

# RÁDIOLÓGIA ZAUJÍMAVOU PRE VŠETKÝCH

BÉREŠOVÁ

MUDR. MICHAELA



# RÔZNY UHOL POHL'ADU V ZÁVISLOSTI OD ŠPECIALISTU

**RÁDIOLÓG-** PODĽA TIEŇA, KTORÝ MÁ, JE TO V.S. VTÁK, V DIFF.DG. OROL, SOKOL, INÉ..

**INTERNISTA-** PODĽA RÝCHLOSTI LETU A INÝCH PARAMETROV JE TO VITÁLNY VTÁK

**ÁRISTA-** PRAVDEPODOBNE VTÁK, ŽIVÝ, NIE JE NEVYHNUTNÁ PODPORA ŽIVOTNÝCH FUNKCIÍ

**TRAUMATOLÓG-** JE TO VTÁK, ALE PODĽA POHYBLIVOSTI  
V.S. FISÚRU

**CHIRURG-** CHYTÍ PUŠKU, ZASTRELÍ HO A PODÁ PAT  
TO JE





# INTERDISCIPLINÁRNA SPOLUPRÁCA





# HISTÓ



**NOVEMBER 1895**

**DISCOVERY OF X-RAYS BY WILHELM CONRAD RÖNTGEN**

Image of Röntgen's wife's hand

**FEBRUARY 1896**

**FIRST CLINICAL X-RAY IN IRELAND**

Dr. Cecil Shaw Baker, credited with producing the first clinical X-ray in Ireland, documented in the February edition of the Lancet 1896

**APRIL 1897**

**DR. WILLIAM STEELE HAUGHTON**

Dr. William Steele Haughton, an orthopaedic surgeon at St Patrick's (then Mater) and Dr. Sheehy's Hospital, was the first practicing radiologist in Ireland. The *New York Times* interviewed him a year after the Faculty of Radiologists annual Scientific Meeting in Ireland in his honour.

**DECEMBER 1932**

**RADIOLOGICAL SOCIETY OF IRELAND**

Original meeting of the Radiological Society of Ireland was held in RCSI, convened by Dr. Michael O'Hara, Radiologist in St. Stephen's Hospital, Dr. W.S. Haughton was elected the first President.

**MAY 1961**

**FOUNDATION OF THE FACULTY OF RADIOLOGISTS OF IRELAND**

Institutes of the Faculty of Radiologists of Ireland, Dr. Desmond J. Egan, Radiologist and Consultant of St. James' Hospital, was appointed first Dean.

**FEBRUARY 1972**

**FIRST COMMERCIALY AVAILABLE CT SCANNER**

The first commercially available CT scanner was installed by Dr. Dudley Houldenfield at Mater, Middlesex United Kingdom at EMI Central Research Laboratories and installed at Adelaide Medical Hospital, Westmead in 1972. He was awarded the Nobel Prize for Physiology or Medicine, shared with Alan H. Cormack in 1979.

**JANUARY 1995**

**"A CENTURY OF MEDICAL RADIATION IN IRELAND- AN ANTHOLOGY"**

Publication of "A Century of Medical Radiation in Ireland- An Anthology", by Dr. James C. Carr, former Dean of the Faculty, to commemorate the centenary of the discovery of X-rays by Roentgen.

**JANUARY 1896**

**THE FIRST ANGIOGRAM**

Headbeck and Lindbergh performed the first angiogram by injecting contrast material into blood vessels of an anaesthetized hand.

**MARCH 1896**

**EARLY FLUOROSCOPE**

Thomas A. Edison created the fluoroscope, permitting direct observation of the object rather than using a photographic plate.

**AUGUST 1922**

**ST VINCENT'S ON THE GREEN**

St Vincent's on the Green was opened by the Irish Sisters of Charity in 1922. This view shows the X-ray Department at the hospital in 1922. An X-ray plate is held over the patient. Small appliances for early prosthetic dentistry.

**FEBRUARY 1925**

**NUCLEAR MEDICINE**

Blomquist, Weiss and Viny performed the first bone study in the medical field that used radioactivity in Boston, MA, USA.

**1947-1948**

**ULTRASOUND**

The first medical application of ultrasound was by Ian Donald and Frederick Dunn, Assistant Surgeons, Glasgow, Scotland. They introduced B-mode ultrasonography technique first produced in the first ultrasound system at St. Mary's Hospital, which was in fact, a station in a television system by Donald.

**MAY 1966**

**FIRST FACULTY RADIOLOGY EXAMINATIONS**

First examinations of the Faculty were held in May 1966. They were Primary Fellowship and Final Fellowship Examinations in Diagnostic Radiology and Radiotherapy.

**JULY 1977**

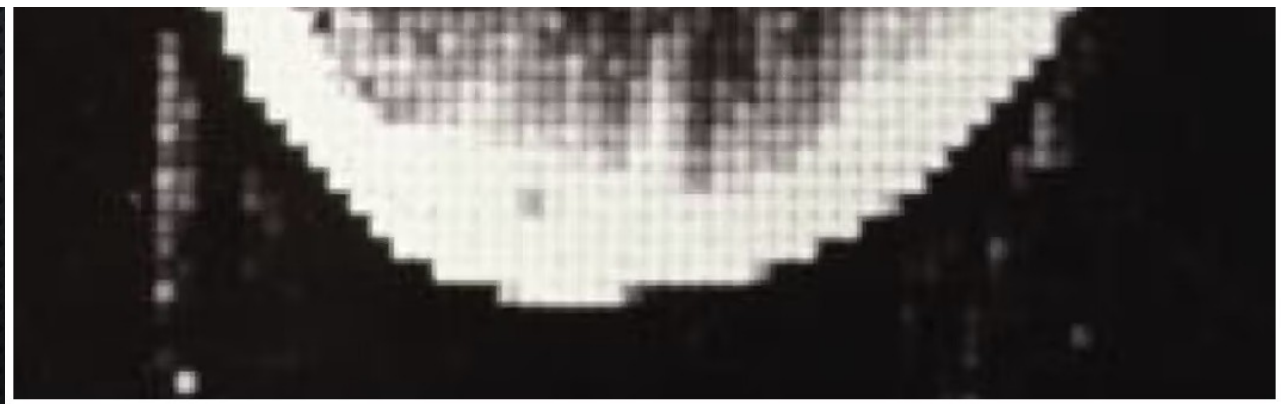
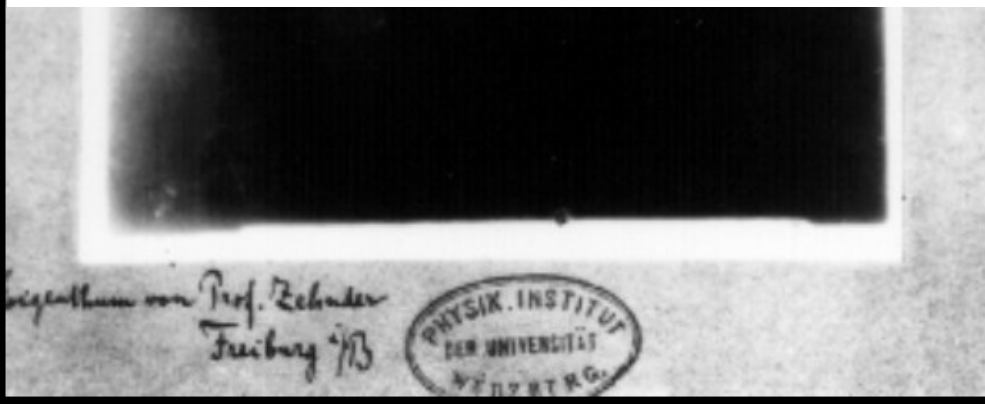
**FIRST MRI SCAN**

The first MRI scan of a healthy human body, Royal College, was the first MRI scanner by 'hard', assisted by two post-graduate students, Stuart H. Adams and Larry Mitchell at Brooklyn Downstate Medical Center, New York.

