

# Jungärztinnentage 2024

Wäre für dich der Titelvorschlag  
„Radiologie im klinischen Alltag“ OK?

Radiologie im Klinischen Alltag

# Behind Radiology

in der Allgemeinmedizin

Kommunikation und Interdisziplinarität

# Behind Radiology

in der Allgemeinmedizin

- Historische Entwicklung
- Kommunikation
- Fallbeispiele
- 1
- 2
- 3
- 4
- 5
- Zusammenfassung
- Schluss

# Behind radiology for GP`s

**You**  
behind radiology for general practitioners

**ChatGPT**  
When referring to "behind radiology for general practitioners," it typically involves understanding the role of radiology in the broader context of healthcare delivery, particularly how general practitioners (GPs) utilize radiological services to aid in diagnosis, treatment planning, and patient management. Here are some key aspects:

- 1. Referral Process:** GPs often serve as the primary point of contact for patients seeking medical care. Understanding when to refer a patient for radiological imaging, such as X-rays, CT scans, or MRIs, is crucial. GPs need to assess the clinical necessity and appropriateness of imaging studies based on the patient's symptoms, medical history, and physical examination findings.
- 2. Interpretation and Communication:** While radiologists are responsible for interpreting imaging studies and generating reports, GPs play a vital role in understanding and communicating these findings to patients. GPs need to be able to interpret radiology reports effectively, integrate the information into the patient's overall clinical picture, and discuss the results with patients in a clear and understandable manner.
- 3. Clinical Decision-Making:** Radiology findings often influence clinical decision-making in primary care. GPs must be able to use radiological information to formulate differential diagnoses, develop treatment plans, and determine the need for further investigations or referrals to specialists.
- 4. Continuing Education:** Keeping up-to-date with advances in radiology is essential for GPs to provide high-quality care. Continuing medical education (CME) activities, such as conferences, workshops, and online courses, help GPs stay informed about new imaging modalities, techniques, and evidence-based guidelines for appropriate imaging utilization.
- 5. Utilization Management:** GPs play a role in promoting responsible and evidence-based use of radiological services to minimize unnecessary radiation exposure and healthcare costs. Understanding appropriate imaging guidelines, such as those provided by professional organizations like the American College of Radiology (ACR) or the Royal College of Radiologists (RCR), helps GPs make informed decisions about when to order imaging studies.

By understanding the role of radiology in healthcare and how it intersects with primary care practice, GPs can effectively utilize radiological services to improve patient outcomes and ensure high-quality care.

Message ChatGPT...

- Behind radiology for GP`s
- 1Referral process
- 2Interpretation and Communication
- 3Clinical decision making
- 4Continuing education
- 5Utilization management

# Historisches



8. November 1895



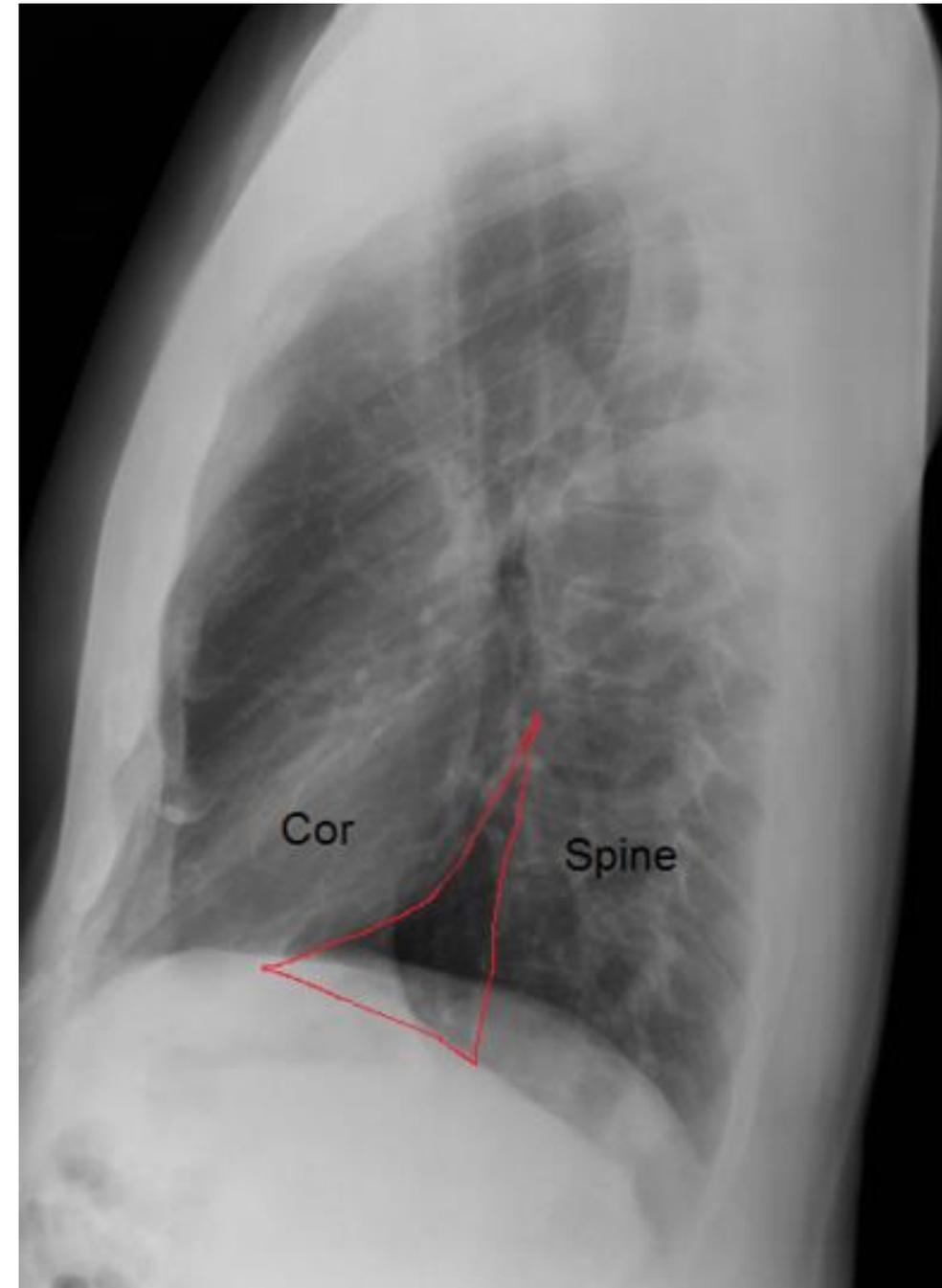
8. November 1895



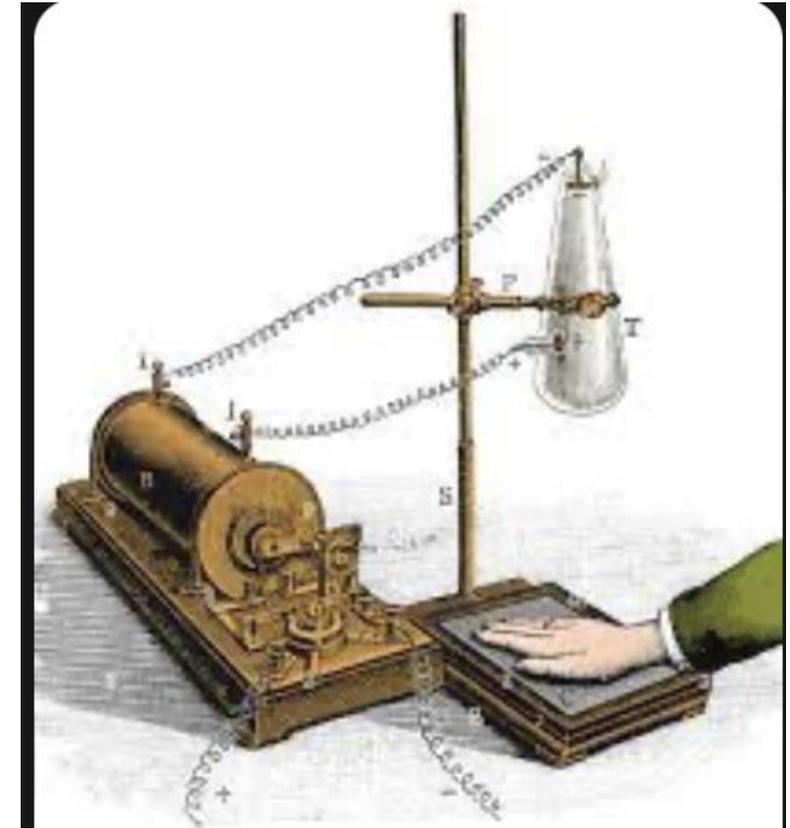
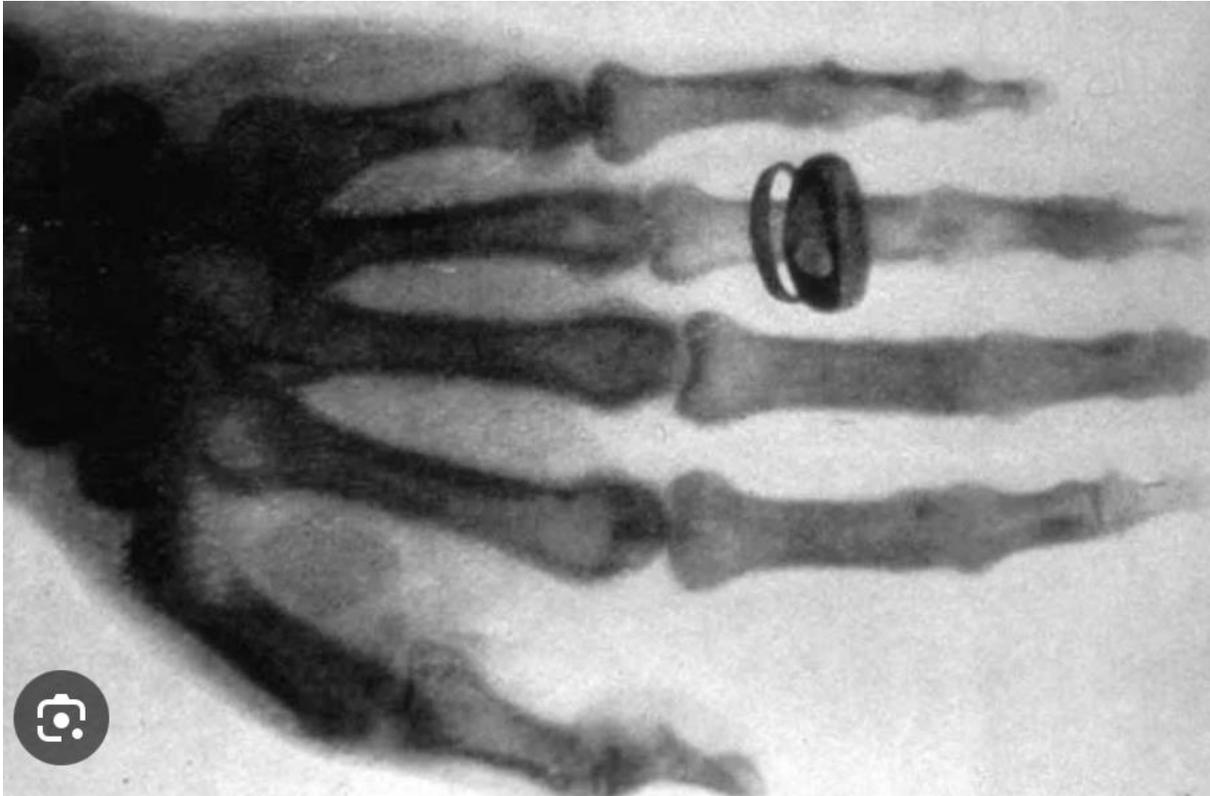
(\* [27. März 1845](#) in [Lennep](#), heute Stadtteil von [Remscheid](#); † [10. Februar 1923](#) in [München](#))



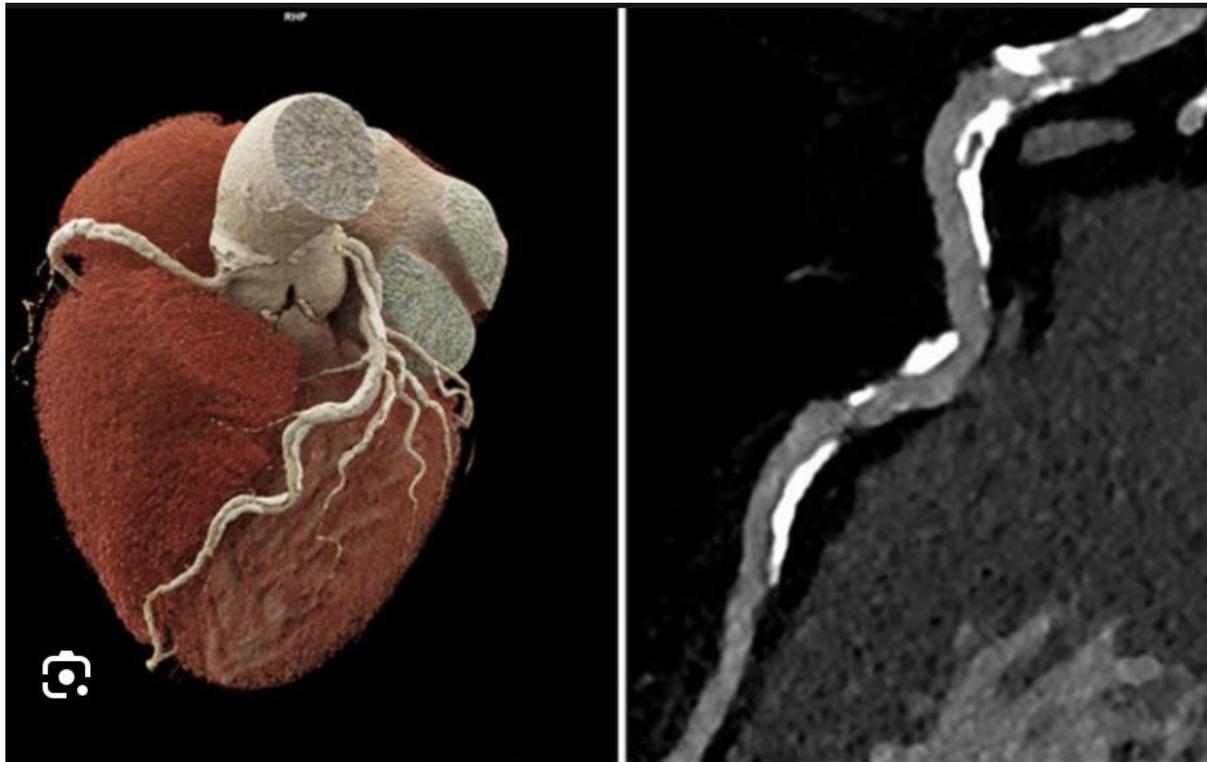
(\* [3. Dezember 1872](#) in [Wien](#); † [30. Oktober 1931](#) ebenda)



# Gasentladungsröhre



# Photon counting CT



2st of August - Photon-counting  
computed tomography instead of...

[Besuchen >](#)



# 130 Jahre Röntgen

- „Ausnutzung der Physik“

- Erkenntnisse in Phänomenologie Linguistik Kommunikation
- AI LLM`s

# Befundkommunikation



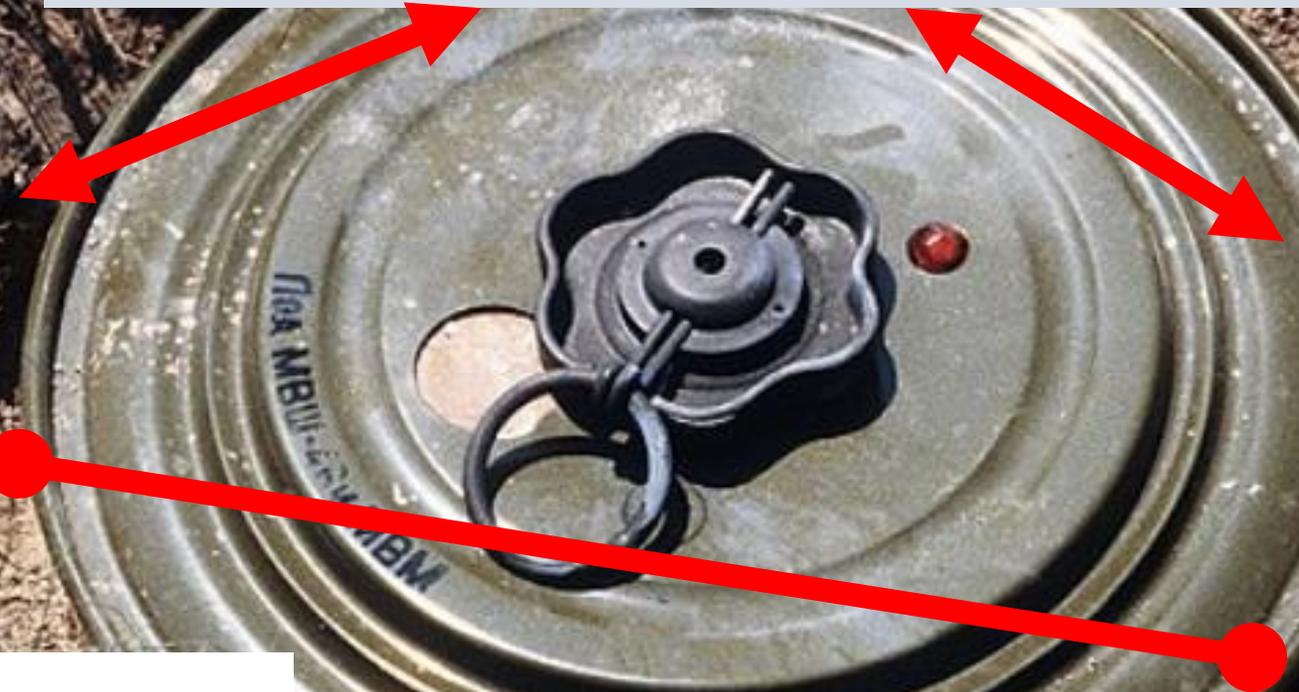
Praktischer Arzt

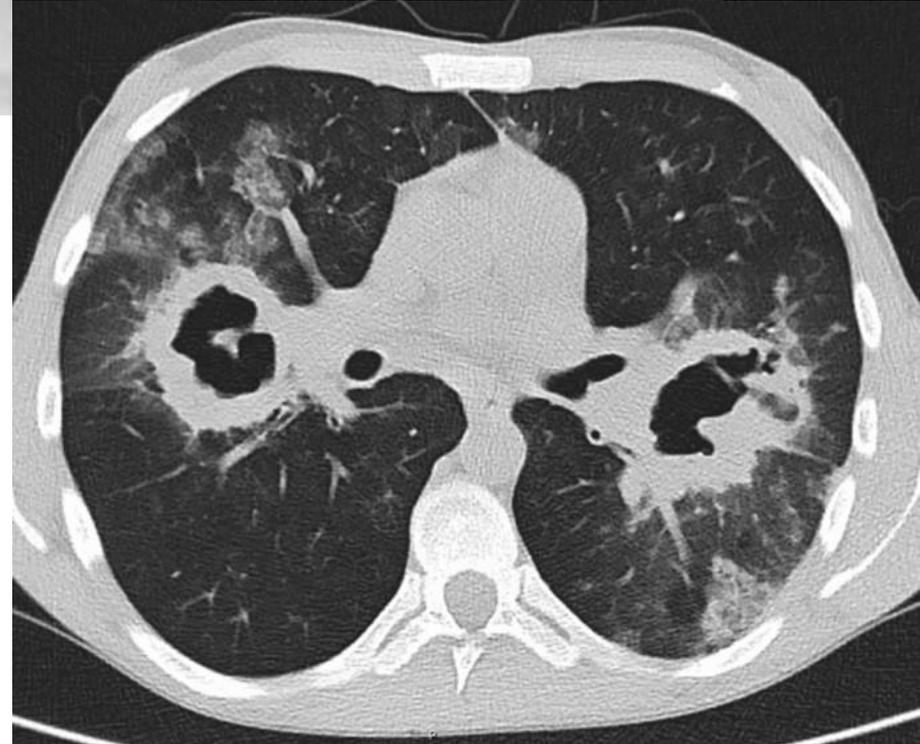
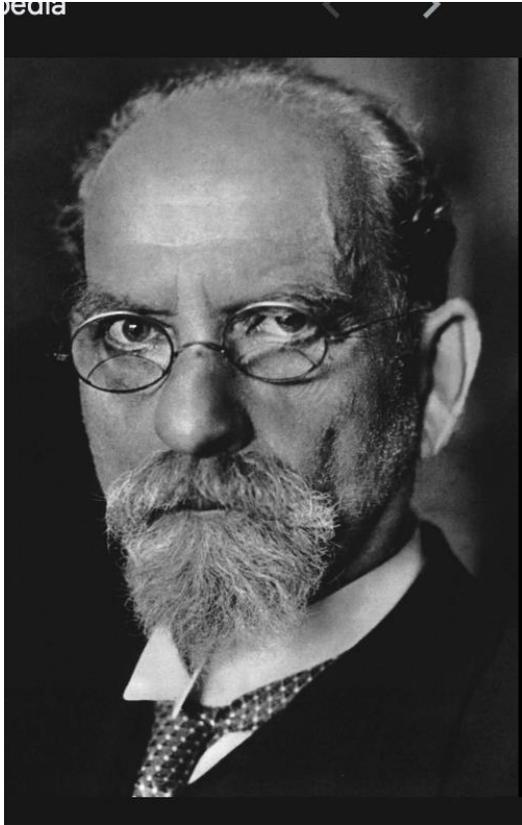
Zuweisungskultur  
(Ki, medical command center)



Radiologe

Radiologie  
Befundkultur





## Phänomenologie „Erscheinung“

- [Deskription](#) als Methode

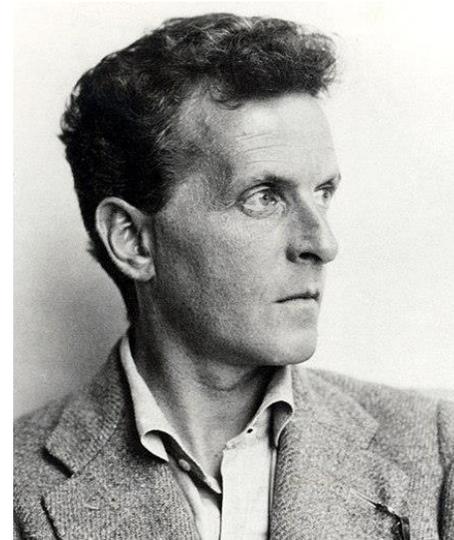
8 April 1859 – 27 April 1938<sup>[1](#)</sup>



**Jacques Derrida** [[ʒak dɛʁiˈda](#)] (\* [15. Juli 1930](#) als **Jackie Derrida** in [El Biar<sup>\[1\]</sup>](#); † [8. Oktober 2004](#) in [Paris](#))

# „Dekonstruktion“

-ist die dekonstruktion des „IST“



Ein **sinnvoller** Satz ist ein Satz, der einen Sachverhalt oder eine Tatsache abbildet

(\* [26. April 1889](#) in [Wien](#), [Österreich-Ungarn](#); † [29. April 1951](#) in [Cambridge](#), [Vereinigtes Königreich](#))

# Fall1

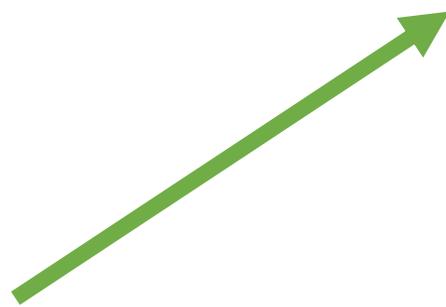
- Pat männlich 69 a Zust n. rez. Cholezystektomie.
- Unspez. Schmerzen re. Flanke- teils kolikartig.
- Sono Abdomen: I-gradige Hydronephrose re.  
Prostatahyperplasie.

