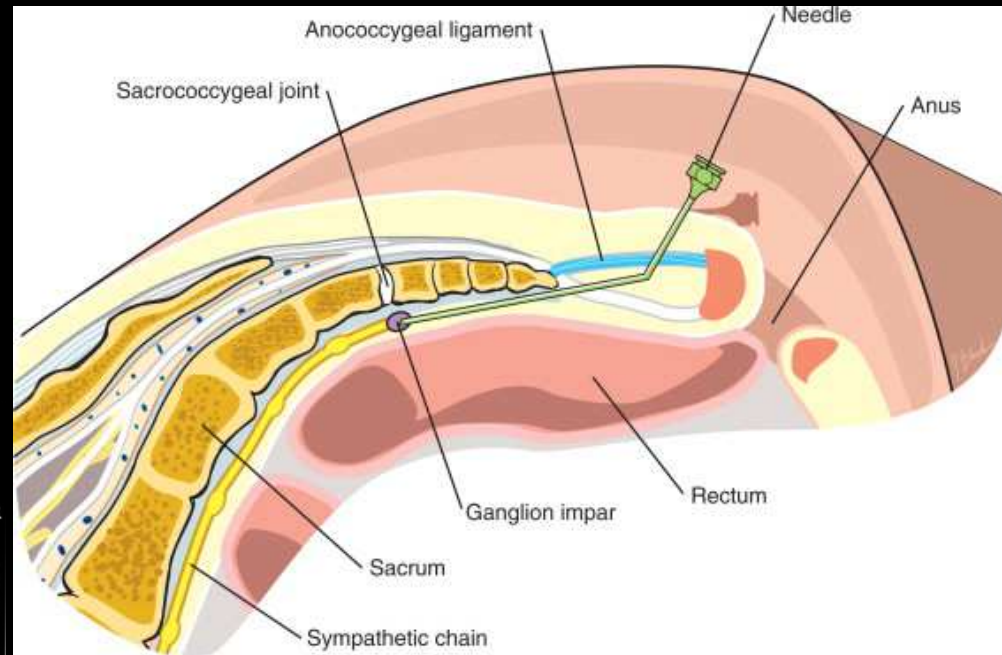
- Bolesti perinea, genitálu, rekta, endometrioza
- Postradiační bolesti



anesthesiology.pubs.asahq.org

Ggl. impar

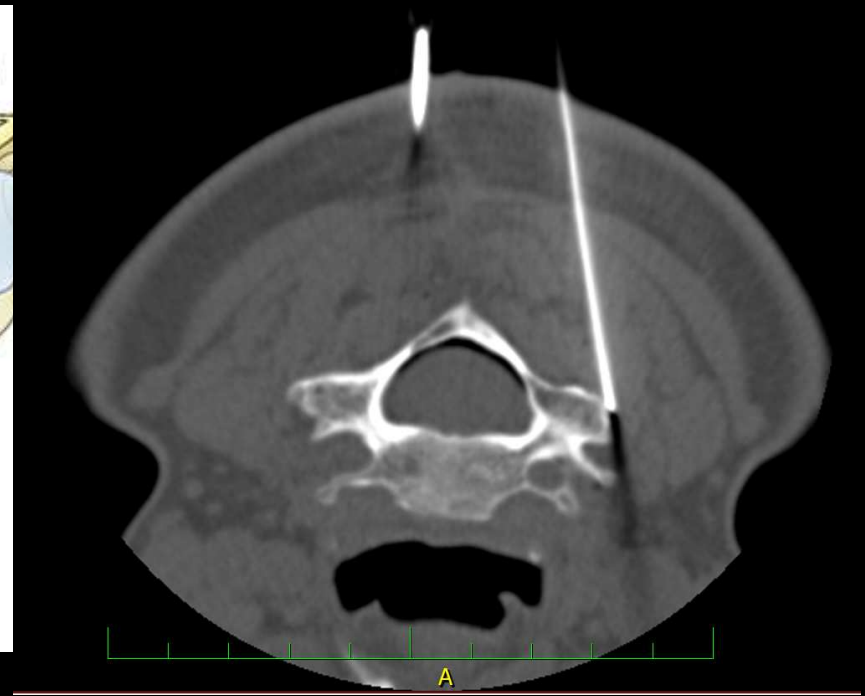
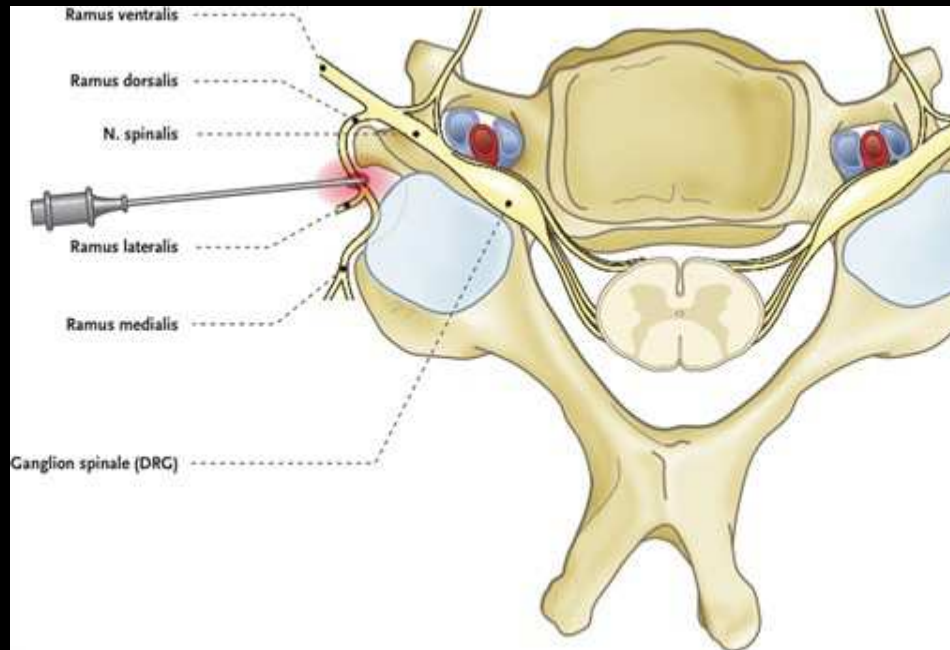
- Bolesti perinea, genitálu, rekta, endometrioza
- Postradiační bolesti