**MAY 2011**

**50th ANNIVERSARY**

50th anniversary of the Faculty of Radiologists of Ireland. The current logo, created and introduced by agreement with the society.





# VÝHODY A NEVÝHODY RÁDIOLÓGIE

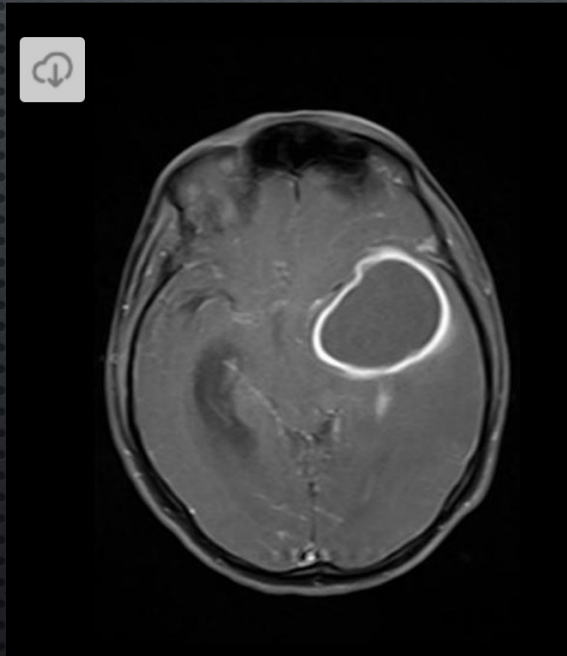
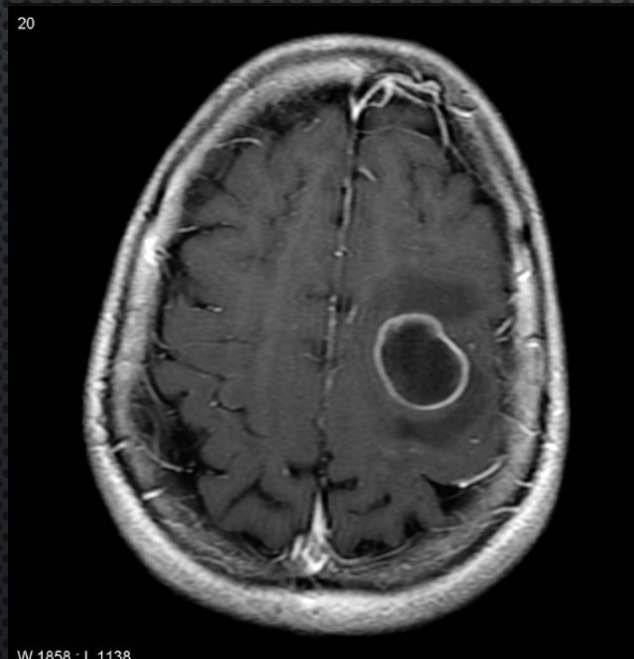
VÝHODA: NEVIDÍME PACIENTOV

NEVÝHODA: NEVIDÍME PACIENTOV

Pre prácu rádiológa je **nevyhnutná** dobre vyplnená žiadanka s podstatnými klinickými údajmi



# RÁDIOLÓGIA $\neq$ HISTOLÓGIA





# DIFERENCIÁLNA DIAGNÓZA

**D:** DEMYELINATING DISEASE (CLASSICALLY INCOMPLETE RIM OF ENHANCEMENT)

**R:** RADIATION NECROSIS OR RESOLVING HAEMATOMA

**M:** METASTASIS

**A:** ABSCESS

**G:** GLIOBLASTOMA

**I:** INFARCT (SUBACUTE PHASE) OR INFLAMMATORY (NEUROCYSTICERCOSIS, TUBERCULOMA)

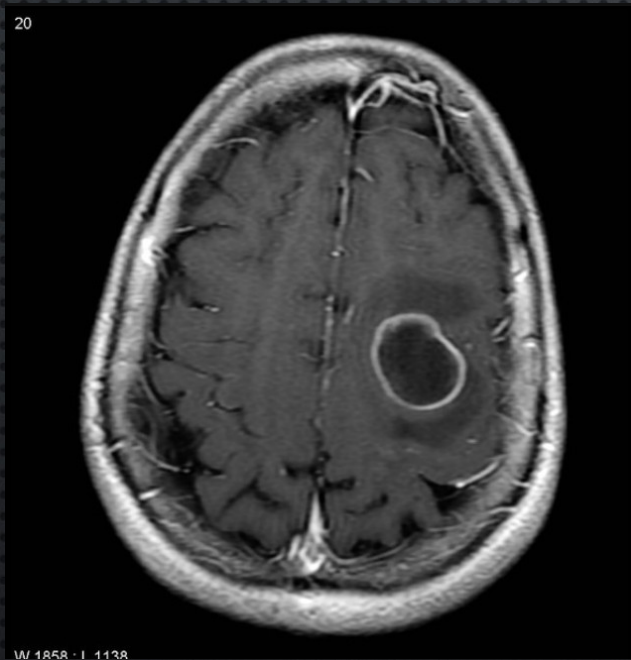
**C:** CONTUSION

**A:** AIDS-RELATED CNS DISEASE (E.G. TOXOPLASMOSIS, CRYPTOCOCCOSIS)

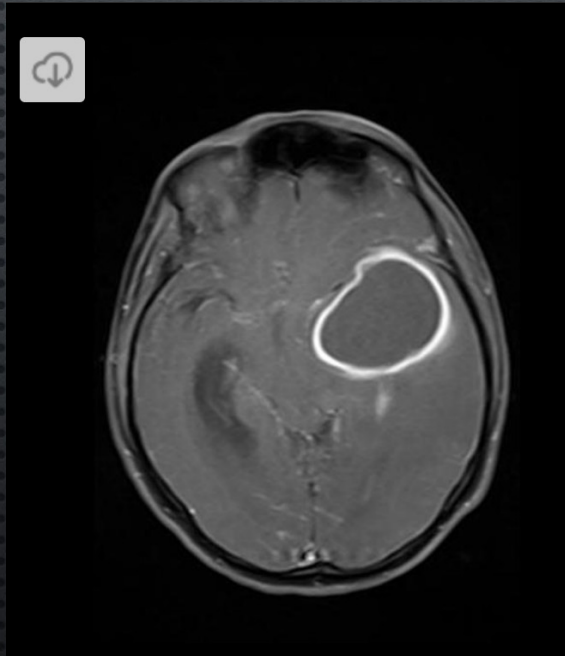
**L:** LYMPHOMA (THIS APPEARANCE IS MORE COMMON IN IMMUNOCOMPROMISED)