Überweisung zum Stein-CT – Ausschluss Ureterolithiasis.

## 2. Ursachen

Die Ursachen für Flankenschmerzen sind

- **Urologische Ursachen**
  - Pyelonephritis
  - Nierenstein
  - Harnleiterstein
  - Harnleiterstenose
  - Niereninfarkt
- **Gastroenterologische Ursachen**
  - Ileus
  - Enteritis
  - Cholezystitis
  - Pankreatitis
- **Gynäkologische Ursachen**
  - Ovarialzysten
  - Tubargravidität



Als **Harnleiterstriktur** bezeichnet man eine Verengung des Harnleiters (**Ureters**),  
Vernarbung.

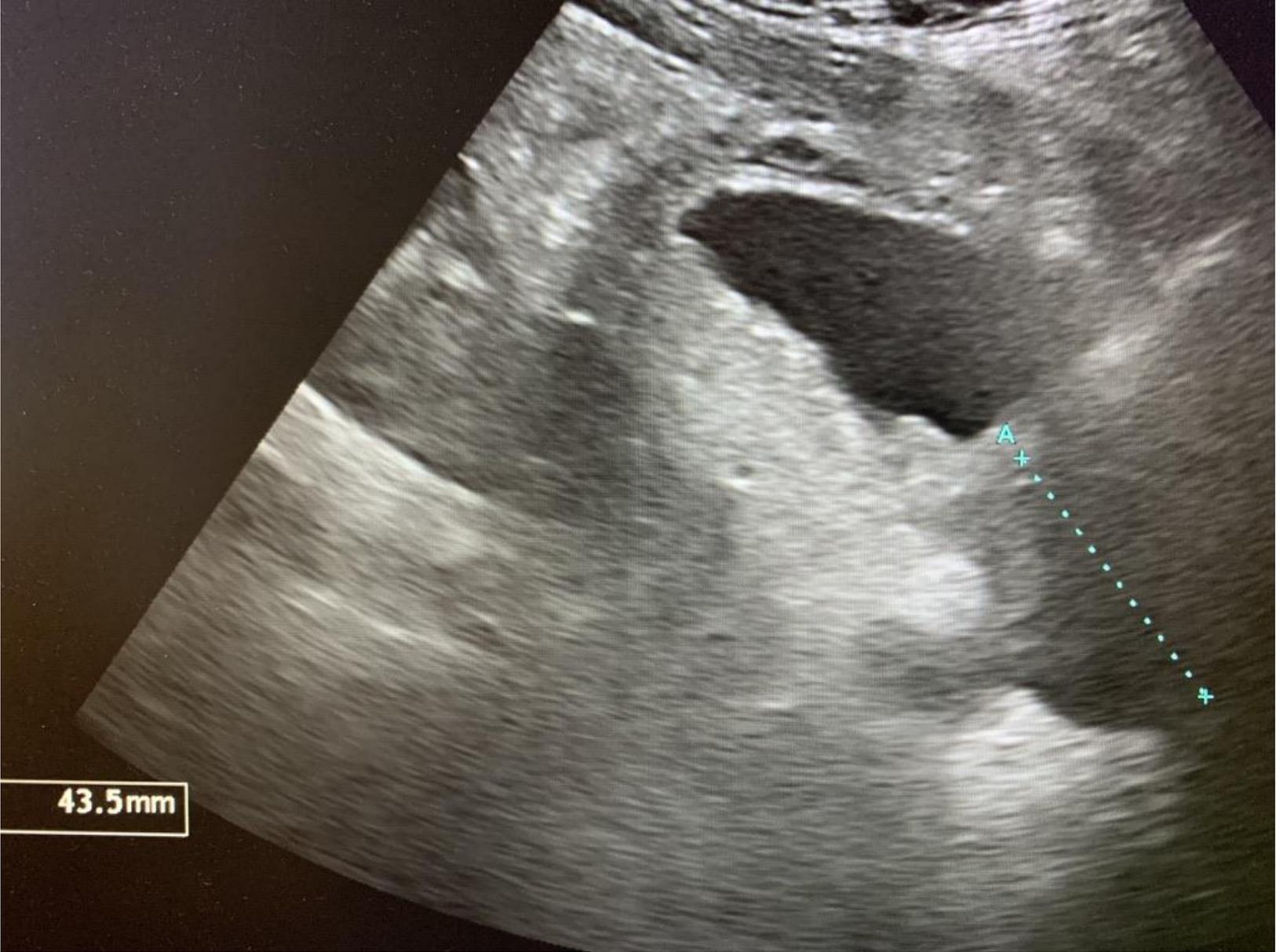
## 2. Ursachen

Eine Harnleiterstriktur kann u.a. folgende Ursachen haben:

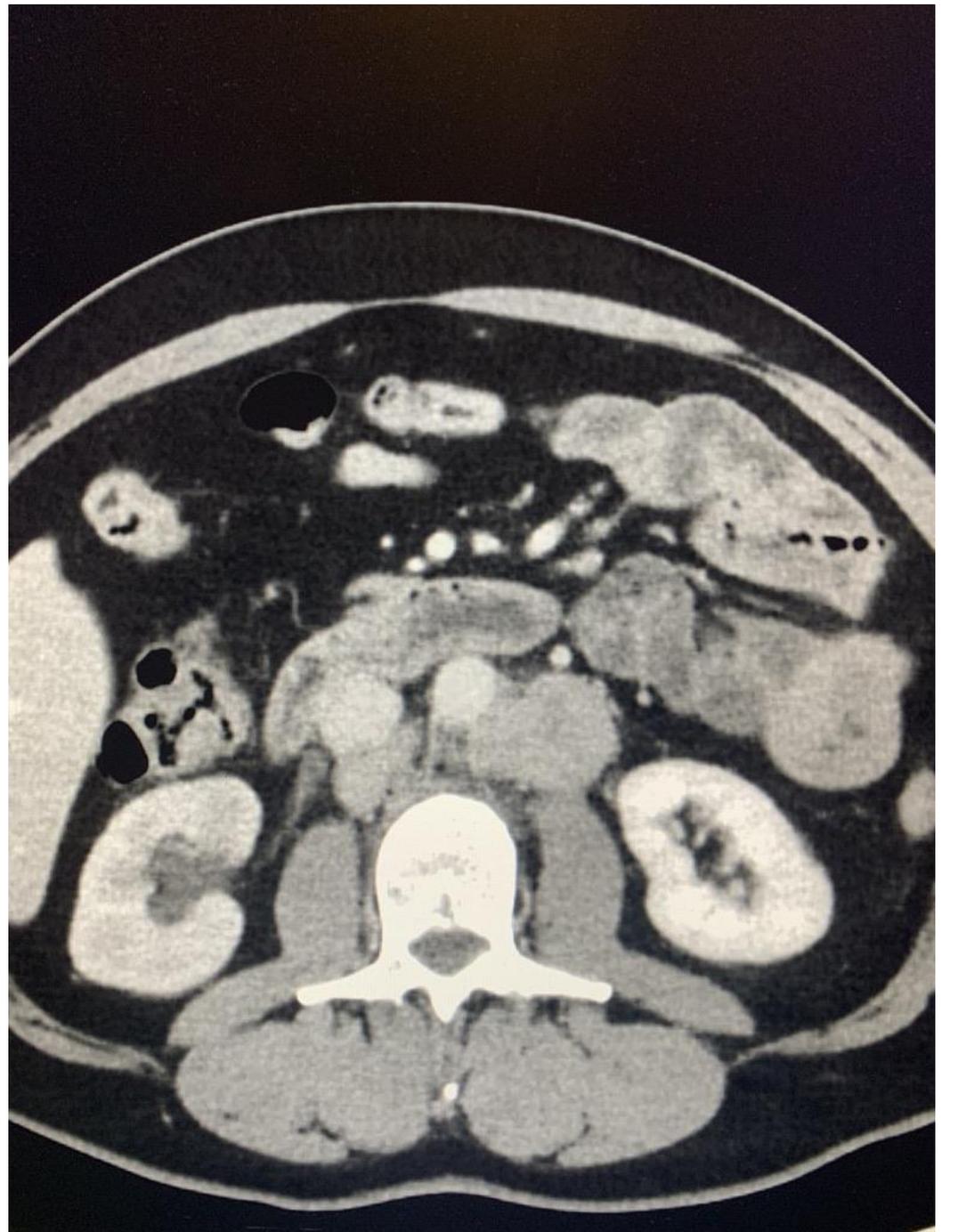
- **Harnleitersteine**
- vorangegangene Verletzung des Ureters oder **Retroperitoneums**
- **Drucknekrose**
- **Tumoren** (**Ureterkarzinom**, infiltrative **Endometriose**)
- Infektionen des Harnleiters (**Urogenitaltuberkulose**, **Bilharziose**)
- **Komplikation** einer Operation
- **Bestrahlung**
- **Retroperitonealfibrose**

*siehe auch: Ureterobstruktion*





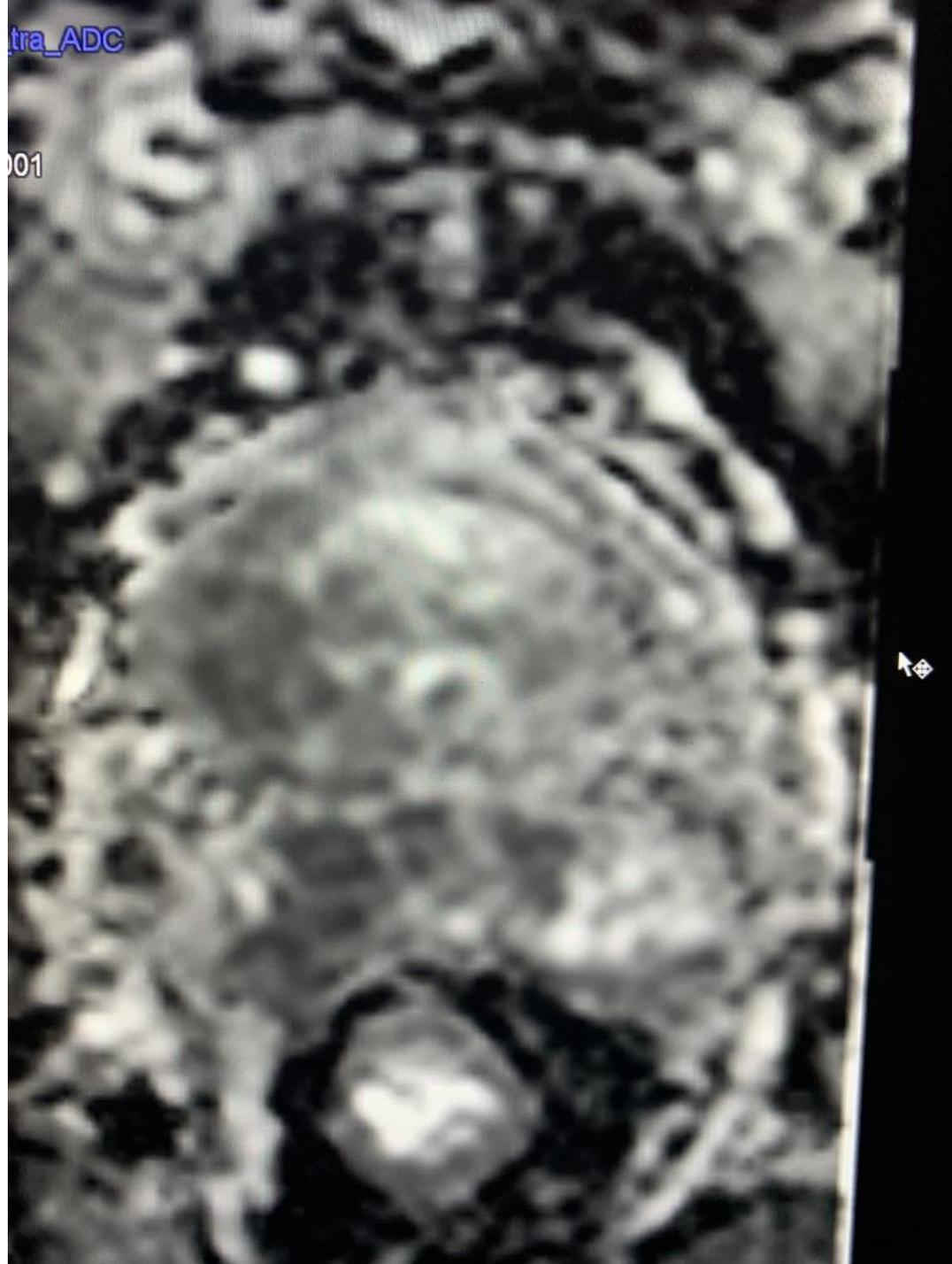
43.5mm



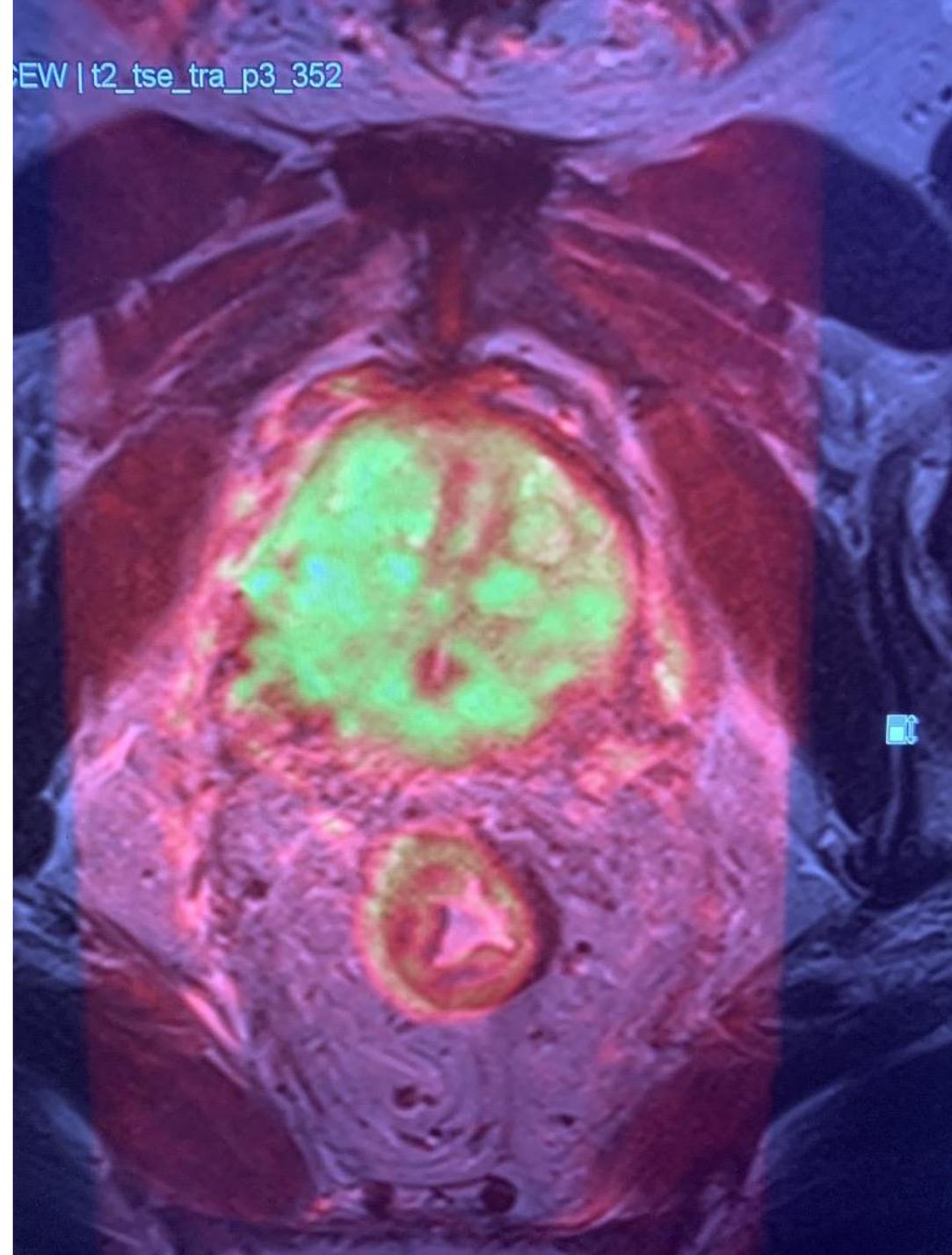


tra\_ADC

001



EW | t2\_tse\_tra\_p3\_352



# Prostatakarzinom

- Sens MR 95%
- > Gleason 7: 97% NPV 96%!
- Rektale Untersuchung sens (51-67%)
- US (TRUS) + DER + PSA: PPV von 80%

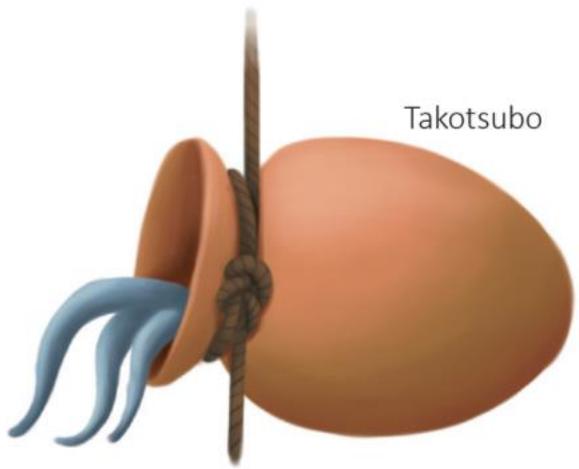
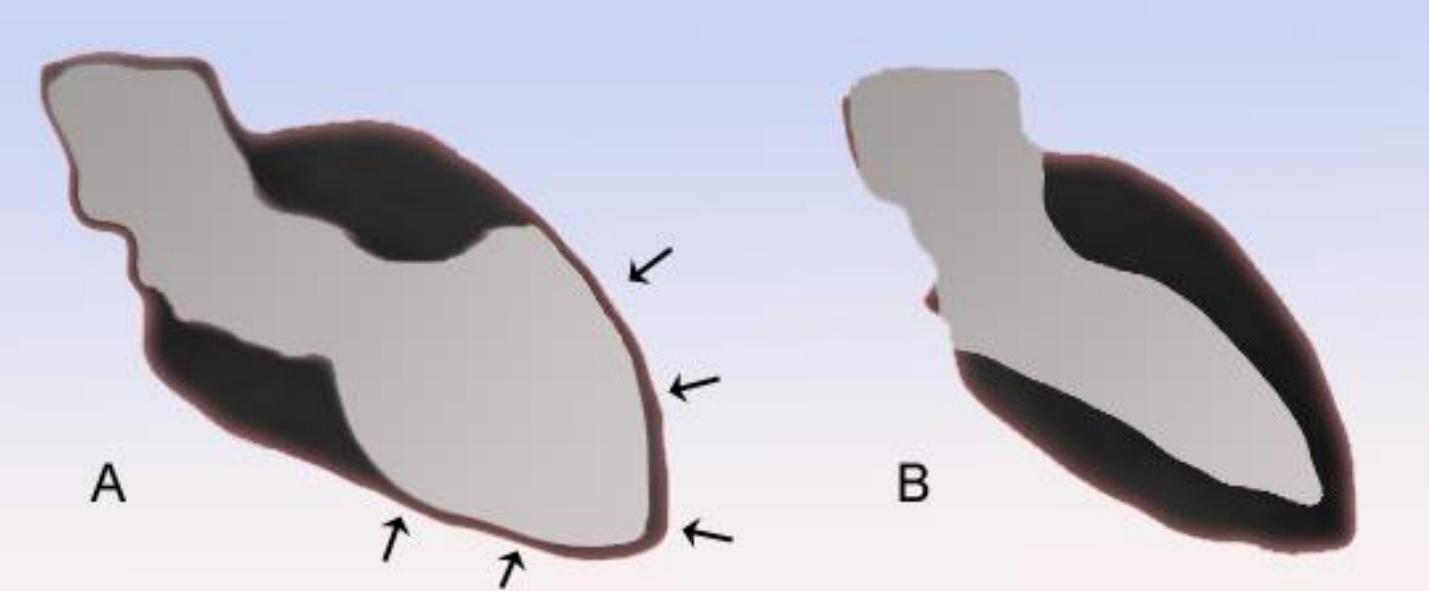
## Fall2