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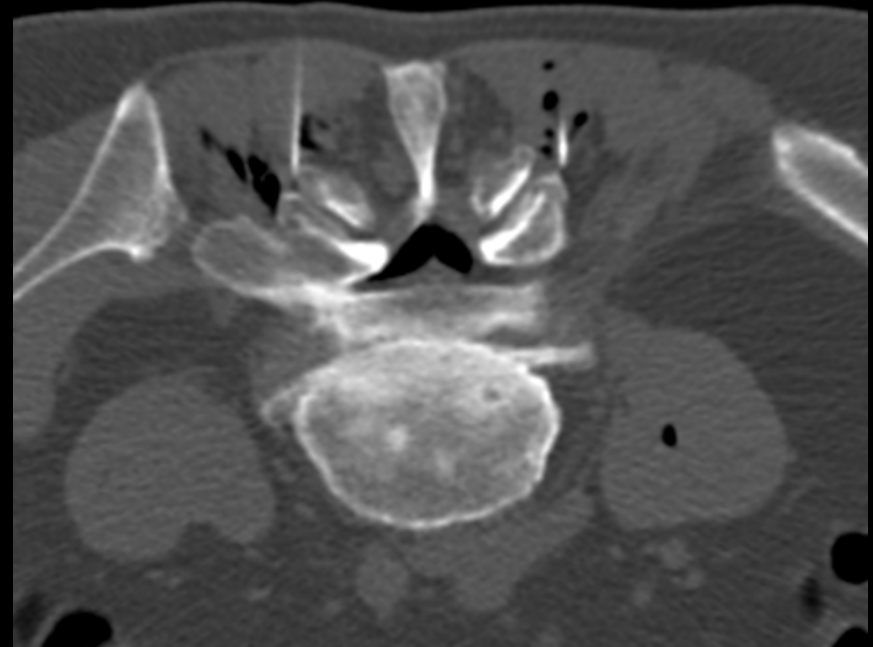
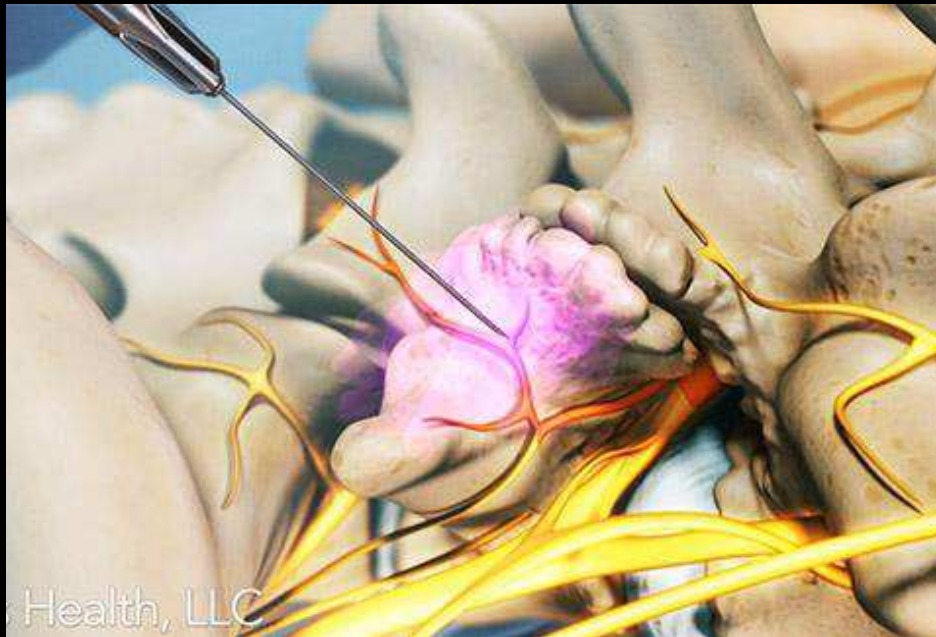
Rhizolýza/ facety

- Facetový sy.: krční



Rhizolýza/ facety

- Facetový sy. : bederní



Závěrem

- Základní techniky nejsou náročné
- SPRÁVNÁ INDIKACE
- I při správném provedení je úspěšnost 60-80%
- Spolupráce s algeziology, amb. paliativní péče
- Lůžka nebo stacionář je velká výhoda