# RÁDIOLÓGIA ≠ HISTOLÓGIA



MTS



Absces



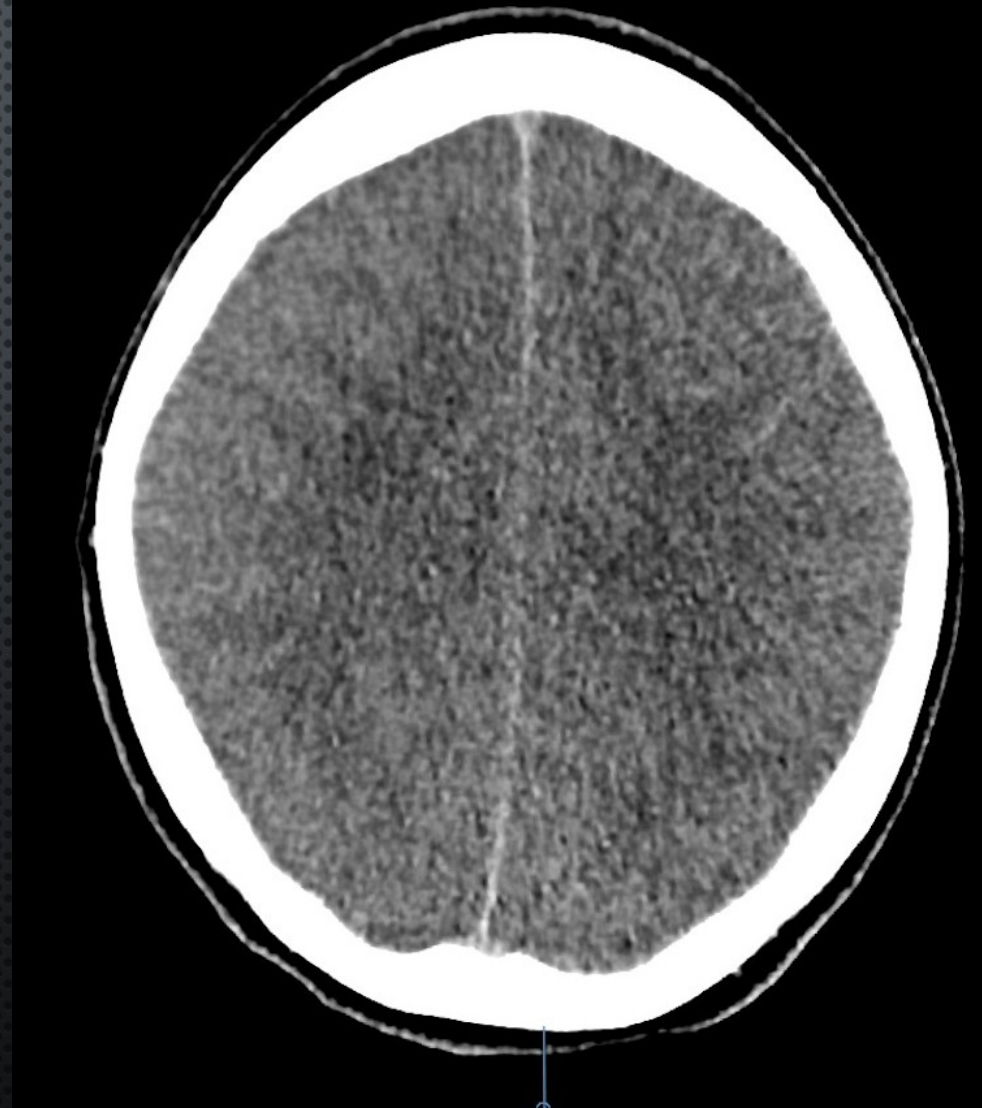
Rádionekróza



# RÝCHLY NÁHLAD VERSUS POPIS



+ 2 dni





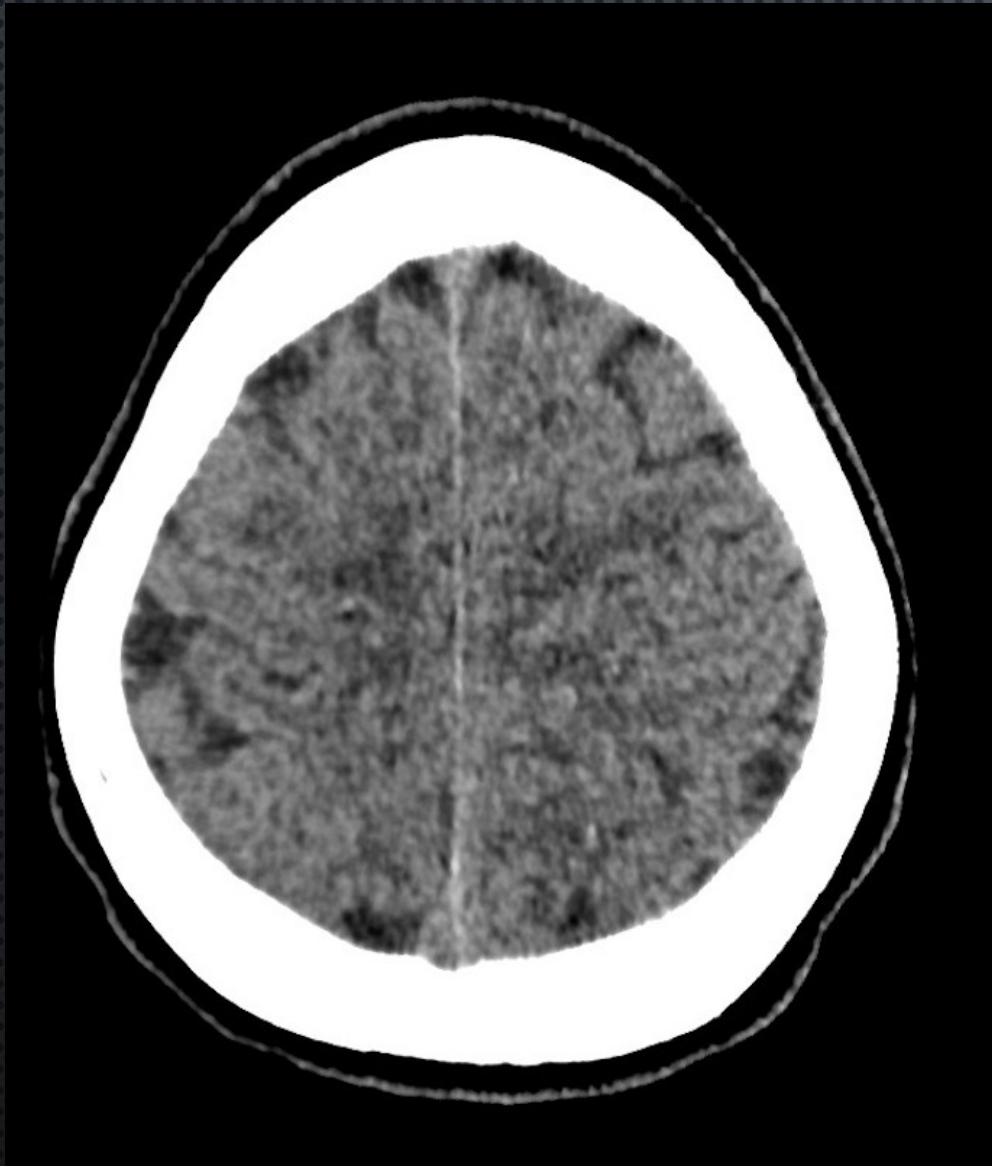


+ 2 dni





# Meningo-encefalitída s infaustným priebehom



+ 2 dni





# Pyelonefritída

## normální sonografický nále





# Pyelonefritída

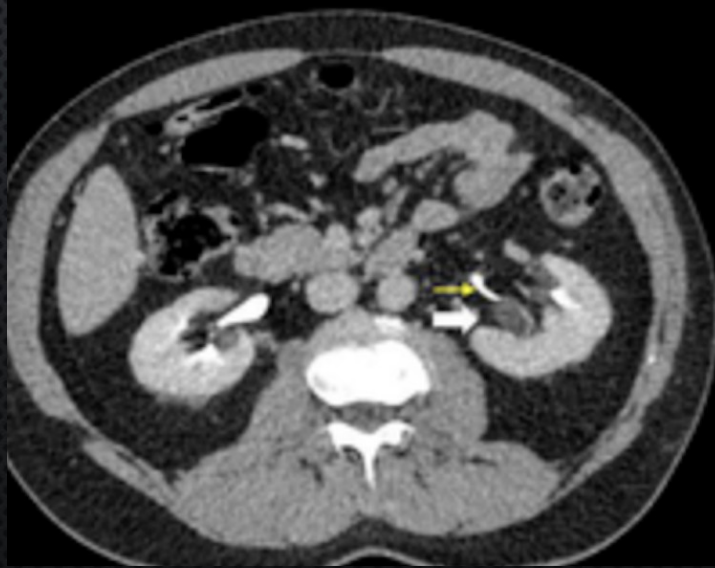
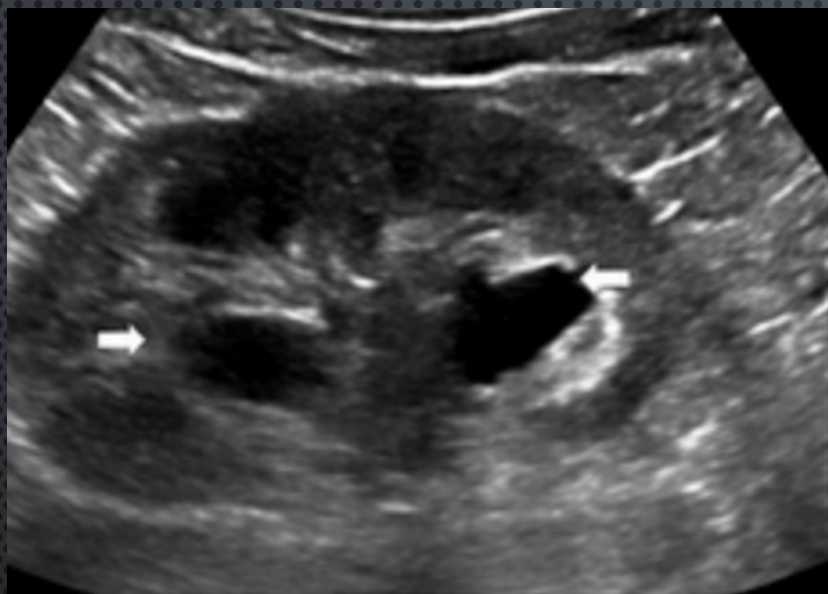
Ten istý pacient o 2 hod CT s KL