- Pat weiblich 61a „Zust n. 2 Stents Takotsubo CMP“
- Cardio MRT erbeten

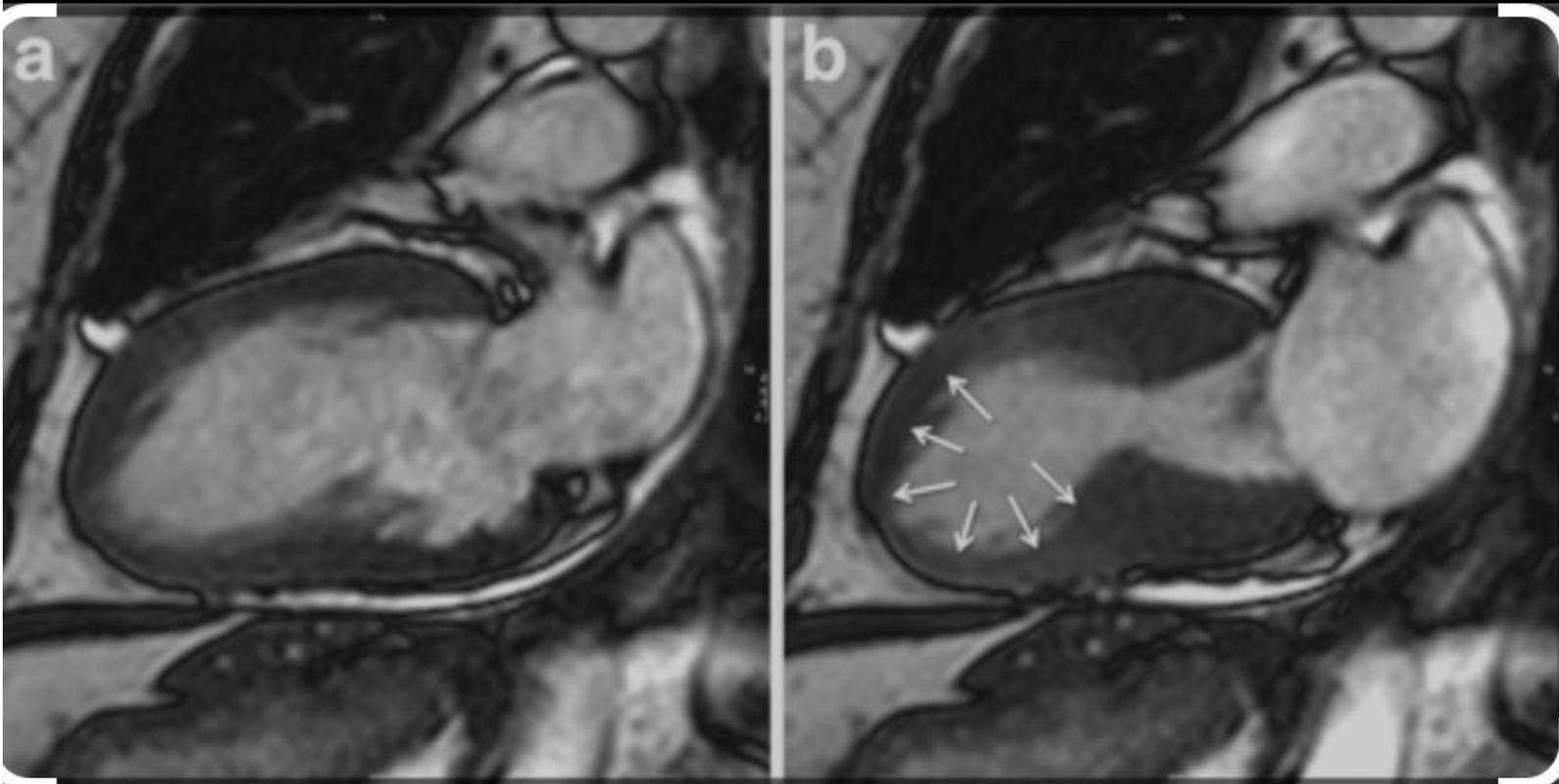
.

# Takotsubo Myocardiopathie

- Stress induzierte Kardiomyopathie
- Broken heart syndrom
- **Temporäre** Kardiomyopathie
- Durch physischen ( Sepsis Katecholamine (Phäochromozytom)) oder psychischen Stress hervorgerufen.
- Postmenopausale Frauen prädisponiert (Östrogen protektiv?)



# Takotsubo Myocardiopathie



# Late Gadolinium Enhancement

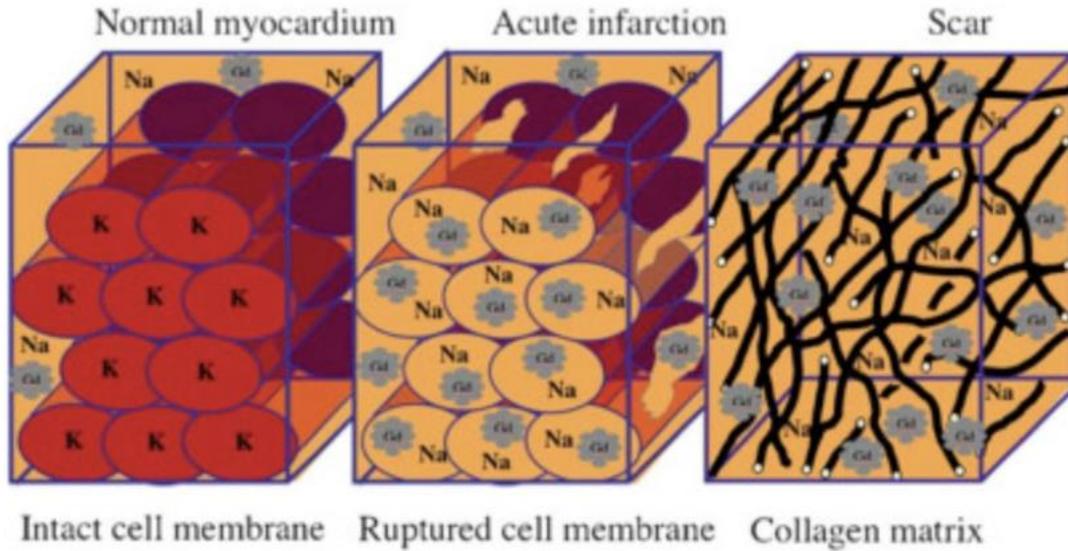
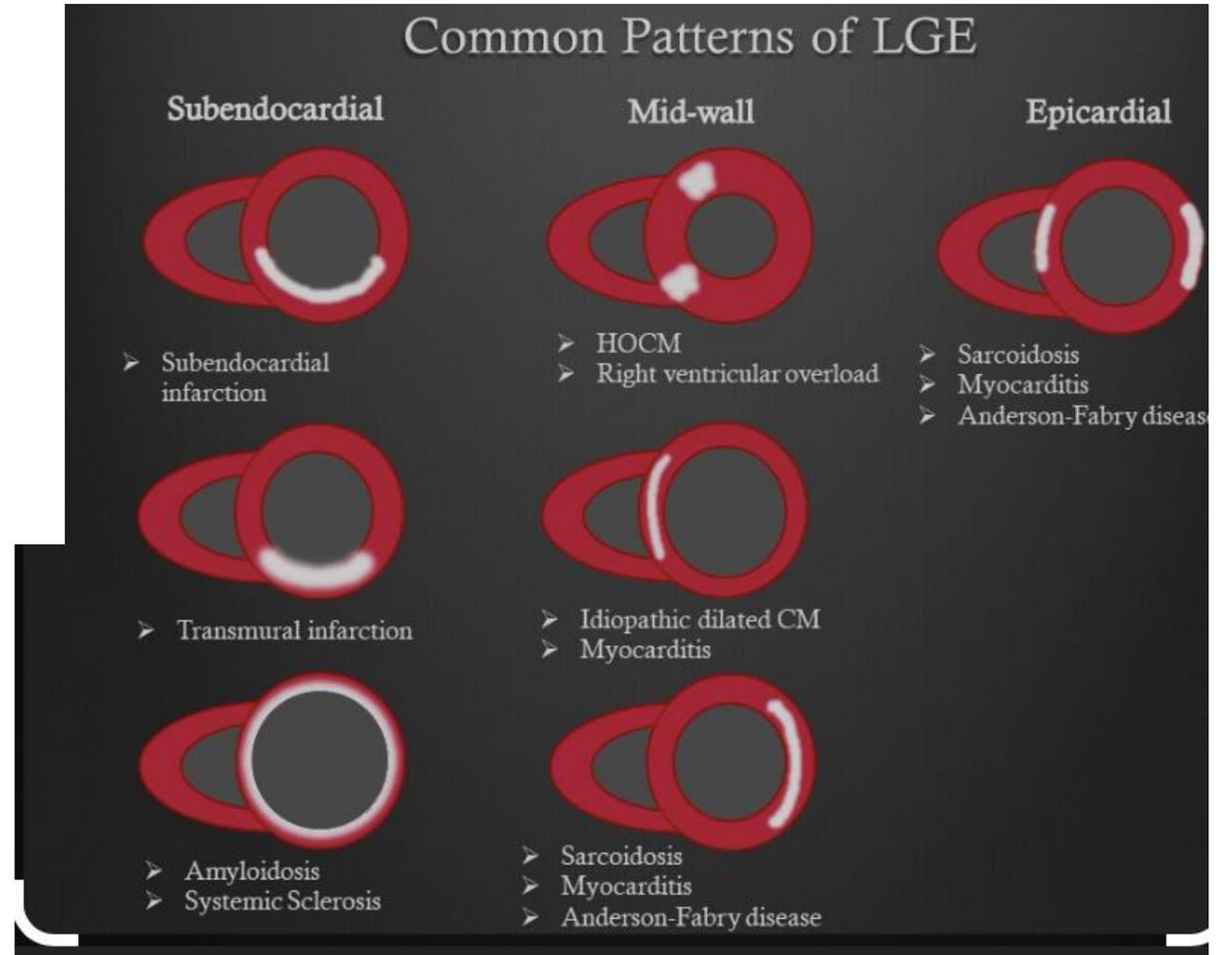
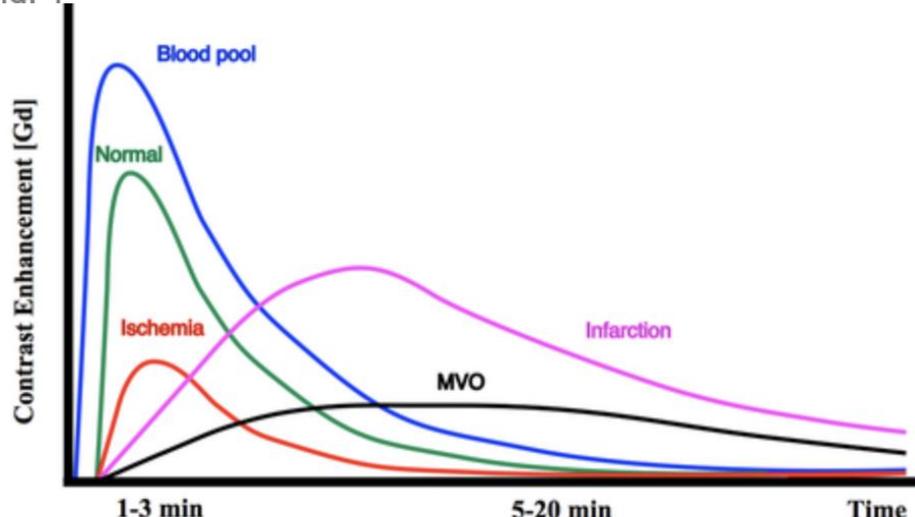


Fig. 1

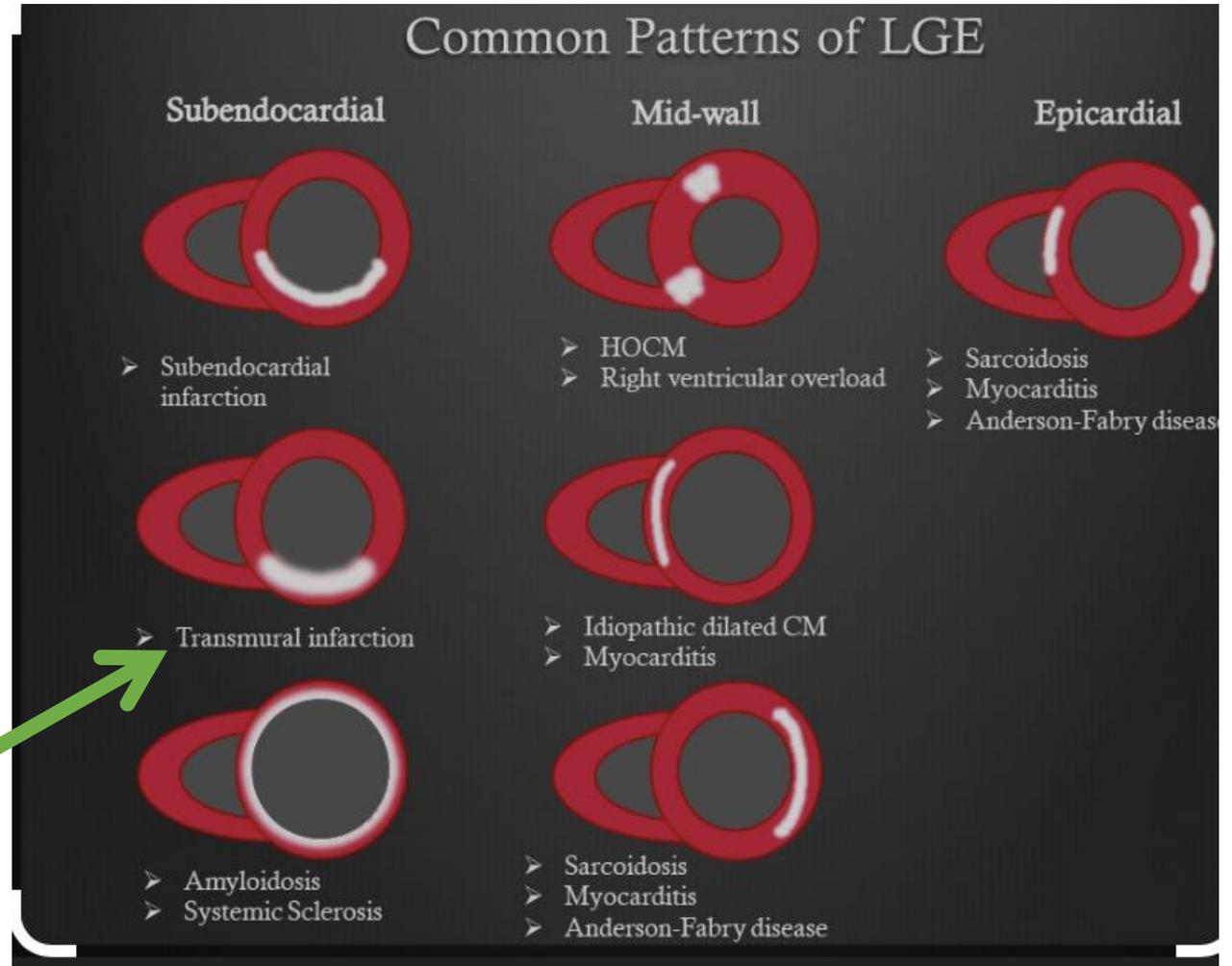
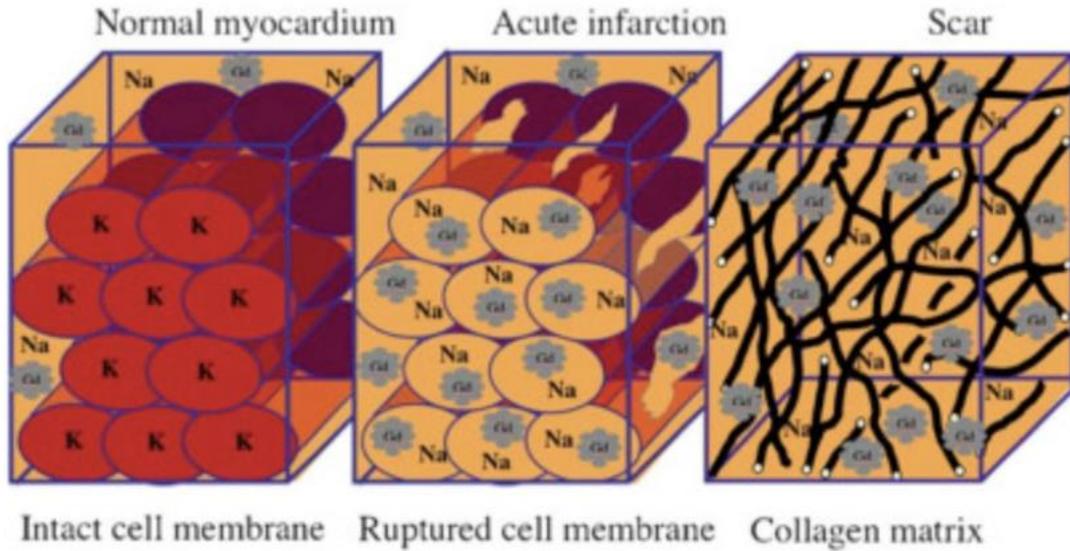




Late G.  
Enhancement



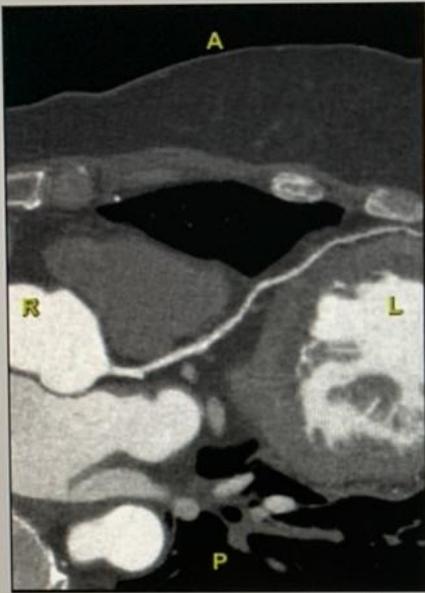
# Late Gadolinium Enhancement



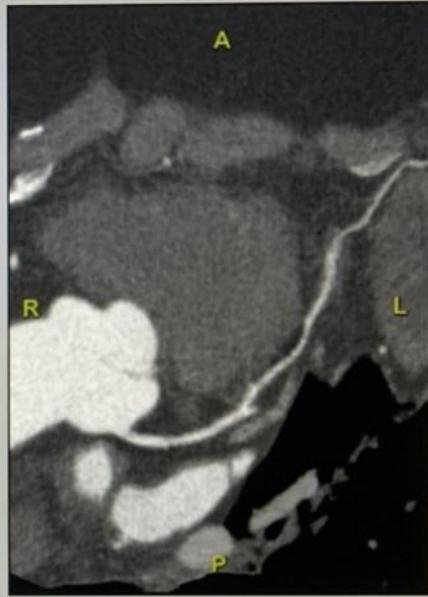
## Fall3

- Pat weiblich 55a „Rythmusstörung, coronare CTA unauffällig“
- Cardio MRT erbeten VHF sowie HF EF

Ramus interventricularis anterior (Winkel : 0° - Phase 75 %)



