

# Välkommen till KUB kurs i kärlkirurgi

221207



Kirurgkliniken, Falu lasarett

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# Imaging

Per Wangefelt

Falun 221207



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# Imaging inom kärlkirurgi



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## Ultraljud - Duplex

- Icke-invasivt, billigt(?), portabelt
- Ingen njurpåverkan
- Dynamisk, "live"
- Stenosgradering artärer – Peak Systolic Velocity
- Ytliga och djupa vener
- *Kan inte kartlägga alla kärlsystem*
- *Undersökarberoende*
- *Tiillgång jourtid?*

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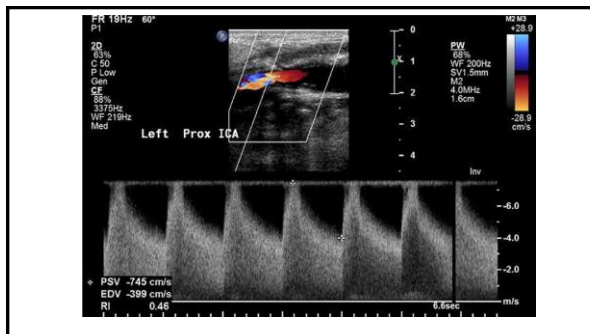
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## CT-angiografi (CTA)

- Utmärkt kartläggning av de flesta kärlsystem
- Snabbt
- Hög tillgänglighet dygnet runt
- MPR – 3D – Centerline för mätning - Fusion
- *Strålbekastning*
- *Jodkontrast, risk för njurpåverkan*
- *Svårtolkat: underben, mkt kalk(?)*

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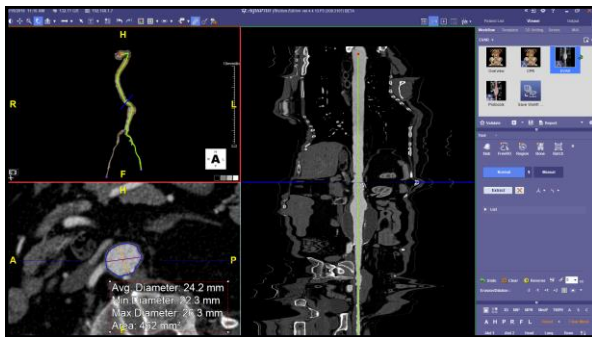
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### MR-angiografi (MRA), gadoliniumkontrast

- Utmärkt kartläggning av de flesta kärlsystem
- Bra för underben
- Ingen strålblastning
- Mindre risk för njurpåverkan, GFR > 30  $\mu\text{mol/l}$
- Något tidskrävande
- Bearbetning/protokoll
- Stentar kan störa ut
- (Nefrogen Systemisk Fibros)

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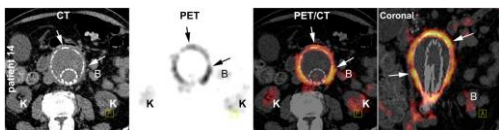
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### Graftinfektion?




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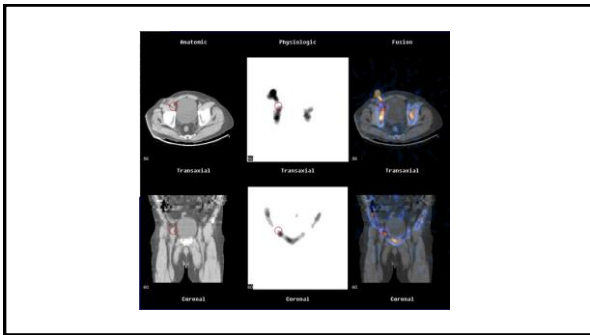
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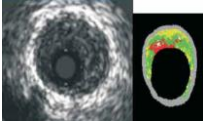
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**Nyare modaliteter**

- IVUS: Intravascular Ultrasound
  - Högupplöst bild av kärlvägg/-lager
  - Venstenoser

Dual Energy CT

MR-angiografi utan kontrast



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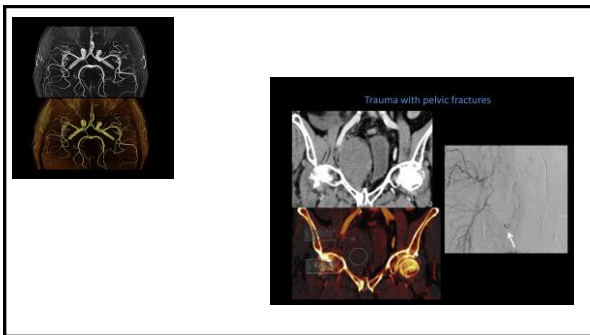
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