# Hydronefróza versus parapelvické cysty

## USG versus CT s KL



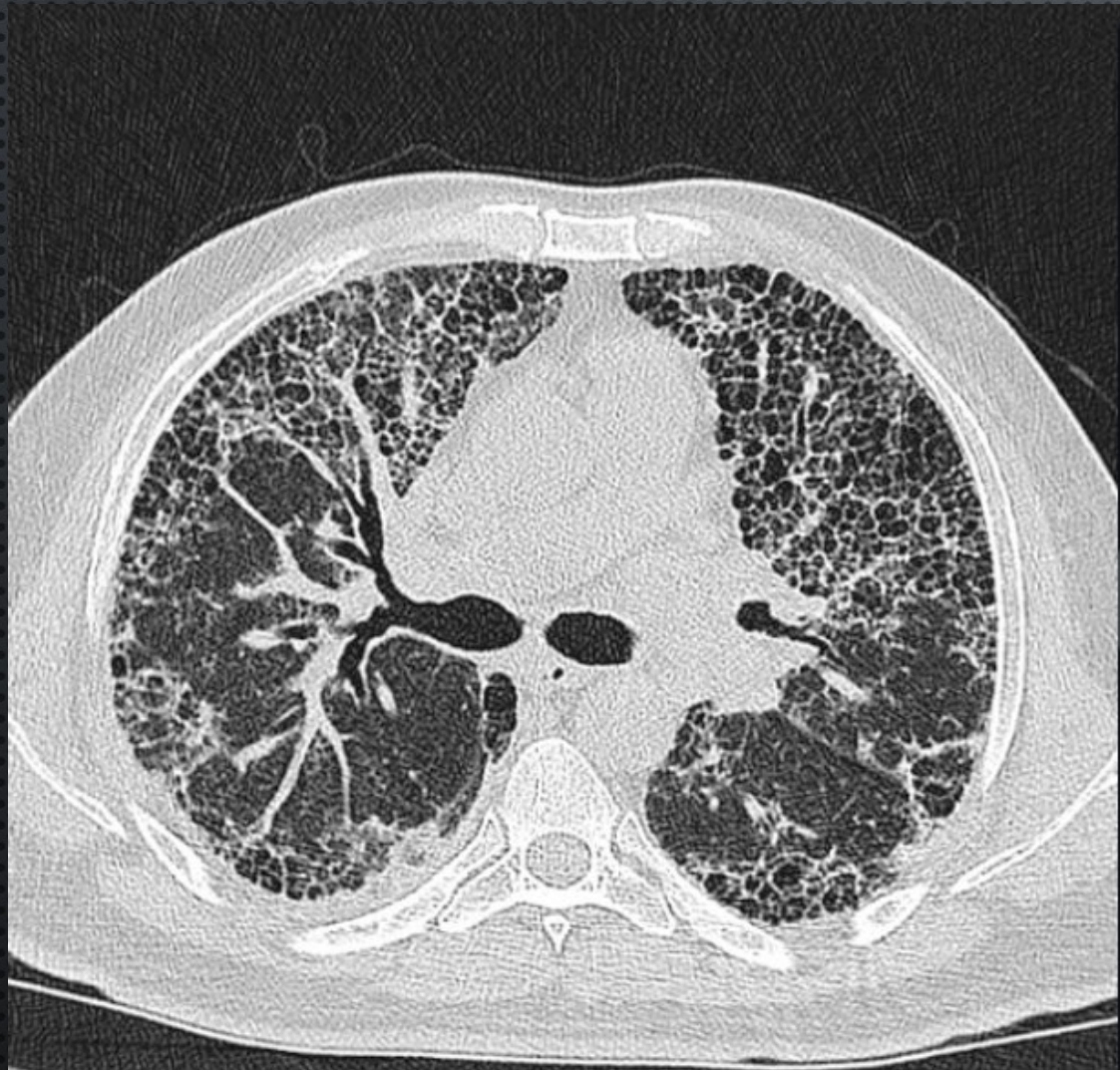


## HRCT vs CT s KL

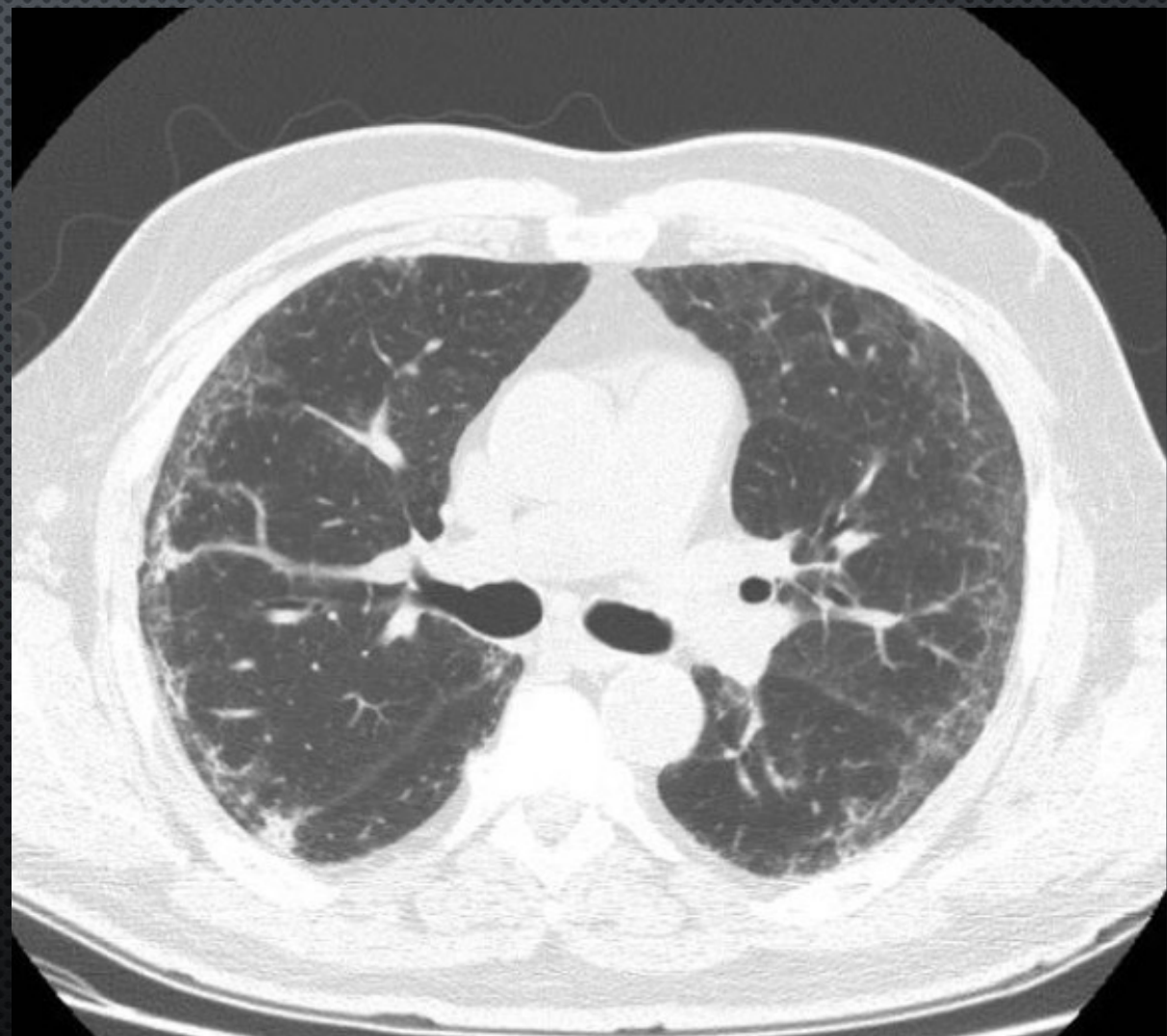
HRCT SA UPREDNOSTŇUJE PRED KONVENČNÝMI CT VYŠETRENAMI, KEĎ SÚ POTREBNÉ JEMNÉ DETAILY PLŮCNEHO PARENCHÝMU: IDIOPATICKÁ INTERSTICIÁLNA PNEUMÓNIA, PLŮCNA FIBRÓZA, PNEUMOKONIÓZA, DIFÚZNE ALVEOLÁRNE POŠKODENIE ATĎ.