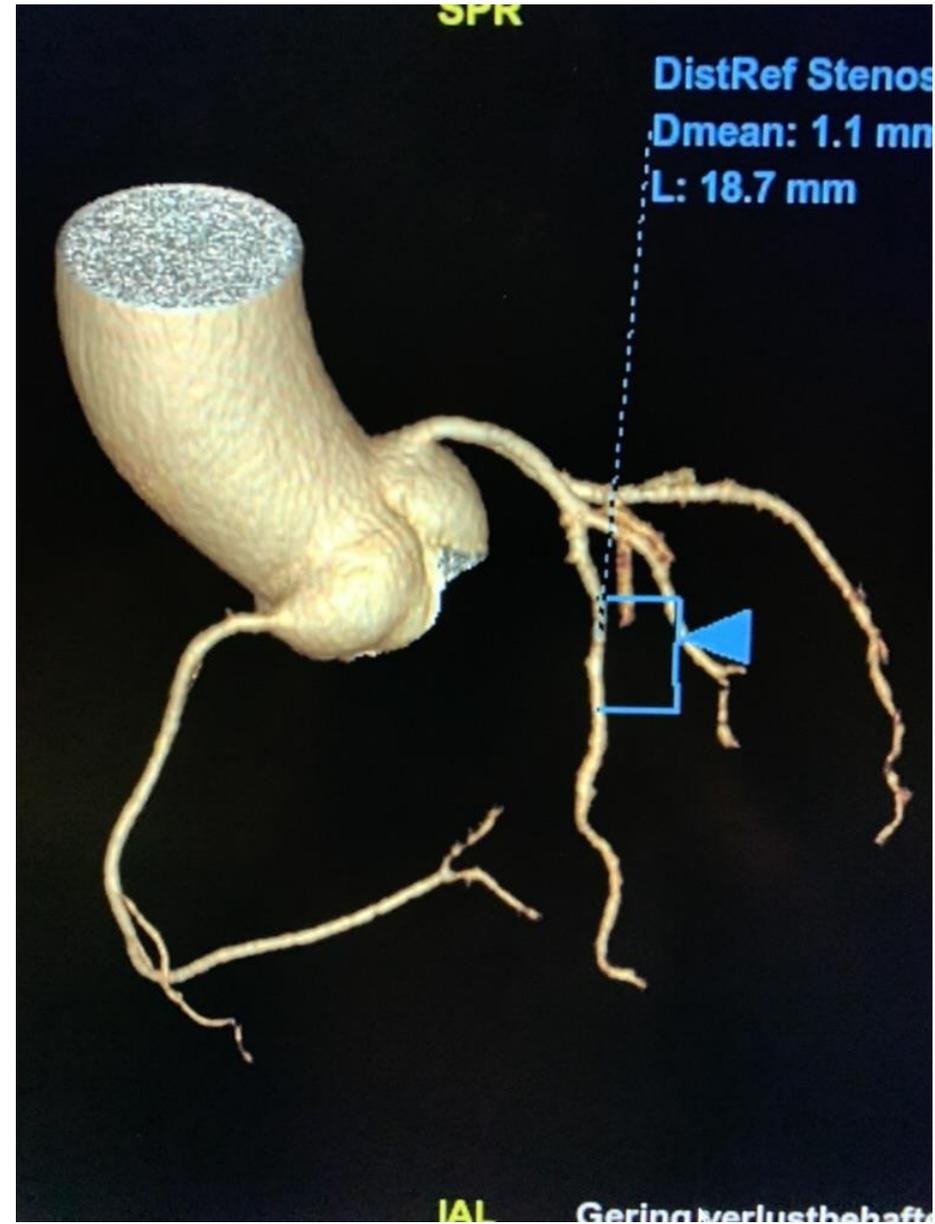
Ramus interventricularis anterior (Winkel : 45° - Phase 75 %)

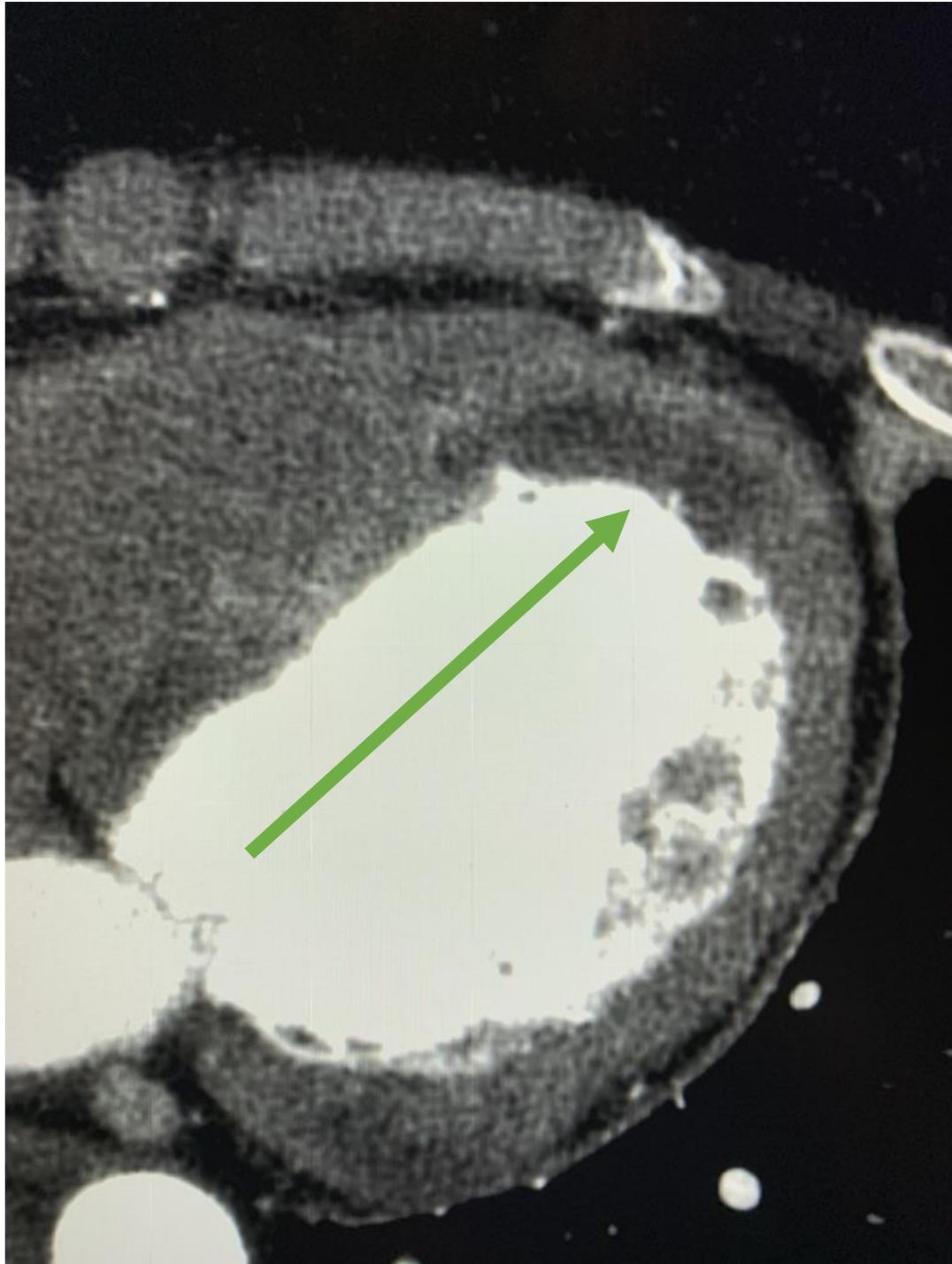


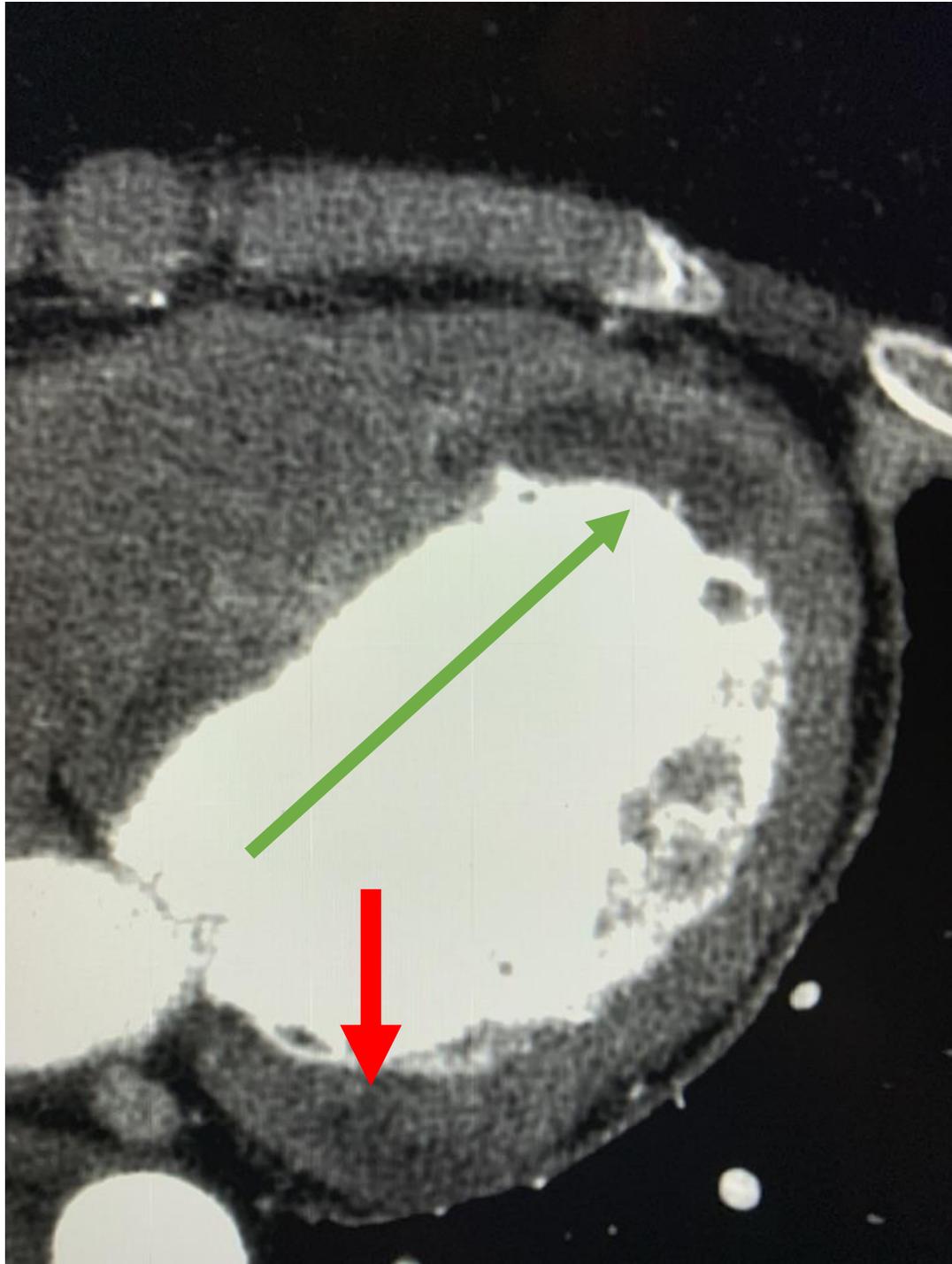
Ramus interventricularis anterior (Winkel : 90° - Phase 75 %)

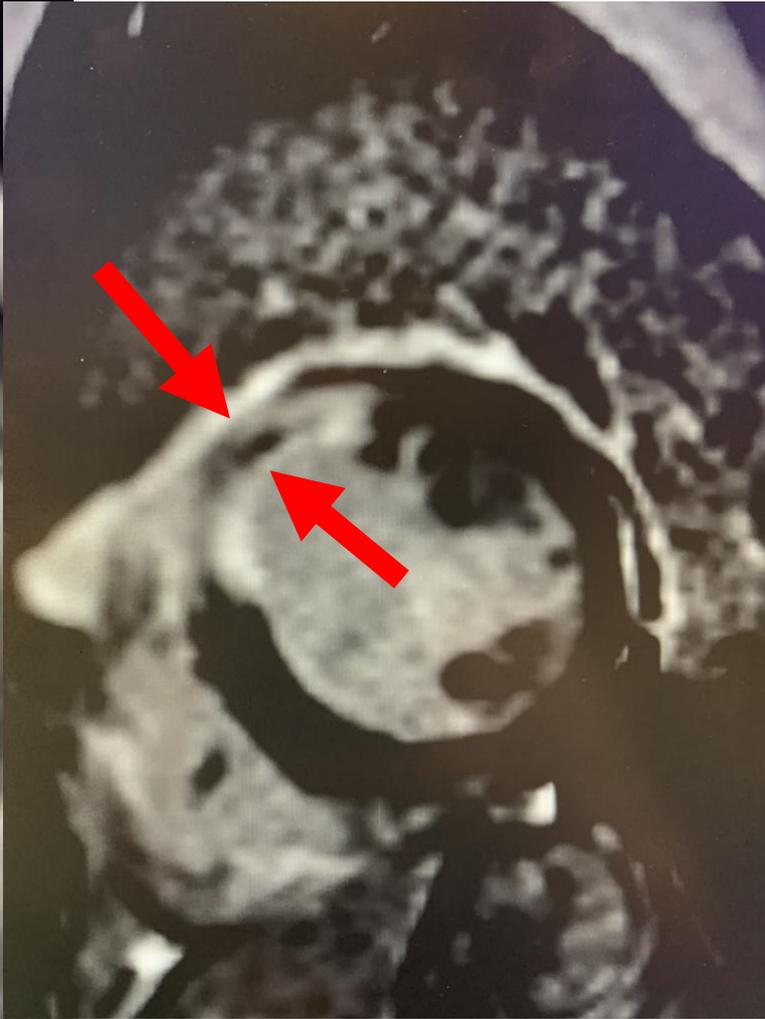
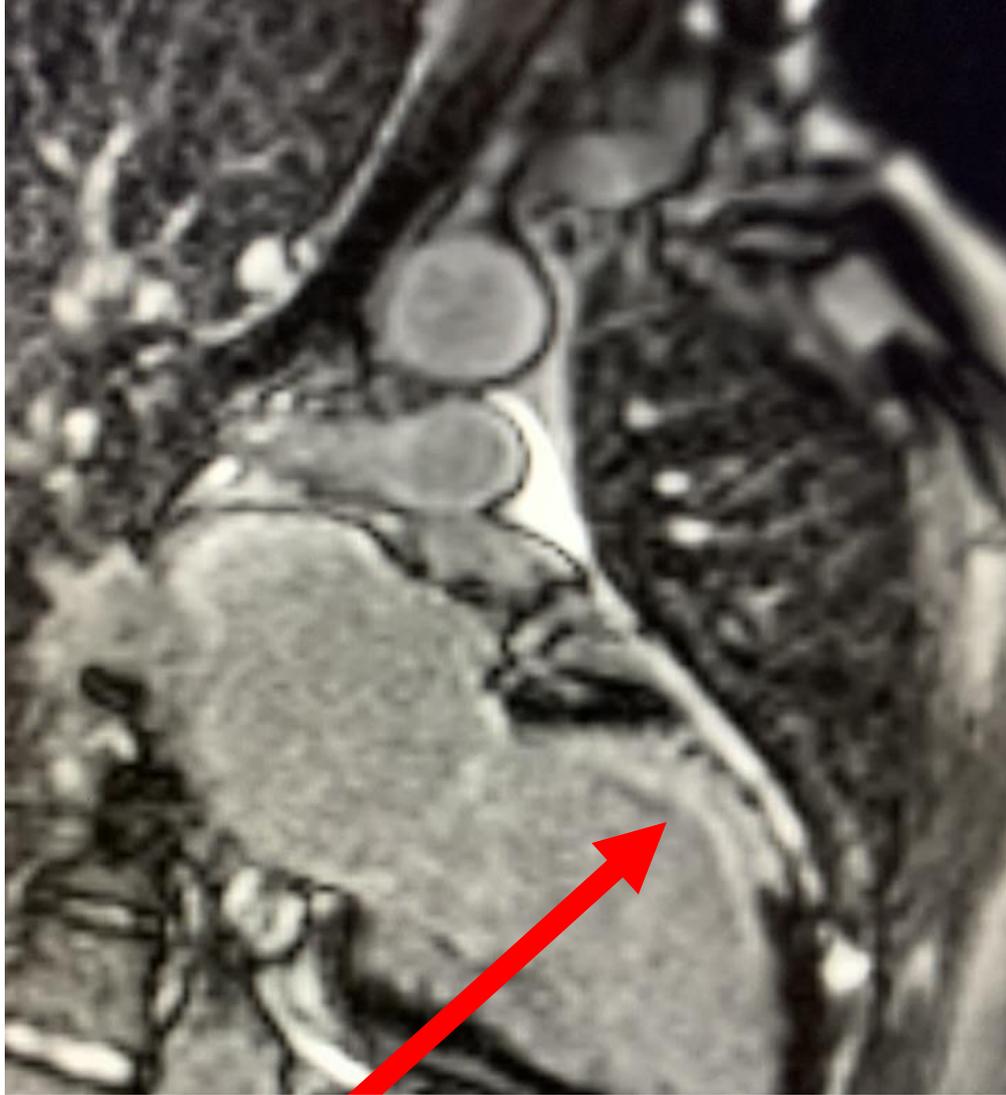


Ramus interventricularis anterior (Winkel : 135° - Phase 75 %)