UIP



NSPI



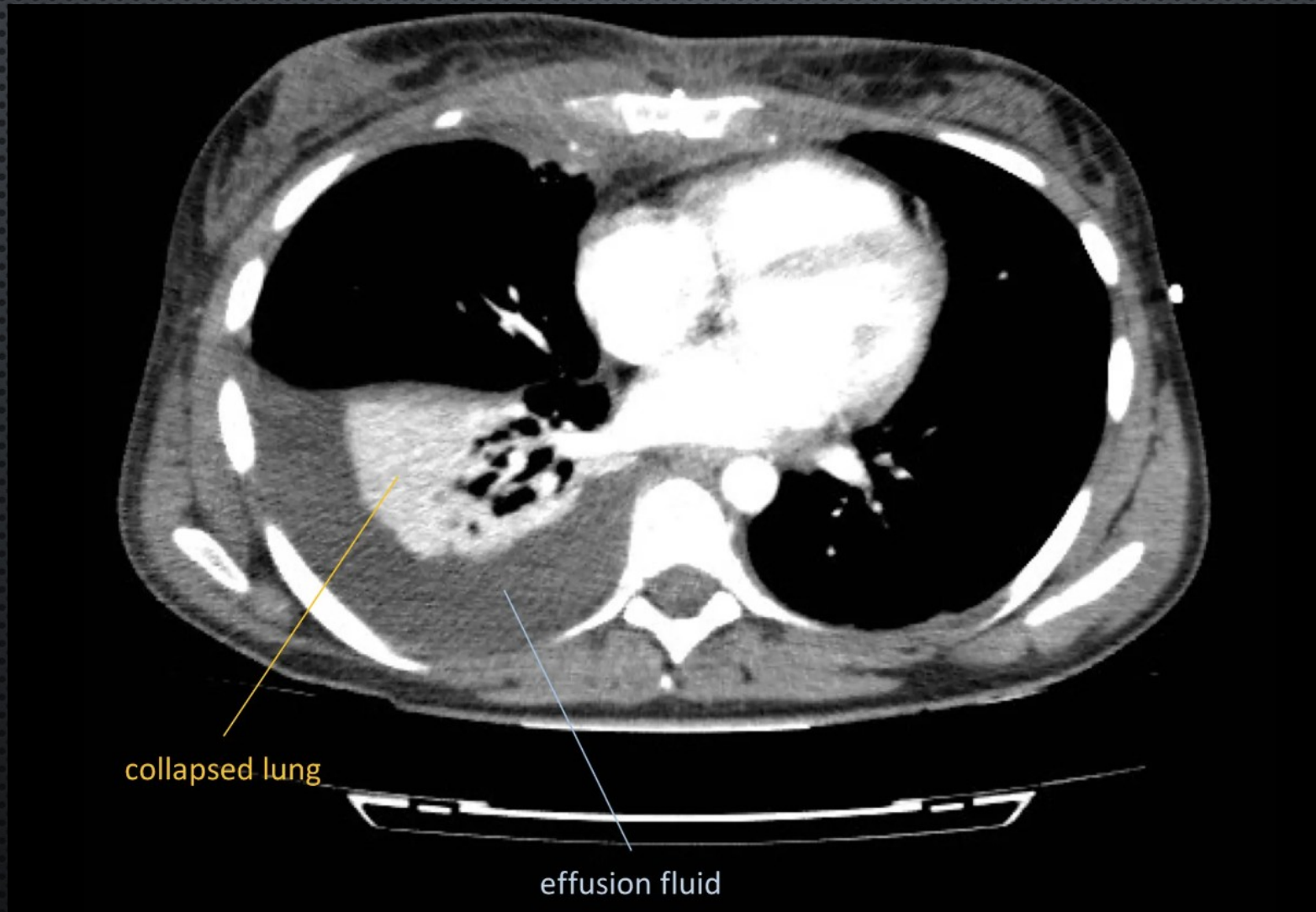


# CT hrudníka v natívnom obraze



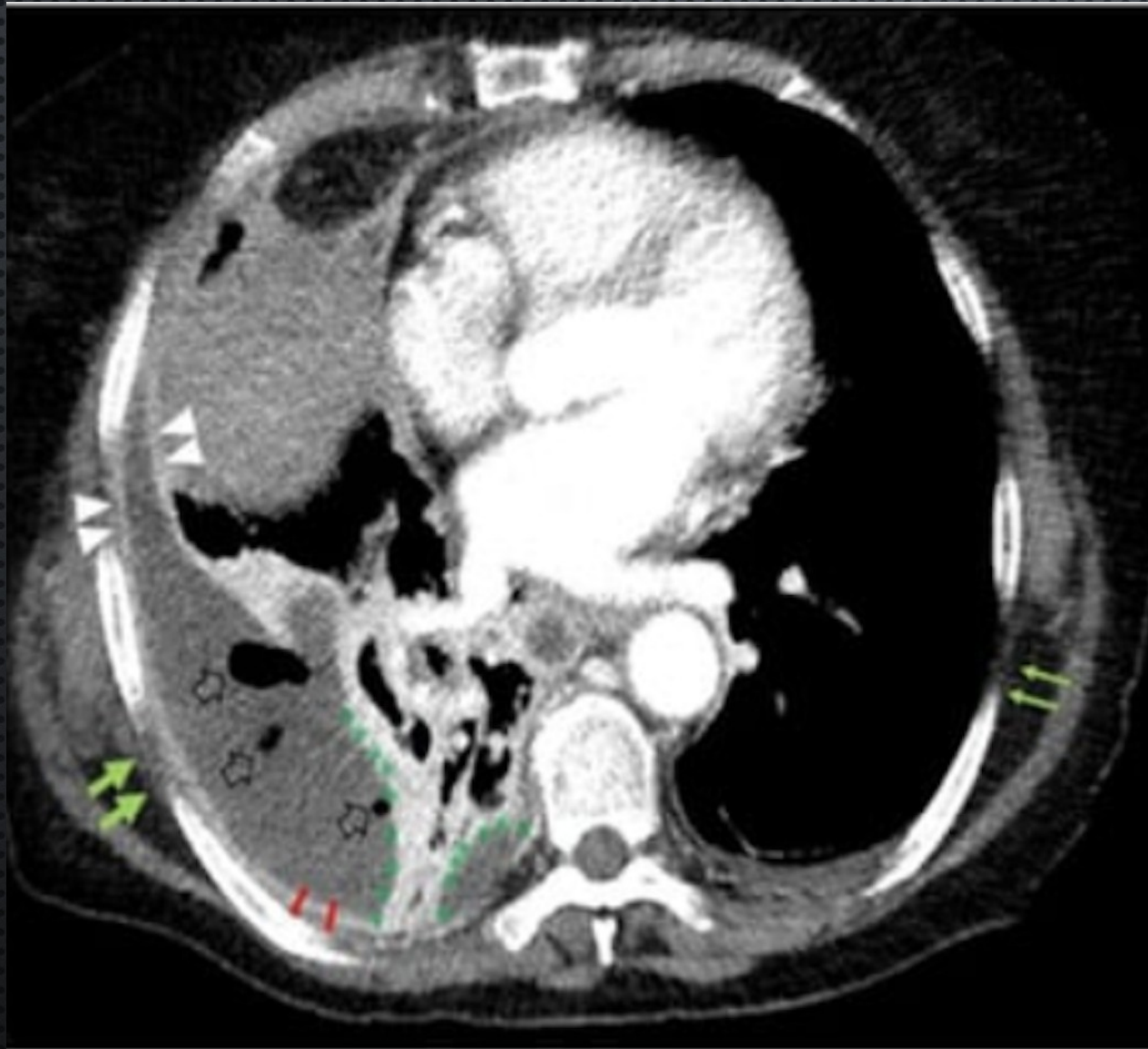


# CT hrudníka s kontrastnou látkou





# Empyém



**“Split pleura sign”** (zhrubnutie parietálnej a viscerálnej pleury)

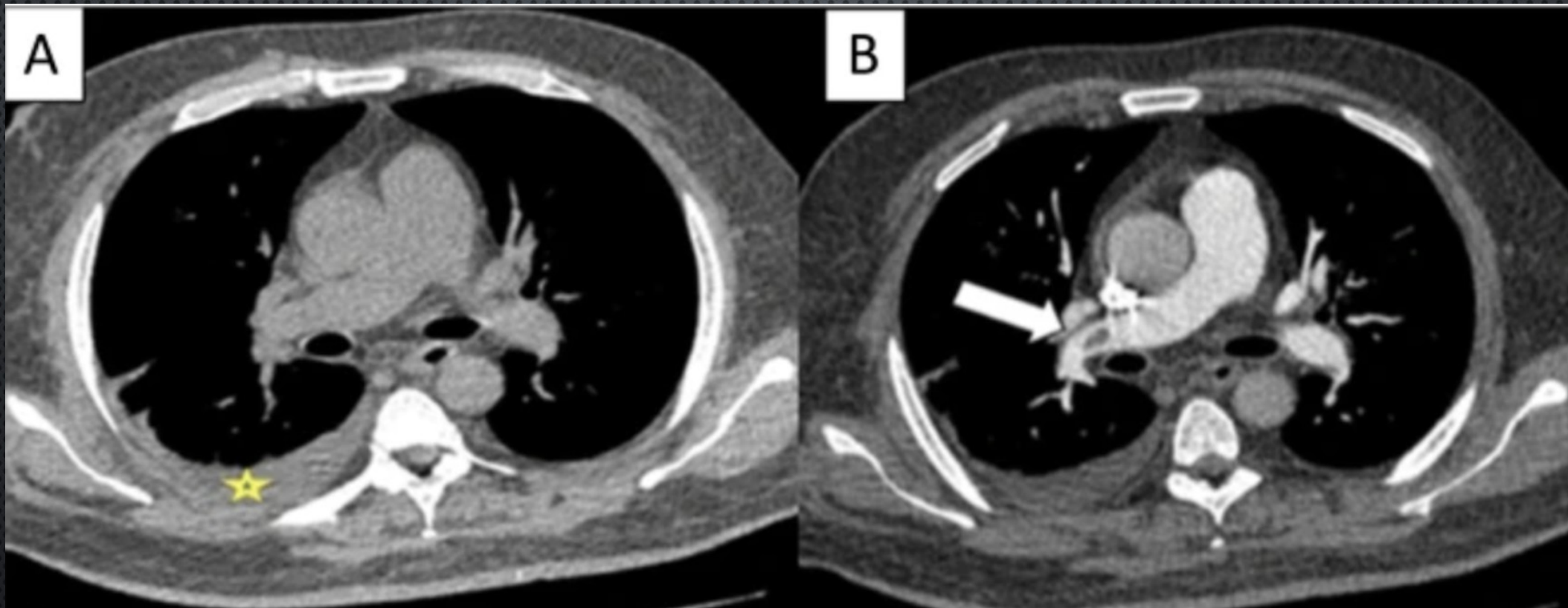


# Akýkoľvek staging/restaging





## Ved'ajší nález





# NAJLEPŠÍ PRIATEL' RÁDIOLÓGA:

- 1) Starší skúsenejší a ochotný kolega/kolegyňa
  - 2) Dobre vypísaná žiadanka
  - 3) Predchádzajúca štúdia
  - 4) Spätná väzba
- Optional... dobrá káva



# MÁM MU INDIKOVAT CT?

- ZMENÍ TO MÔJ TERAPEUTICKÝ POSTUP?
- PRI KONTROLÁCH- ZMENIL SA KLINICKÝ STAV?
- JE TO BEZPEČNÉ PRE PACIENTA- RISK/BENEFIT
- RADIAČNÁ OCHRANA- DETI!!!, MLADÍ PACIENTI
- GUIDELINES



What I got

HEPATOSTEATÓZA, CYSTY HEPARU  
CYSTY OBLIČIEK, BOSNIAK I.