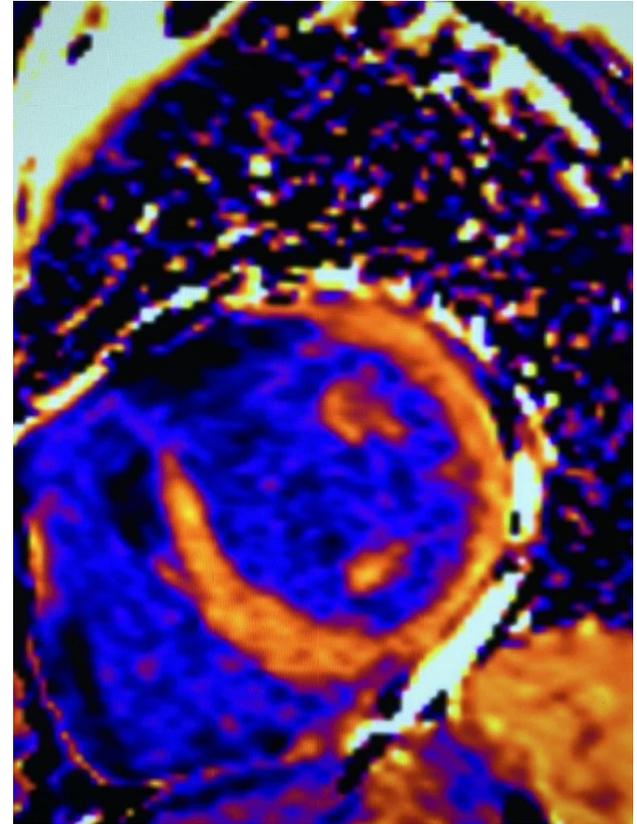






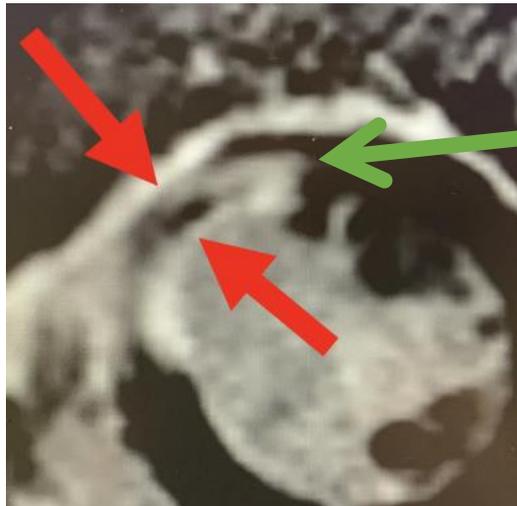
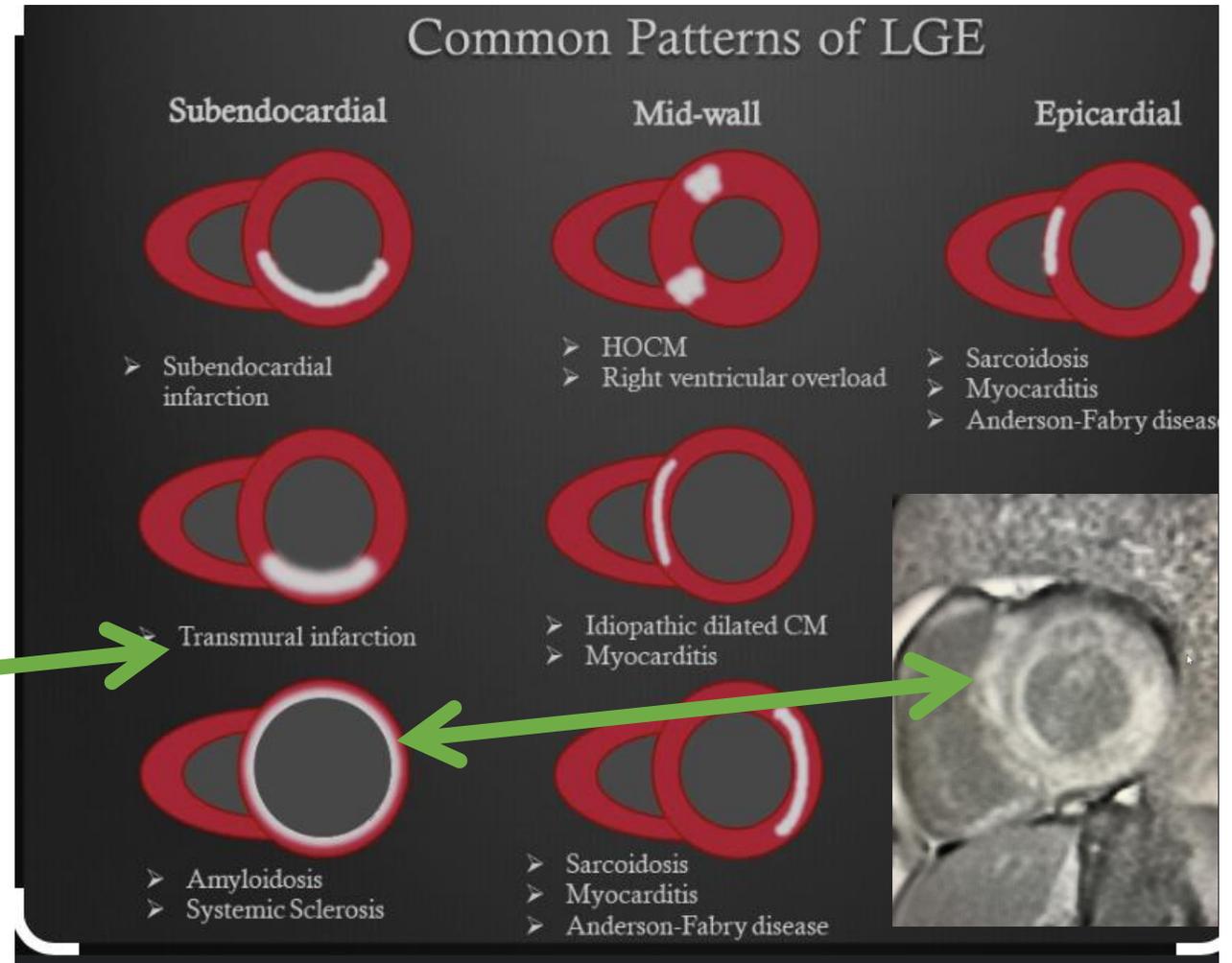
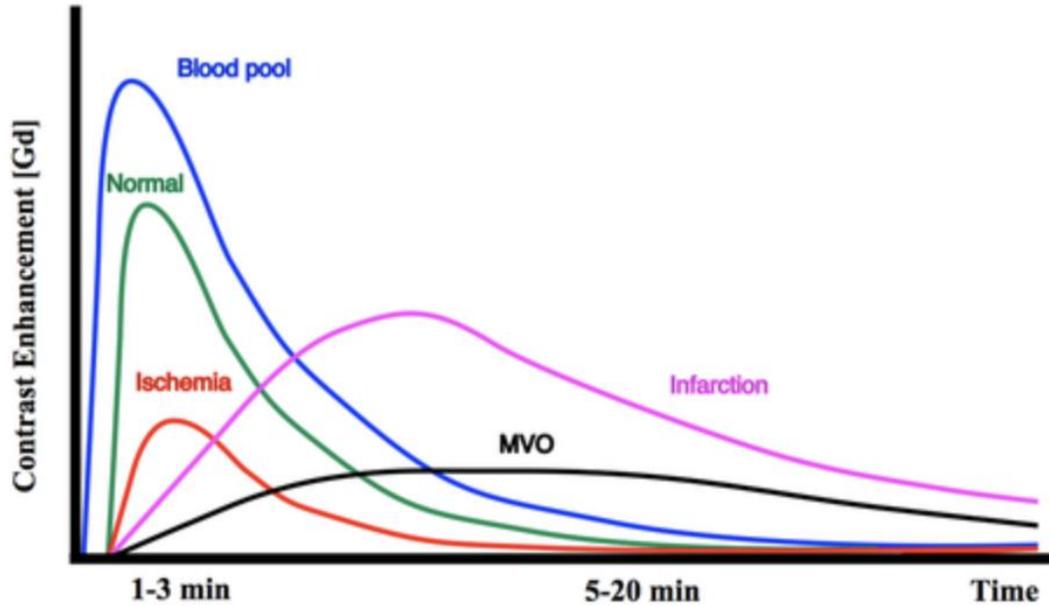


## Late G. Enhancement



On [late gadolinium enhancement \(LGE\)](#), areas of microvascular obstruction are seen as central foci of low signal or hypoenhancement (so-called “dark zones”) within an avidly enhancing site of myocardial infarction.

# Late Gadolinium Enhancement



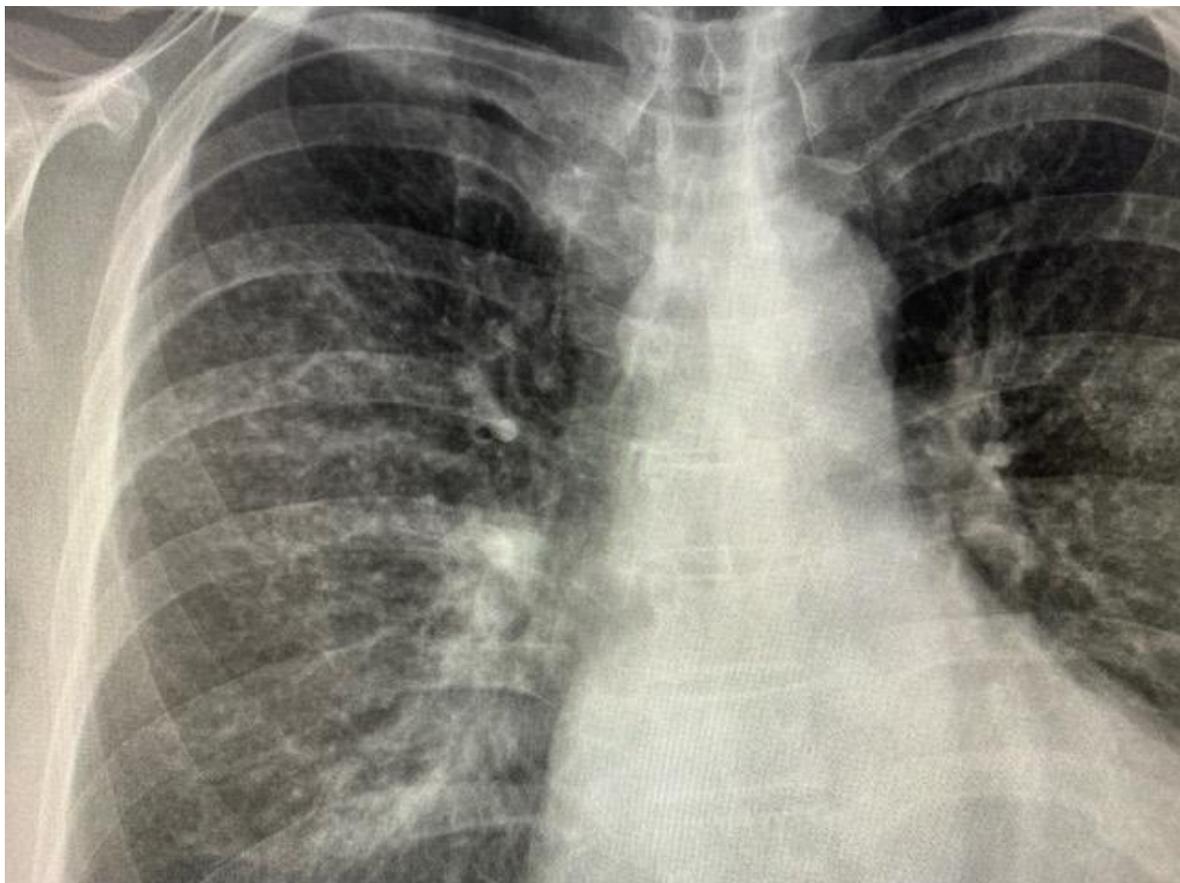
# Minoca

- Bis zu 9% aller infarkte
- Häufiger non STEMI
- Häufiger Frauen
- Plaqueeerosion, -ruptur,-  
Thrombus
- Spasmus
- Dissektion
- Mikrovaskuläre Dysfunktion

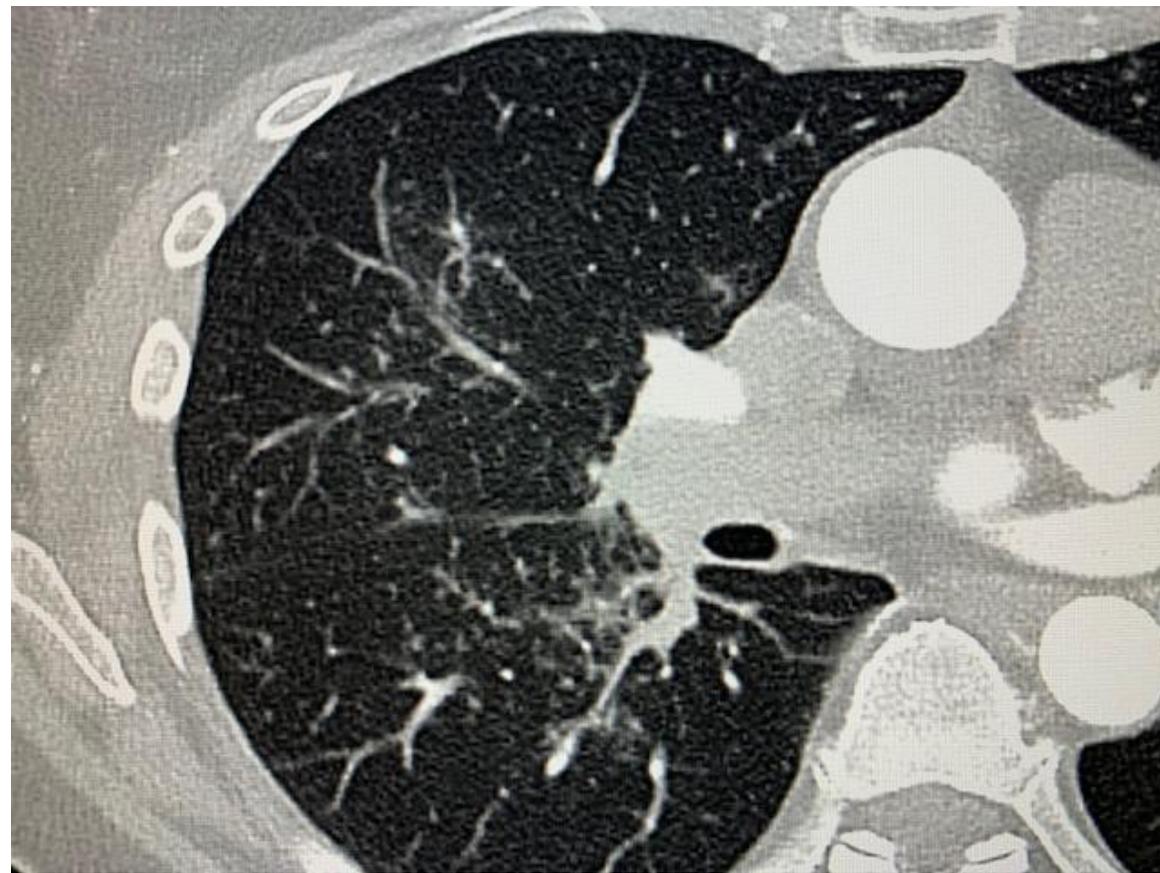
# Sarcoidose

- Symptome unspezifisch
- 90% thorakal Lymphadenopathie
- 20% Lungenbeteiligung
- 55% Kardiale Beteiligung oft  
asymptomatisch
- Typischerweise Septum und  
Lateralwand
- Sehr „helles „ LGE
- Oft rechter Ventrikel -  
Rythmusstörungen

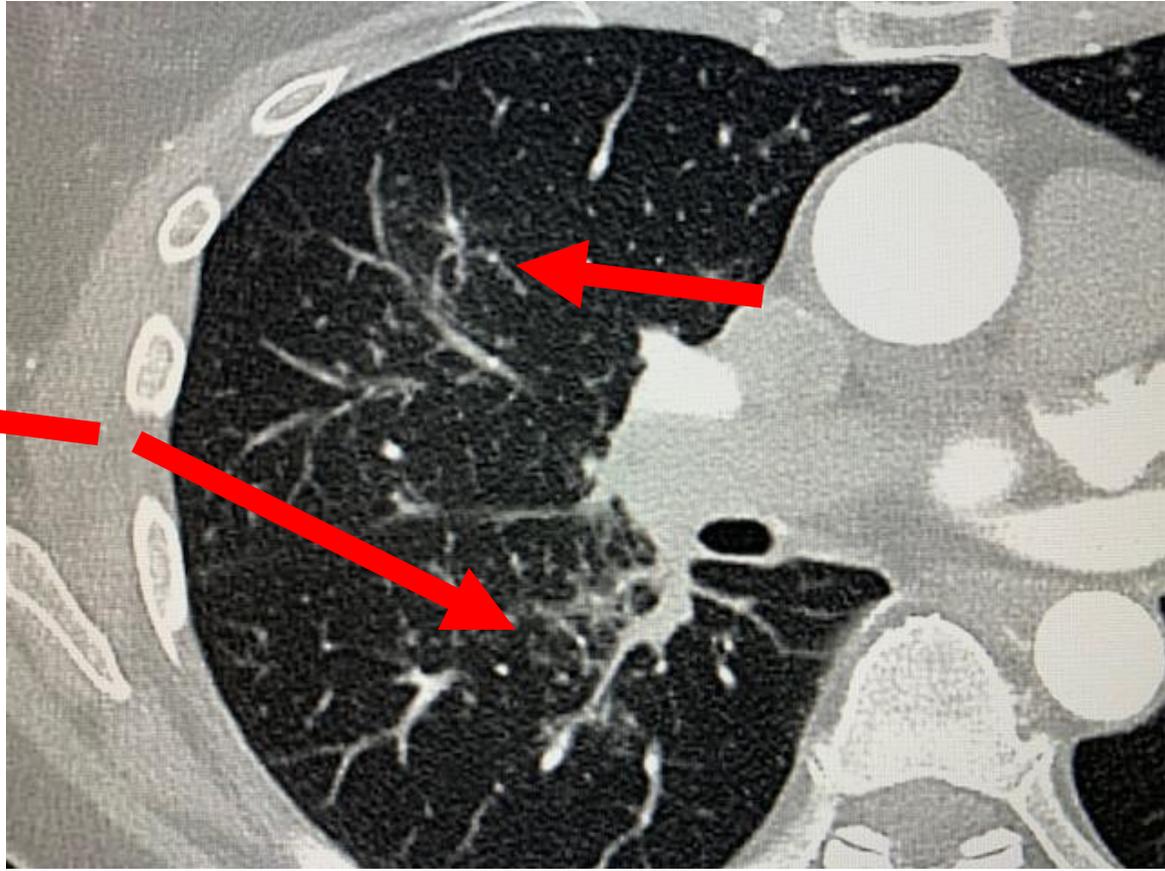
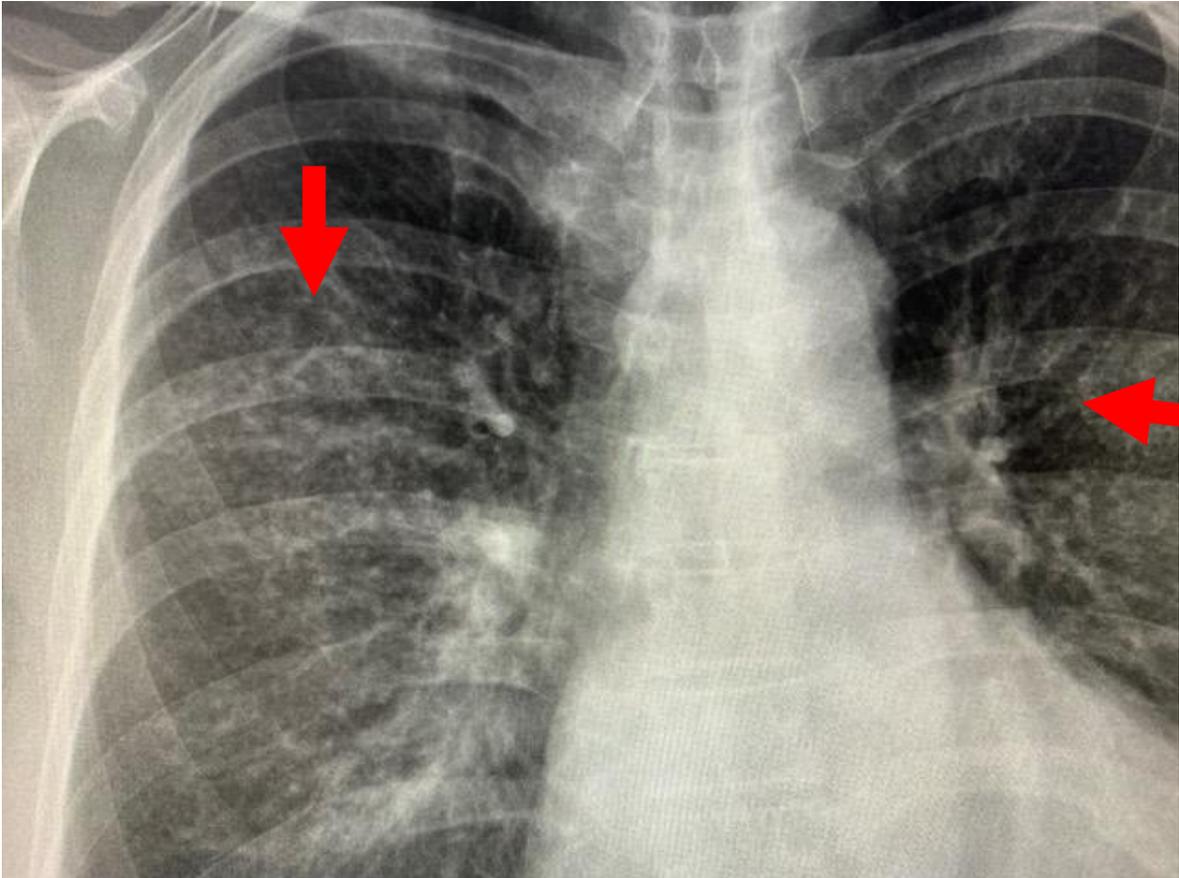
28.08.2023 THX



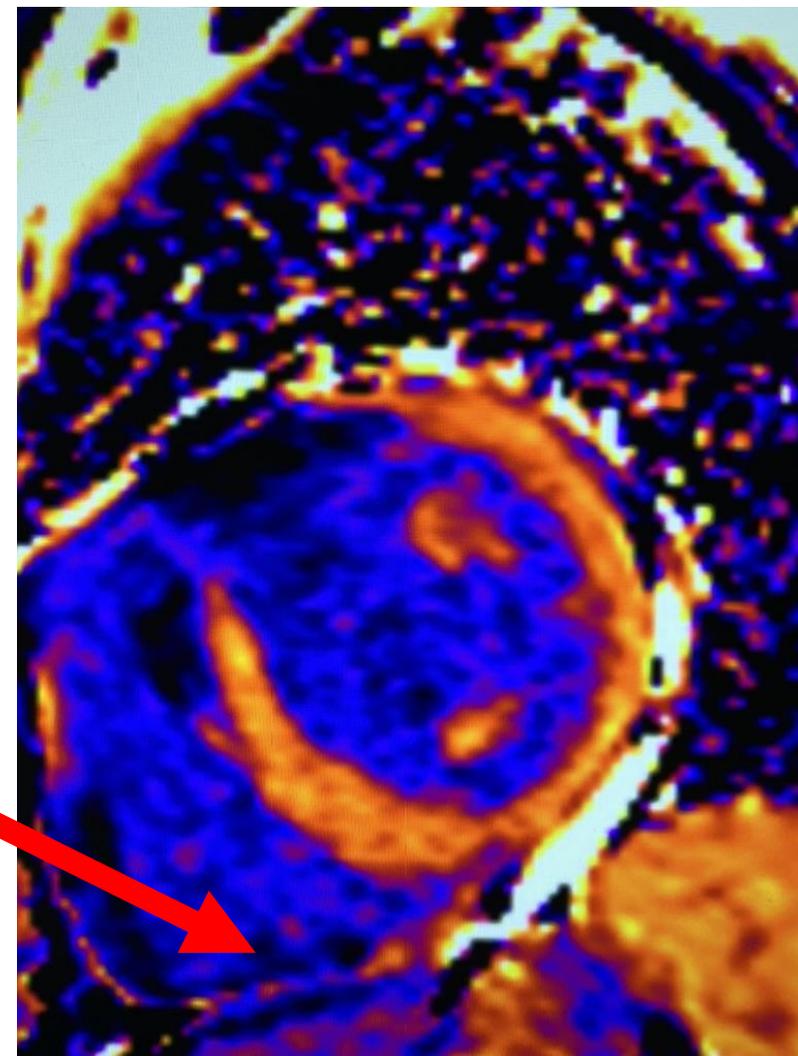
01.09.23 CT



# Sarcoidose



# Sarcoidose



# Minoca

- Bis zu 9% aller infarkte
- Häufiger non STEMI
- Häufiger Frauen
- Plaqueerosion, -ruptur,-

[Home](#) > [Der Radiologe](#) > [Article](#)

## Die vielen Gesichter der Sarkoidose

Many faces of sarcoidosis

CME | [Published: 05 January 2016](#)

Volume 56, pages 77–89, (2016) [Cite this article](#)

# Sarkoidose

- Symptome unspezifisch
- 90% thorakal Lymphadenopathie
- 20% Lungenbeteiligung
- 55% Kardiale Beteiligung oft asymptomatisch
- Typischerweise Septum und Lateralwand
- Sehr „helles „ LGE
- Oft rechter Ventrikel - Rythmusstörungen