NODULÁRNA LÉZIA NADOBLIČKY I. DX.  
V.ADENÓM

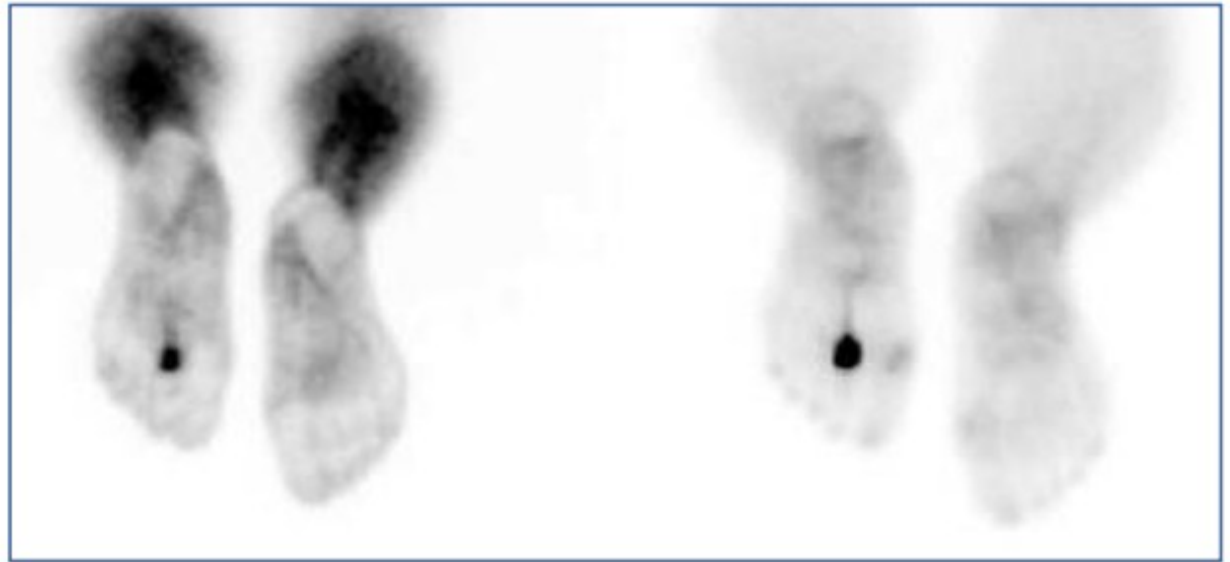
LÉZIA SIGMY K DORIEŠENIU

What did I ask for

CT OBRAZ BEZ ZNÁMOK AKÚTNEJ  
APENDICITÍDY



# Fraktúry v iniciálnom štádiu nedetekovateľné na RDG





# Avaskulárna nekróza/osteonekróza



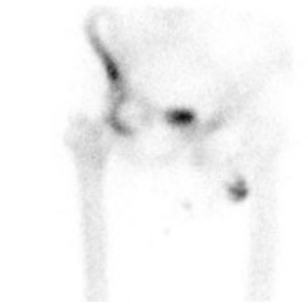