# Fall4

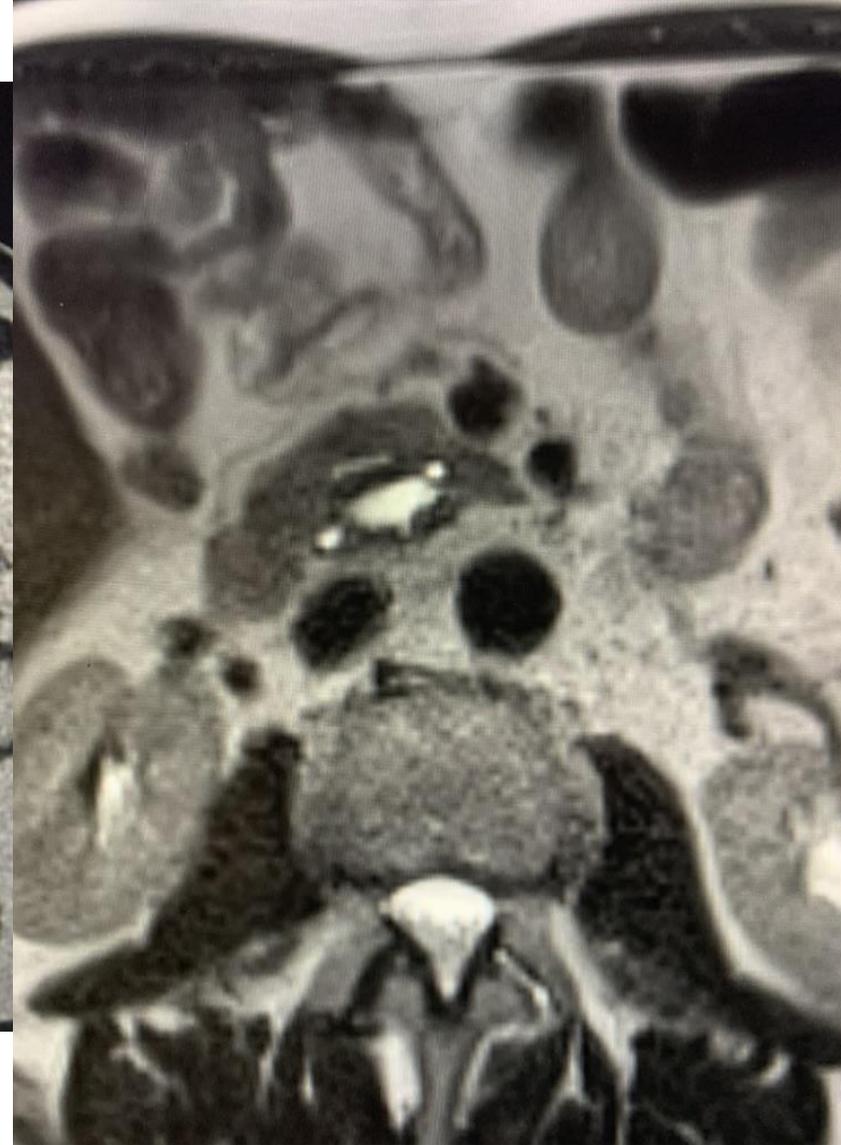
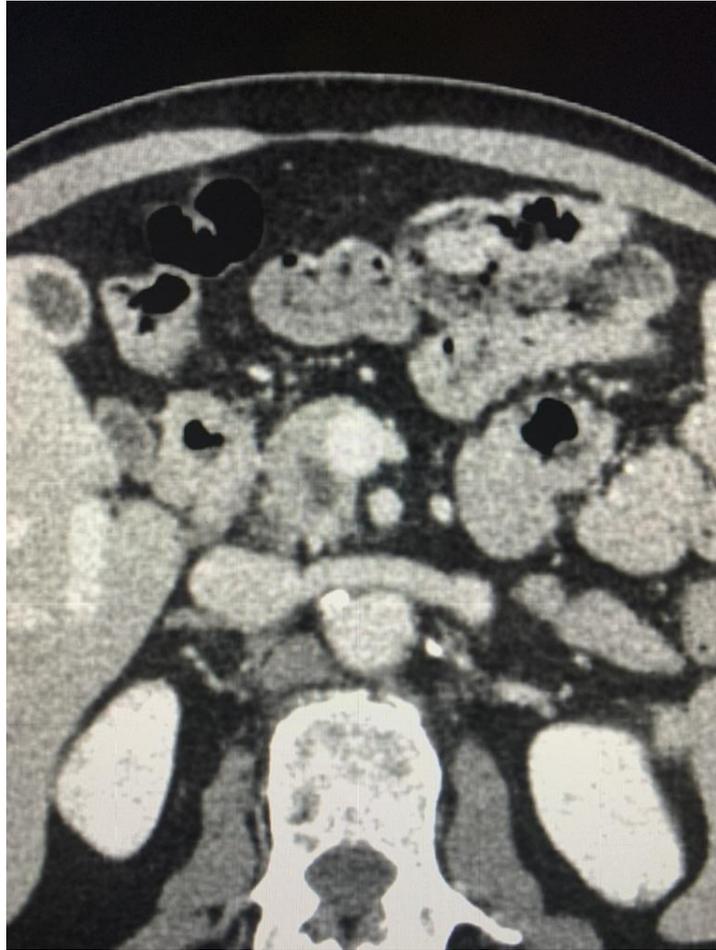
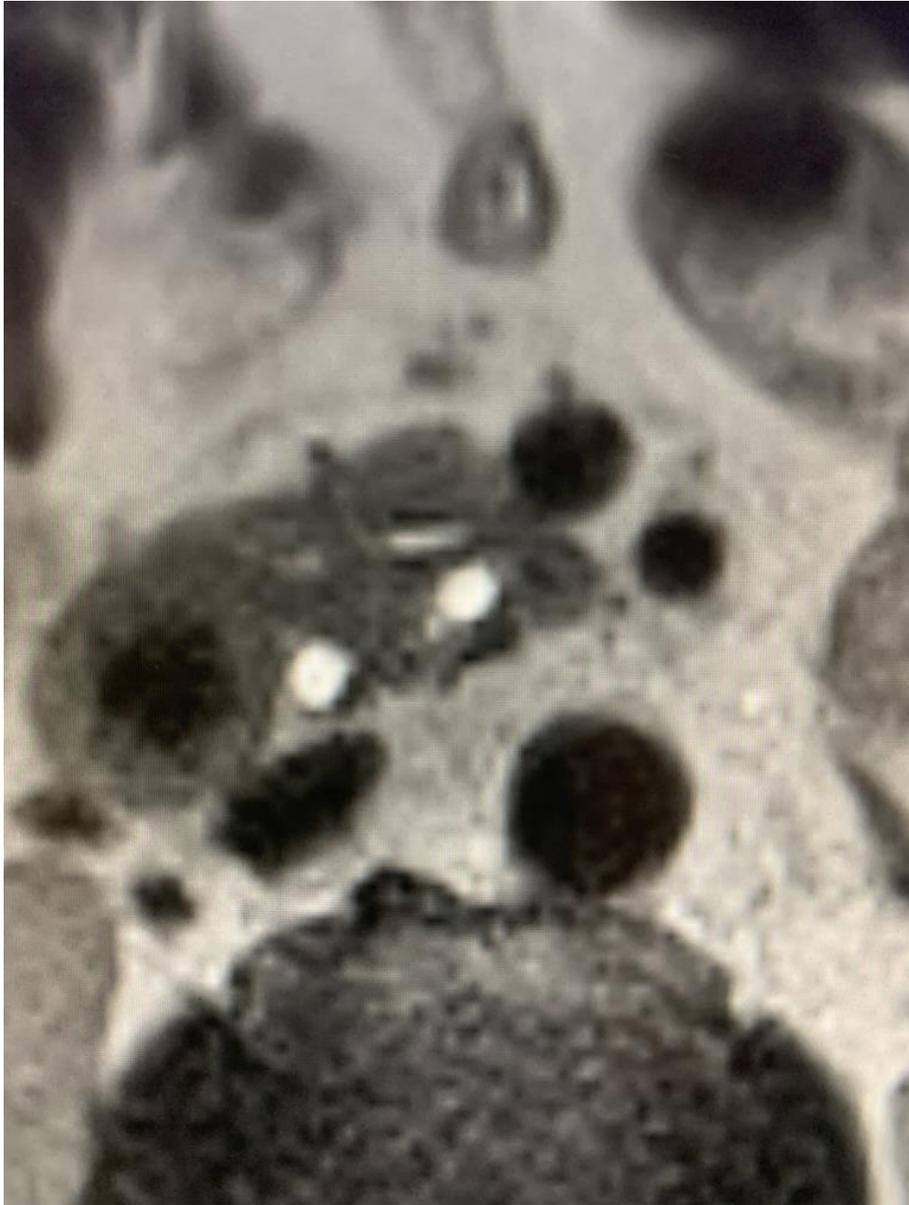
- Männlich 74a

v.a. Pankreaskopfkarzinom

Us: dilatierter Ductus Pancreaticus V.a.Rf

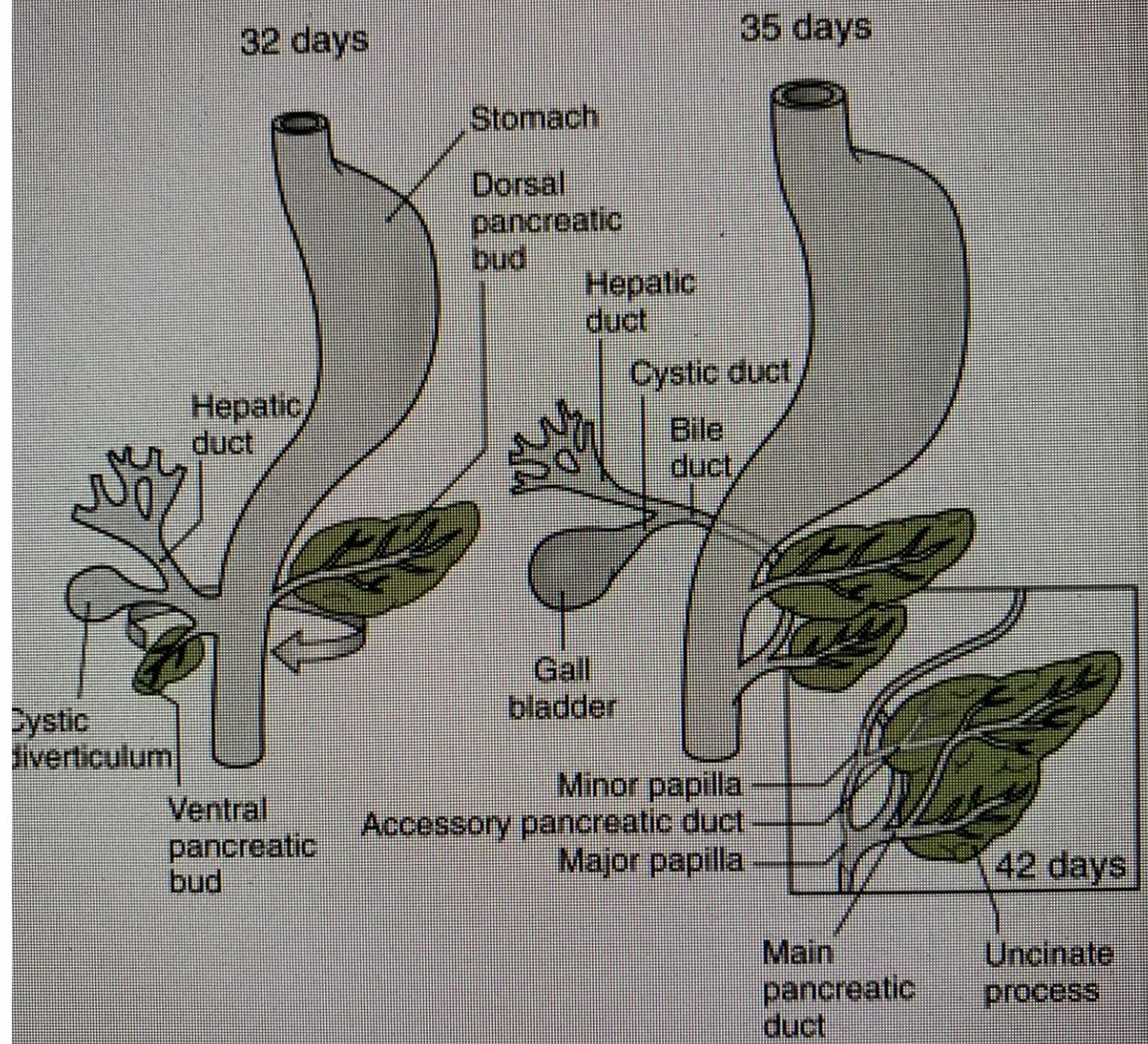
Pankreaskopf

Lipase erhöht.



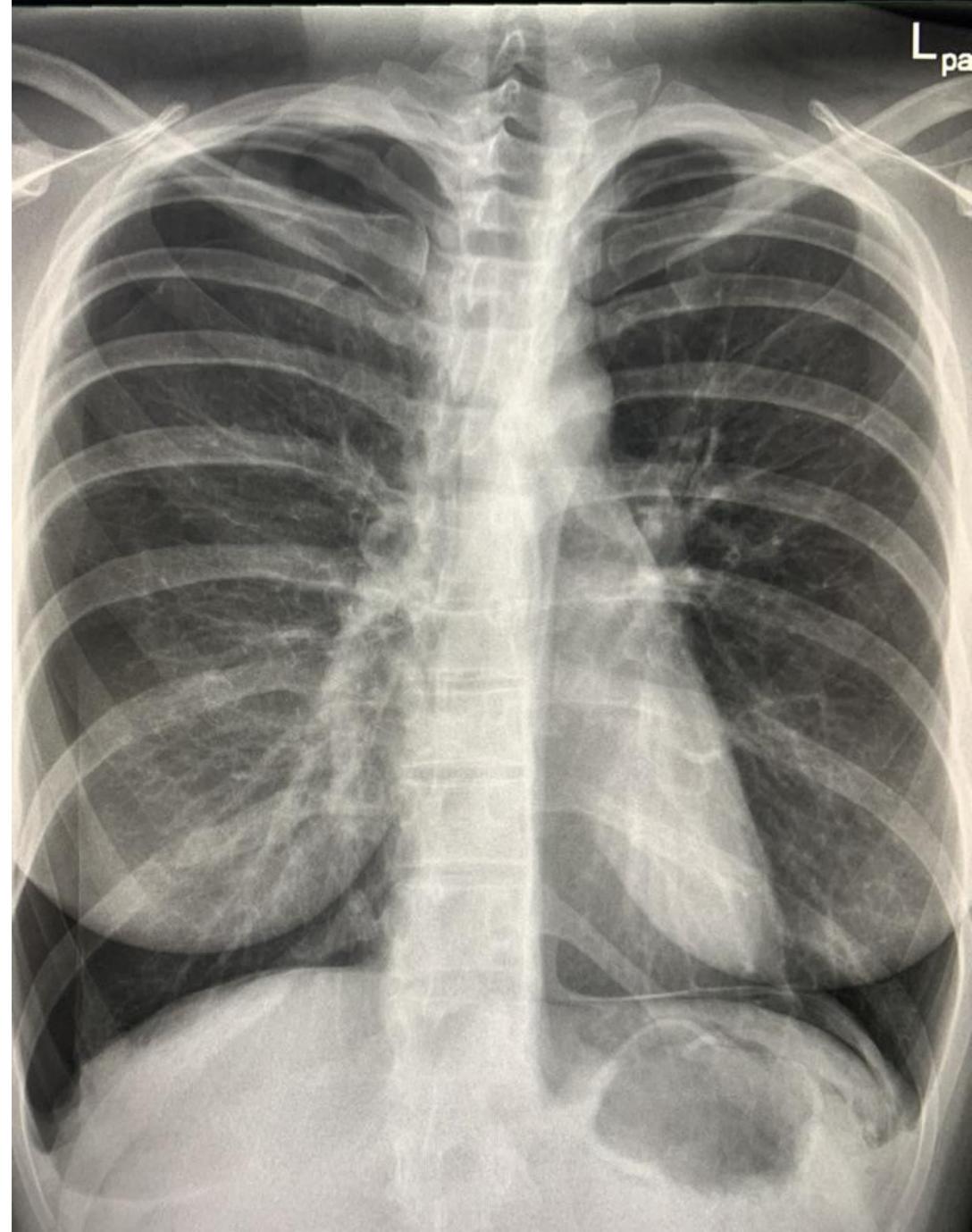
# Pancreas Divisum

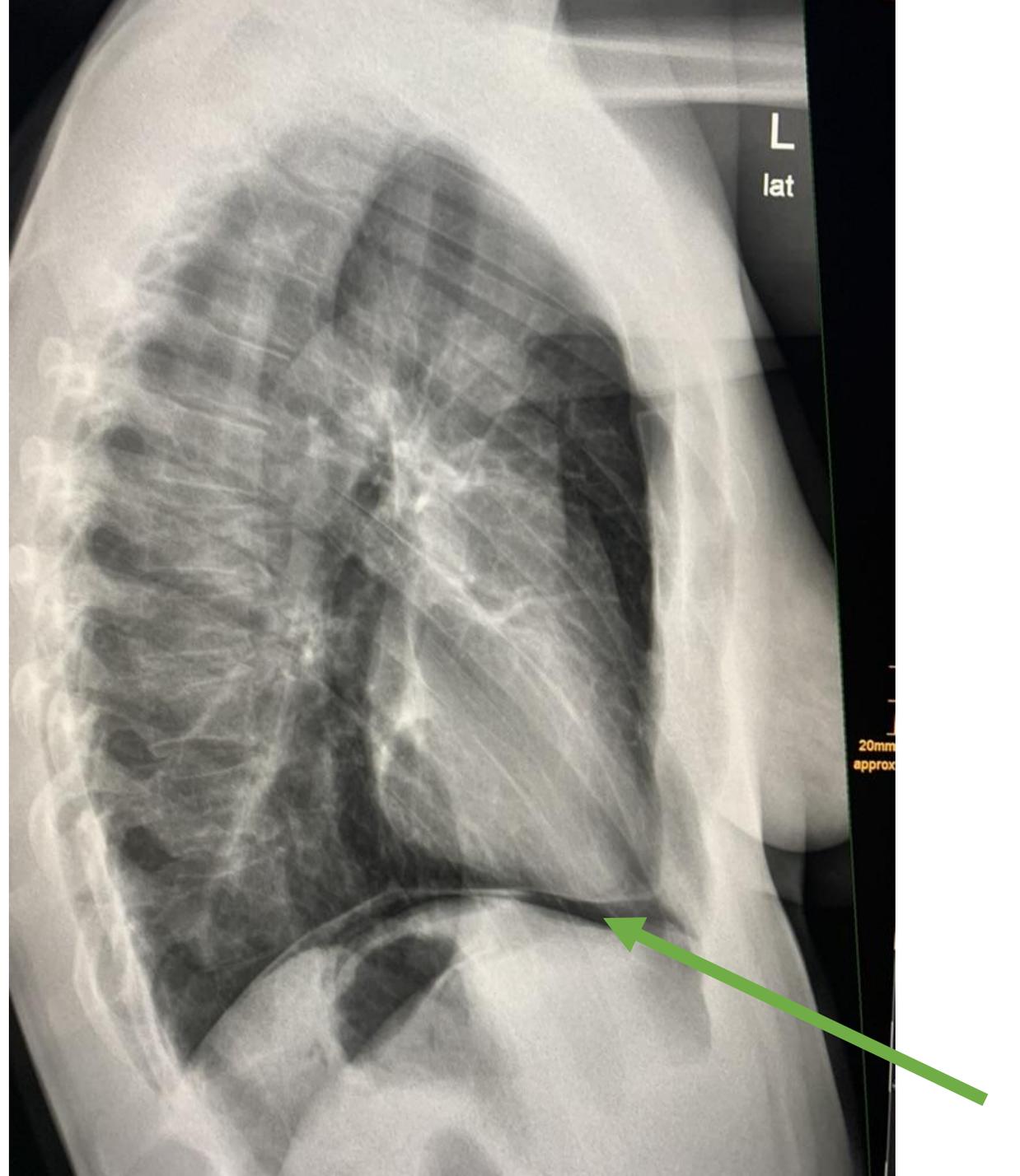
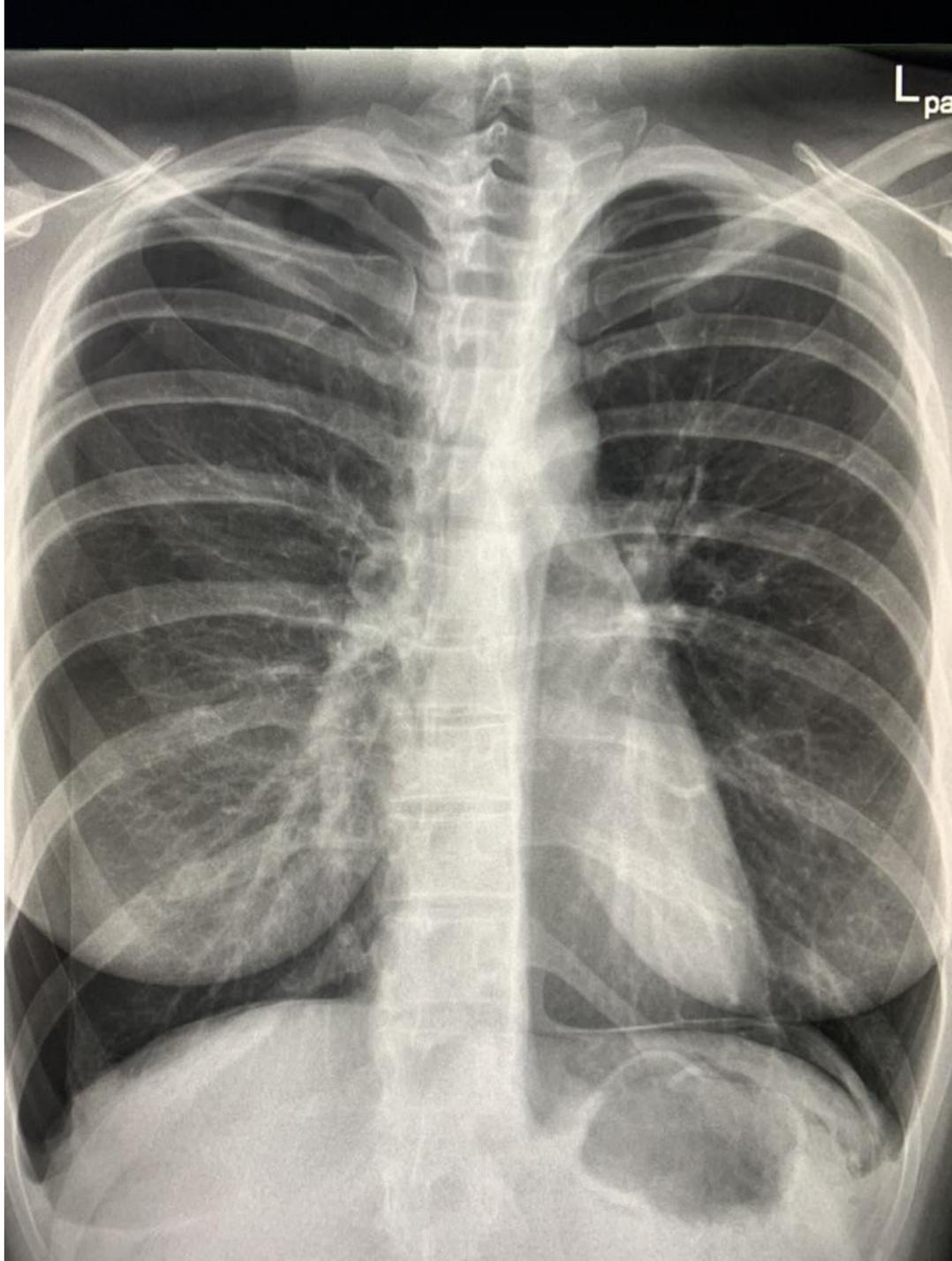
- Prevalenz 5-14% !
- Oft asymptomatisch
- Chronische oft rezivierende Bauchschmerzen
- Erhöhte Inzidenz von „idiopathischen“ Pankreatitiden
- prominent dorsal duct sign