POOL ANTER



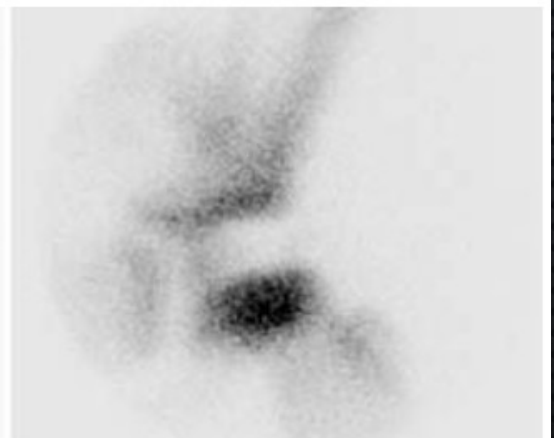
ANTERIOR



POOL

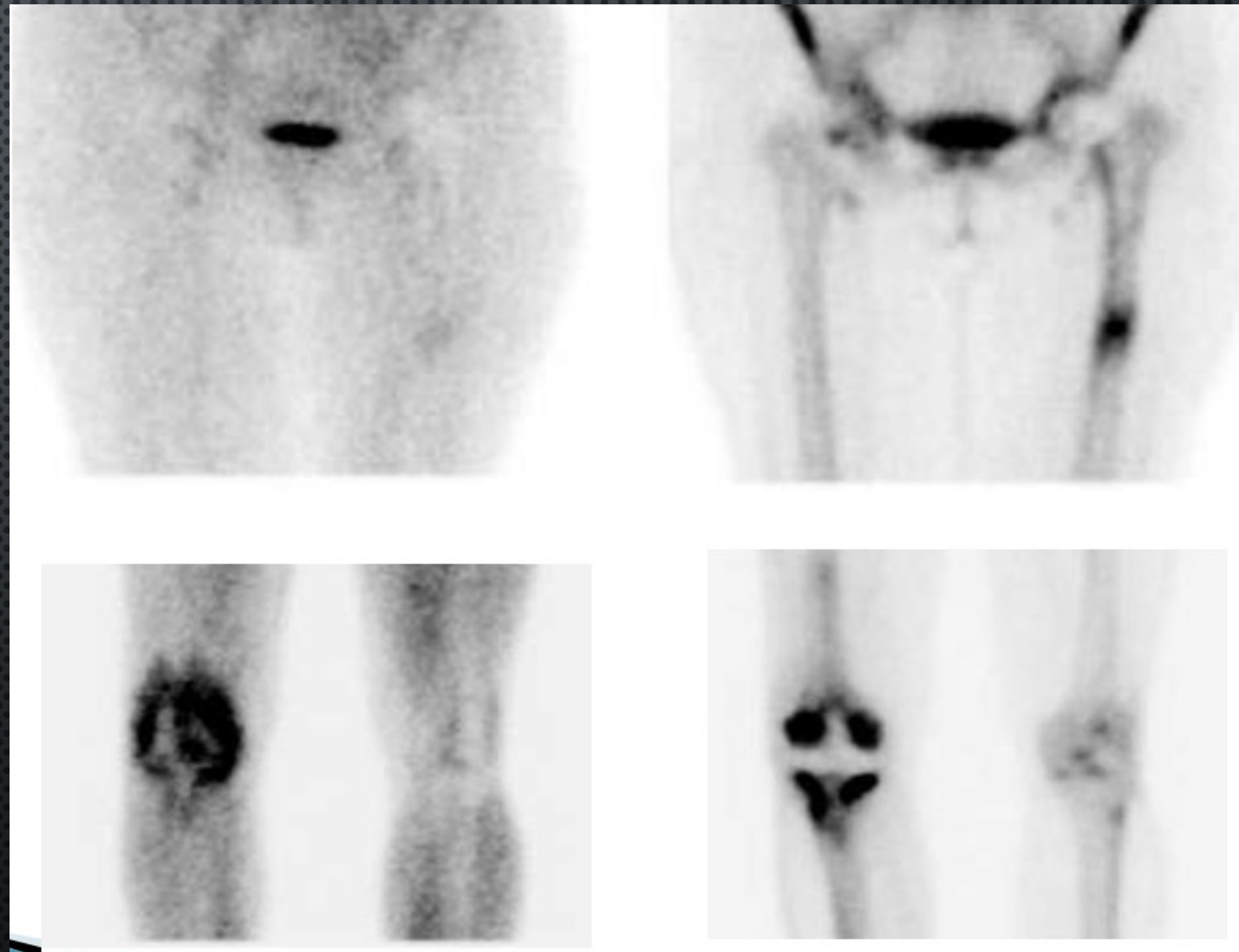


POOL

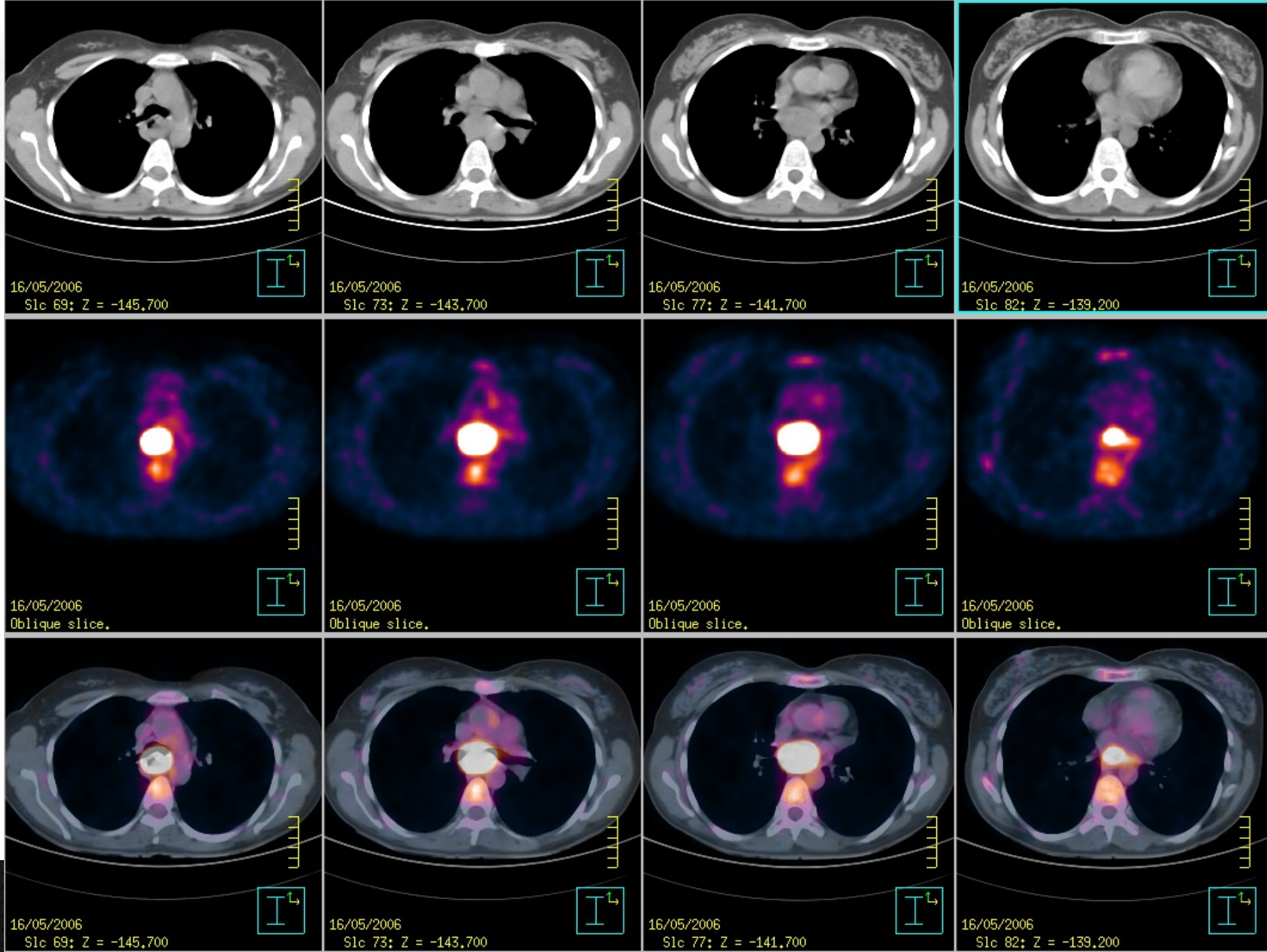




Aseptické/septické  
uvoľnenie protézy







PET/CT tumor neznámeho pôvodu



Ďakujem veľmi pekne za pozornosť