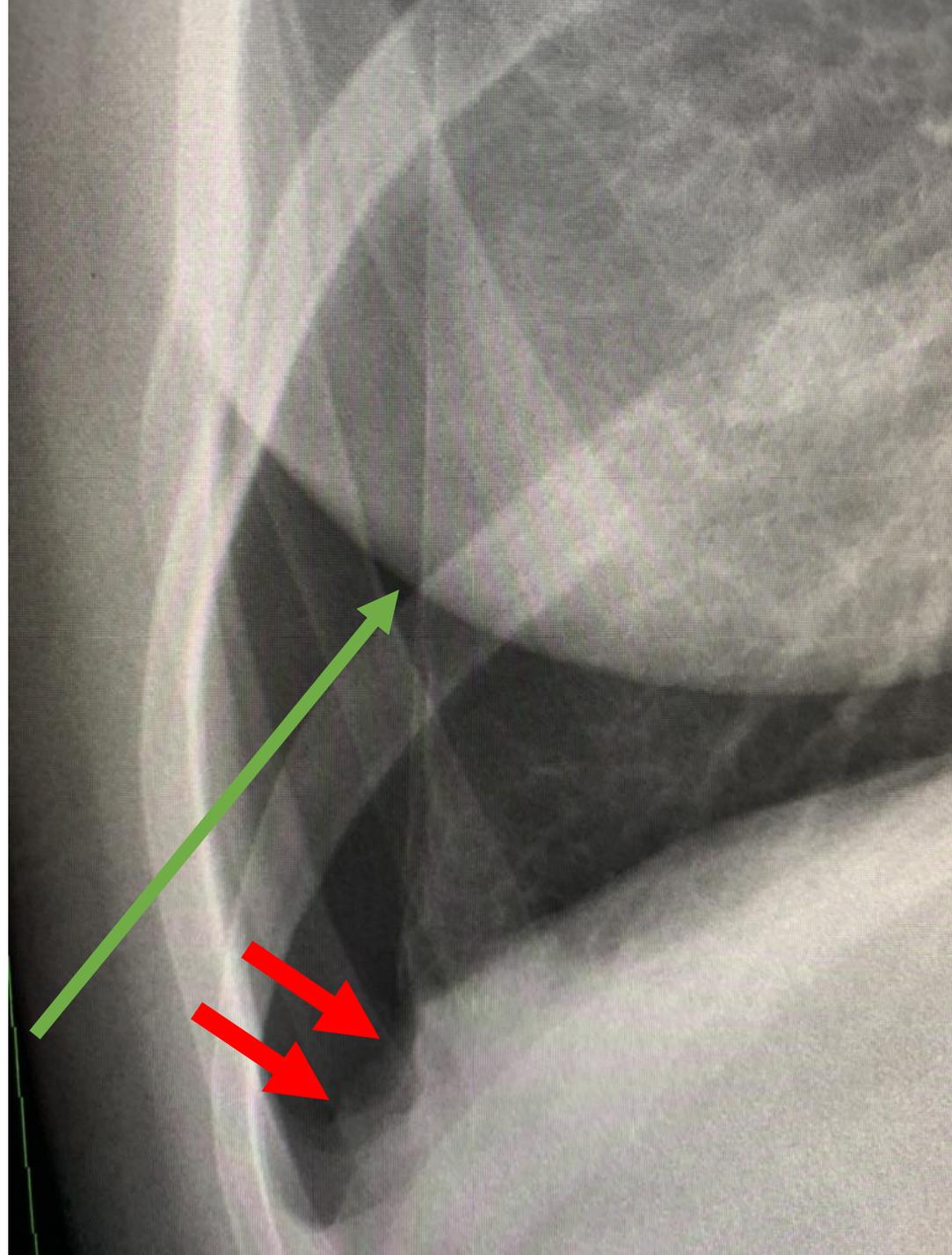
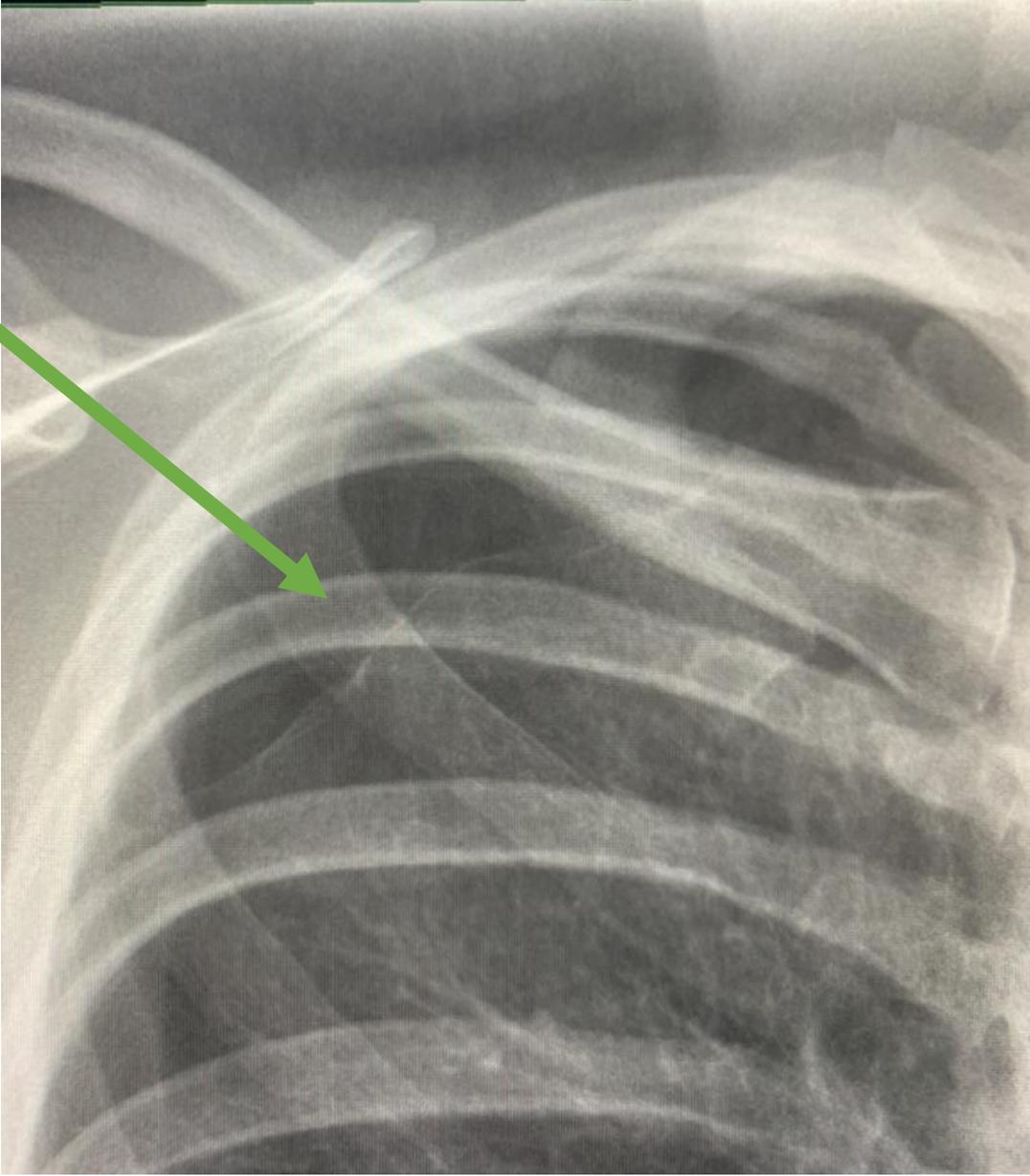


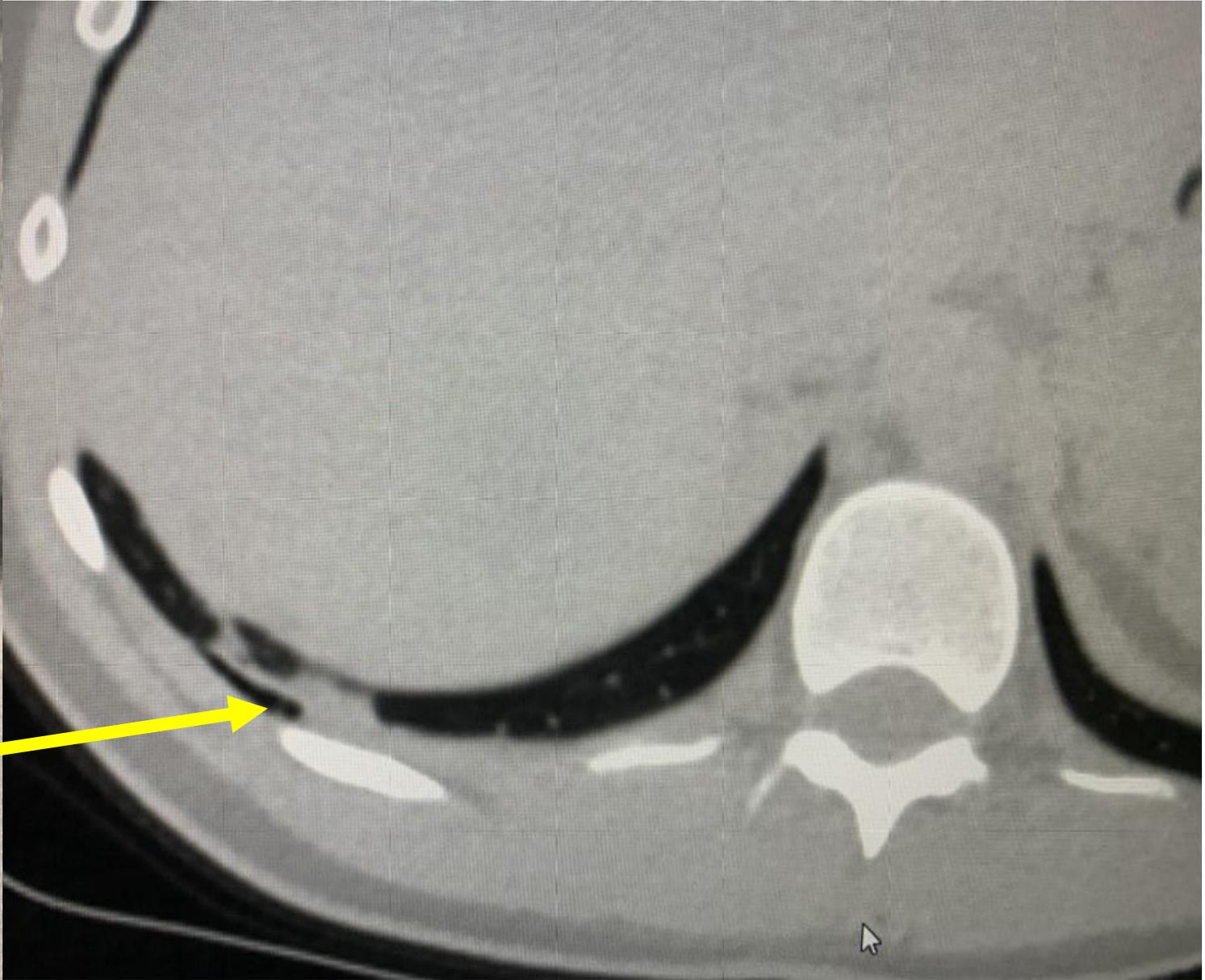
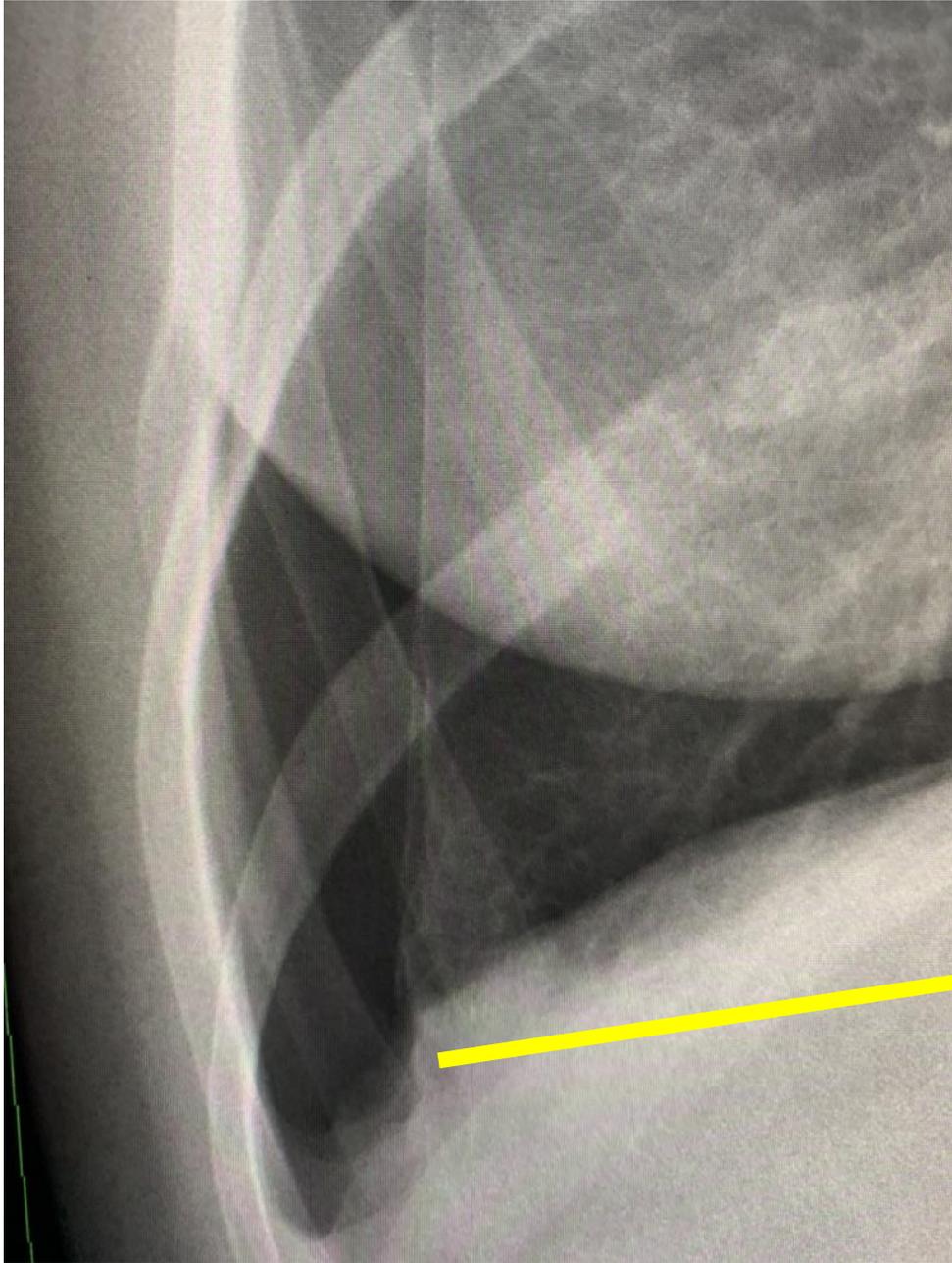
## Fall5

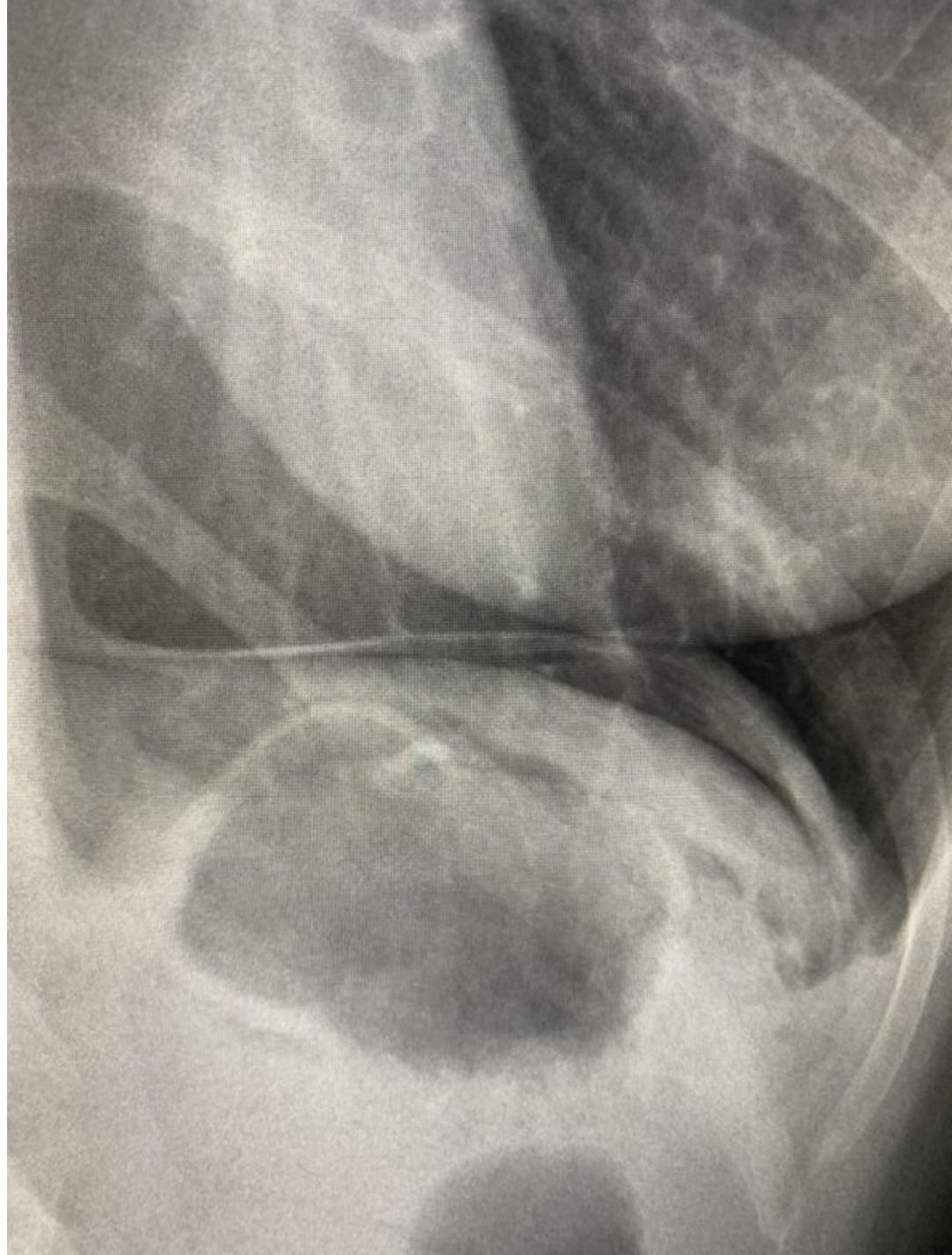
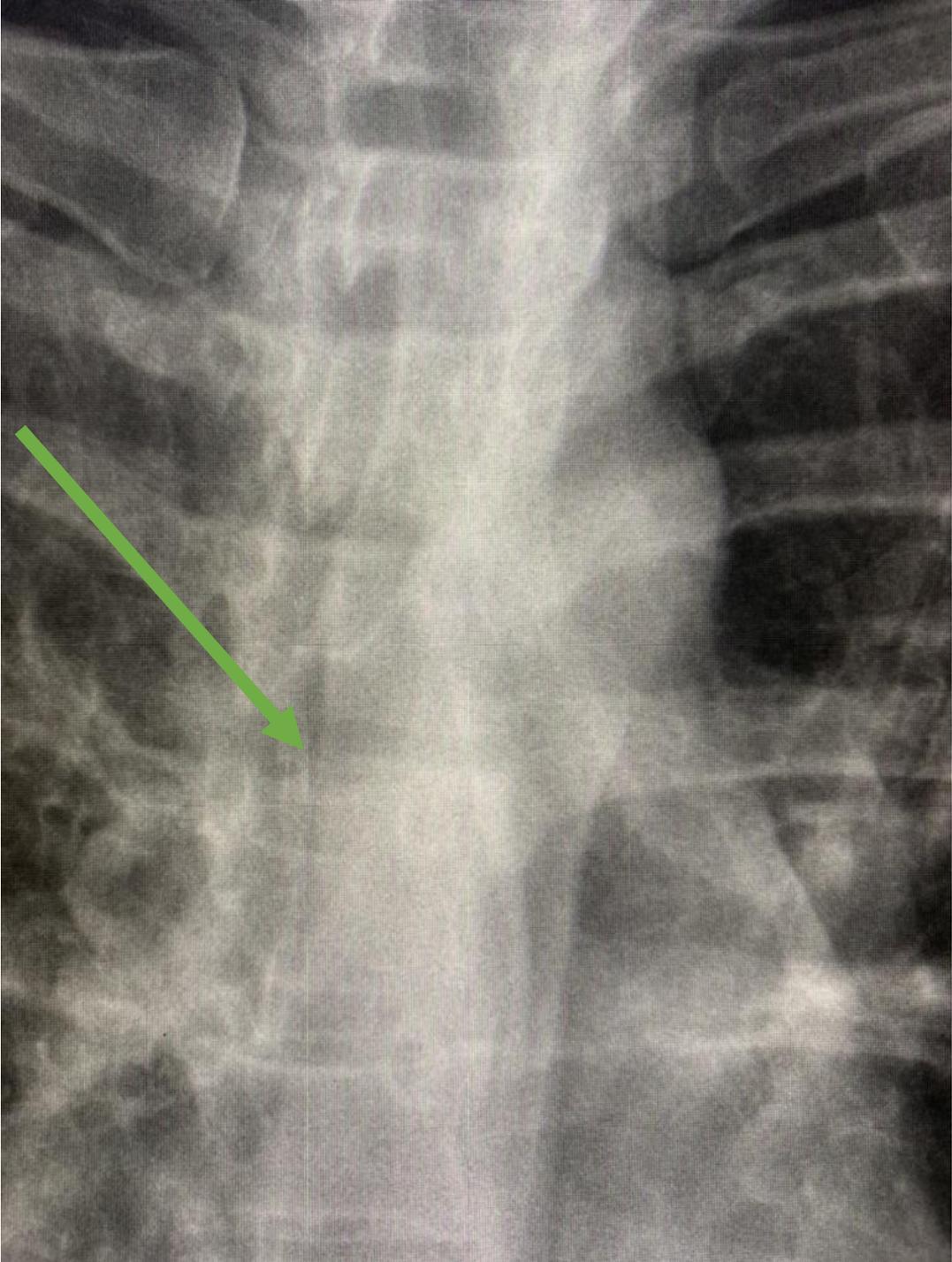
- Pat Weibl. 25a
- Atemabhängige Schmerzen re
- Peumothorax and more





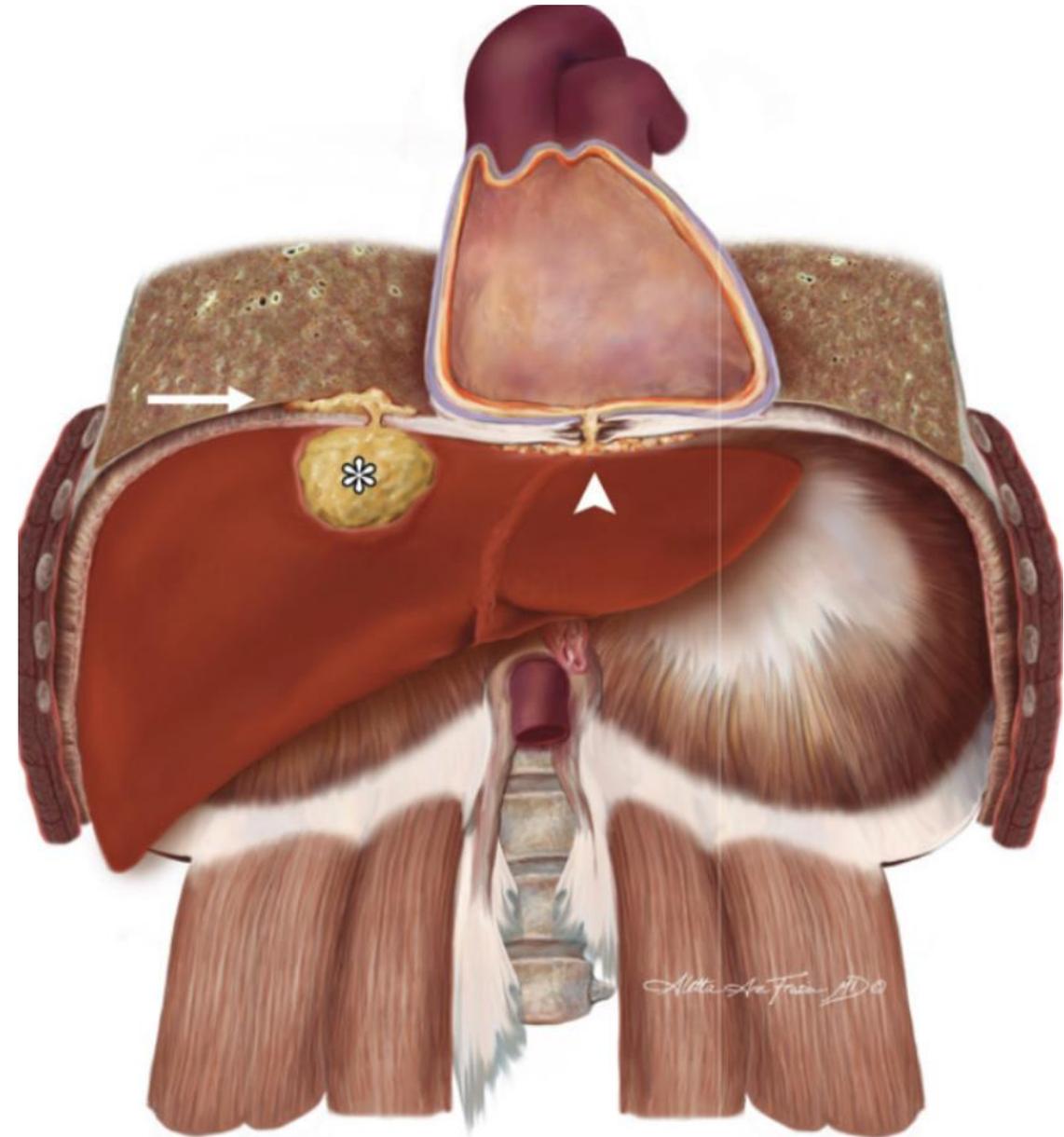






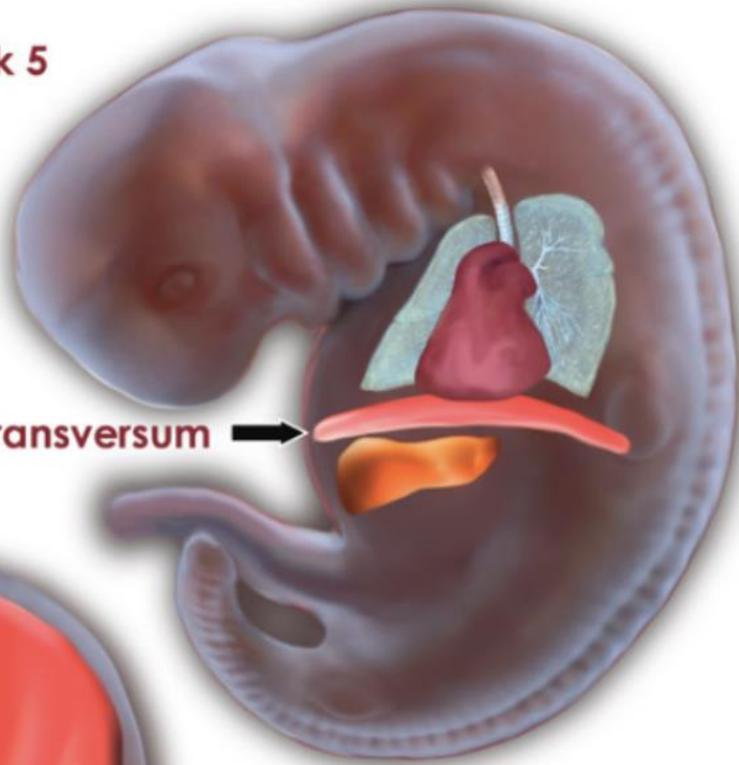
# Verbindungen zwischen Pleura und Peritoneum

- Zahlreiche Verbindungen durch das Zwerchfell entlang der Lymphbahnen (Aumüller Doll 2010 Anatomie Thieme Stuttgart)
- “Bare Area`s“ Leberkapsel, basales Perikard



Week 5

Septum Transversum



Septum Transversum

IVC

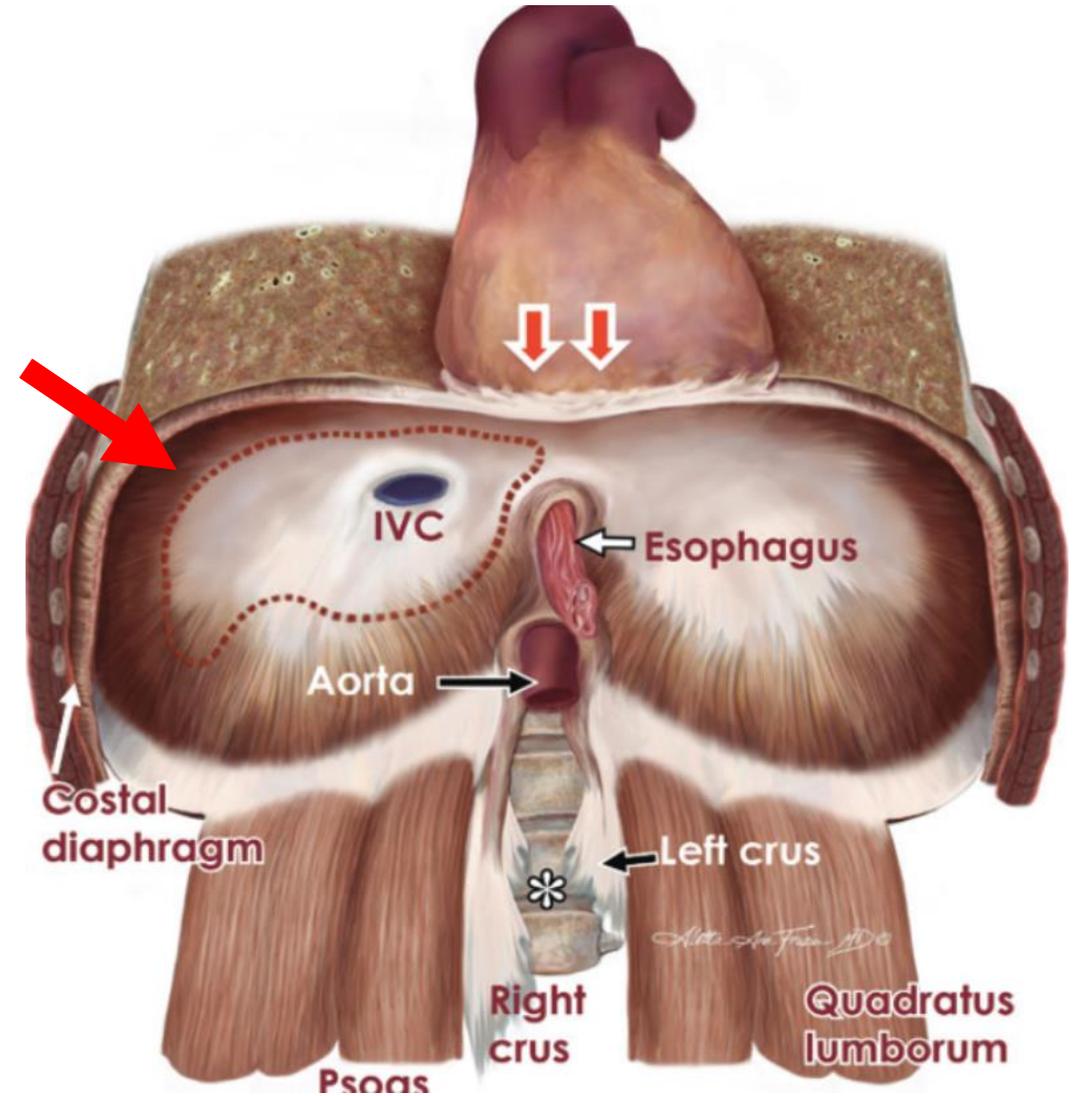
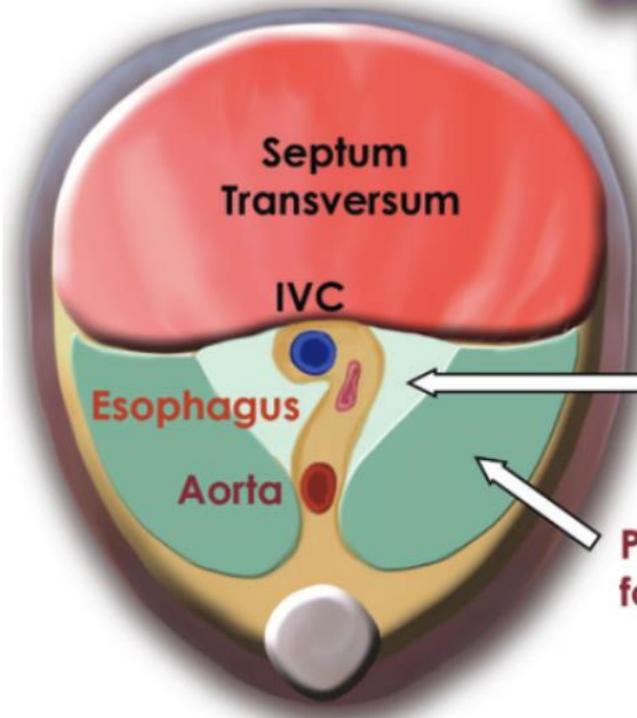
Esophagus

Aorta

*Alla An Fasin MD*

Pleuroperitoneal canal

Pleuroperitoneal fold



IVC

Esophagus

Aorta

Costal diaphragm

Left crus

Right crus

Psoas

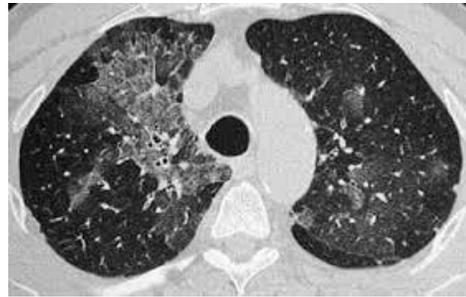
Quadratus lumborum

*Alla An Fasin MD*



# „Dekonstruktion“

-ist die dekonstruktion des „IST“



IST

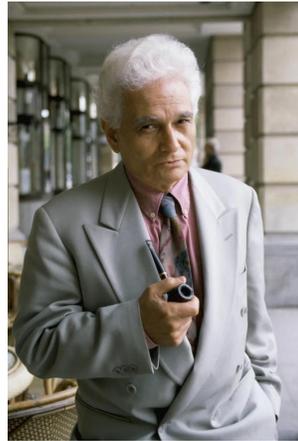
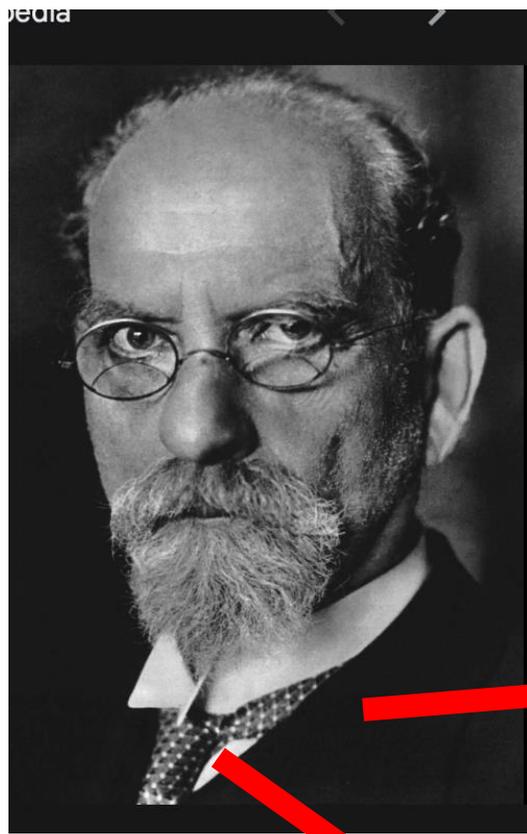
RSV Pneumonie



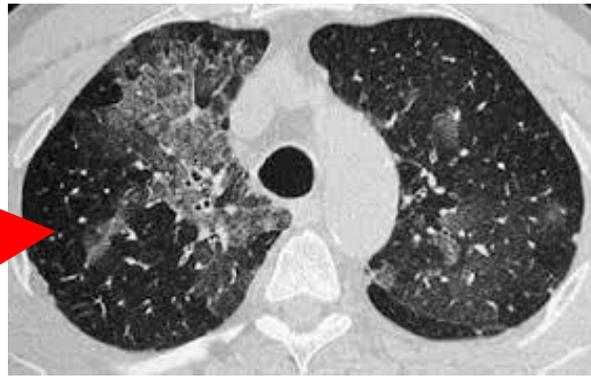
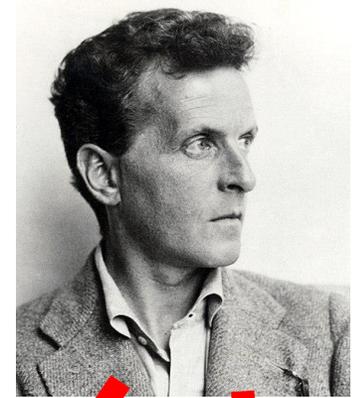
IST

Vaskulitis

Jacques Derrida [[ʒak dɛʁi'da](#)] (\* [15. Juli 1930](#) als Jackie Derrida in [El Biar<sup>\[1\]</sup>](#); † [8. Oktober 2004](#) in [Paris](#))

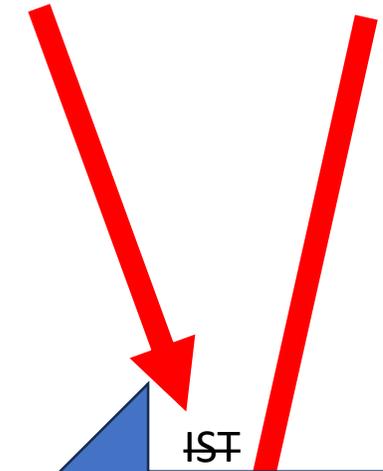
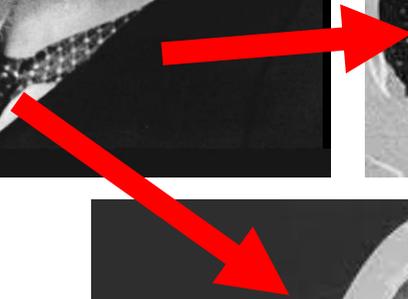


„Dekonstruktion“  
-ist die dekonstruktion des „IST“



Vaskulitis

RSV Pneumonie



# Zusammenfassung

- Physik & Technik in der Radiologie 
    - Detektion (durch KI) schon sehr gut
      - (KI)Spezifität als Problem
      - (KI) Integration in ein Gesamtbild tut sich noch schwer. 
  - Kommunikationsdefizit 
  - Wissenszuwachs  
- Das „IST“ in der Diagnose wird immer problematischer  

Stop learning for a while –  
expand your thinking.....

# Schluss!

Danke