



UMC Utrecht



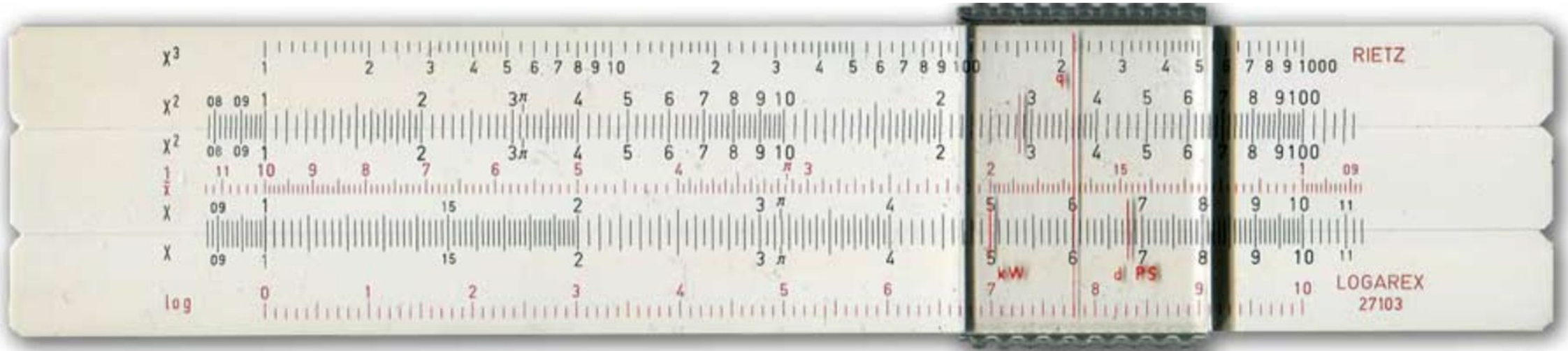
**Denis Kutnár
Tomáš Koščo
Jason Van Schoor**

**Technologický avantgard v zdravotníctve -
vývoj AI nástrojov pre diagnostiku a liečbu
na Slovensku**

Deep Art Medicine s.r.o.

www.deepartmedicine.com

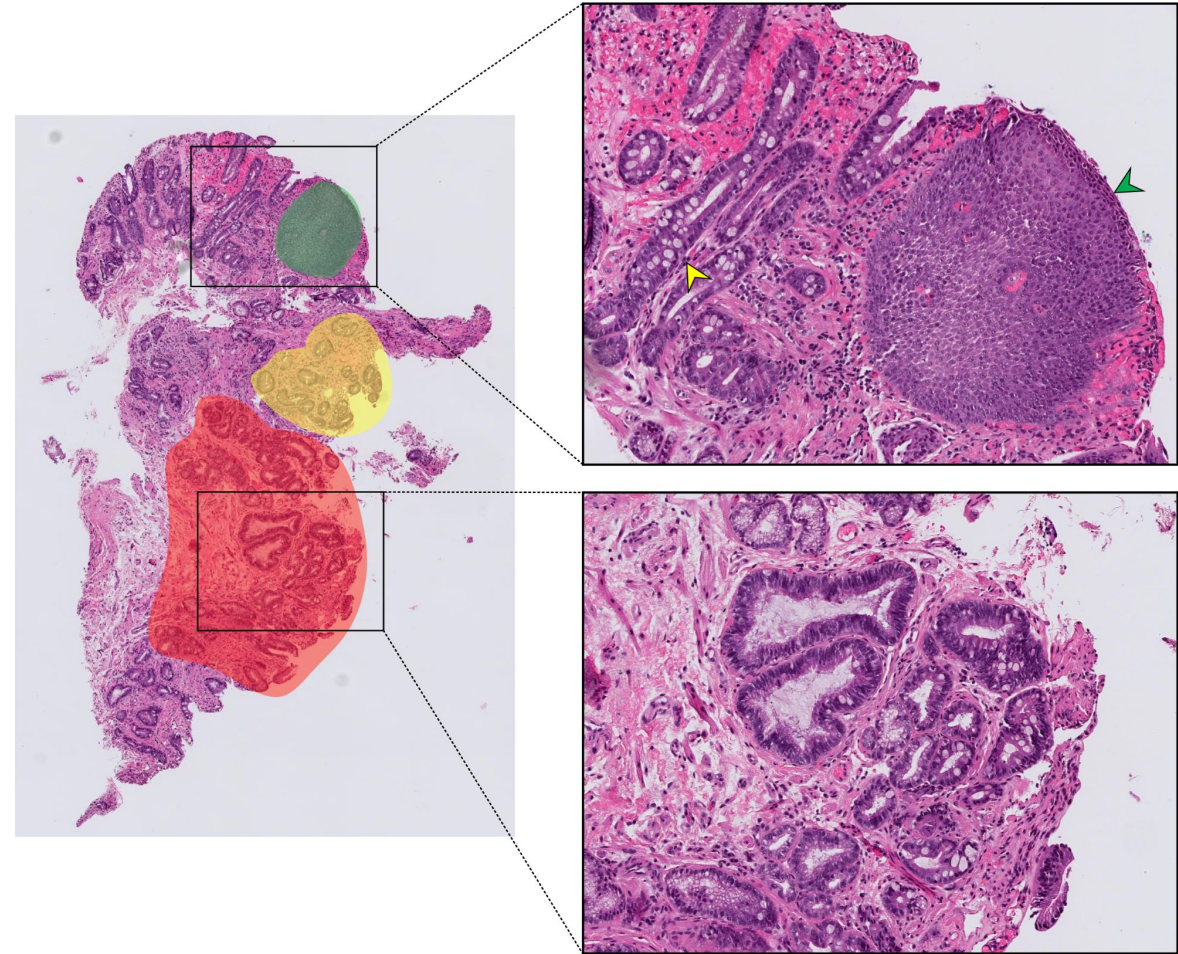
12.03.2024



Ako rýchlo napreduje AI v oblasti medtech?

AI v oblasti medical imaging = Etablovaný vedecký odbor

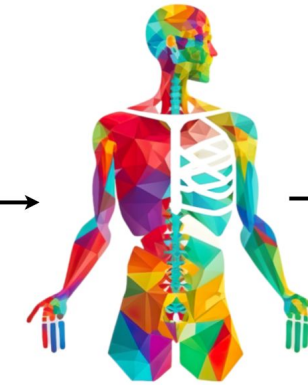
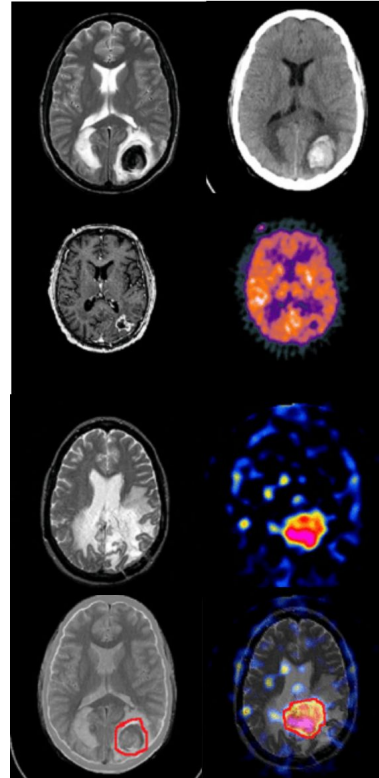
- Personalizovaná medicína
- Prediktívna medicína
- Analýza obrazu
- Zvyšovanie presnosti diagnostiky



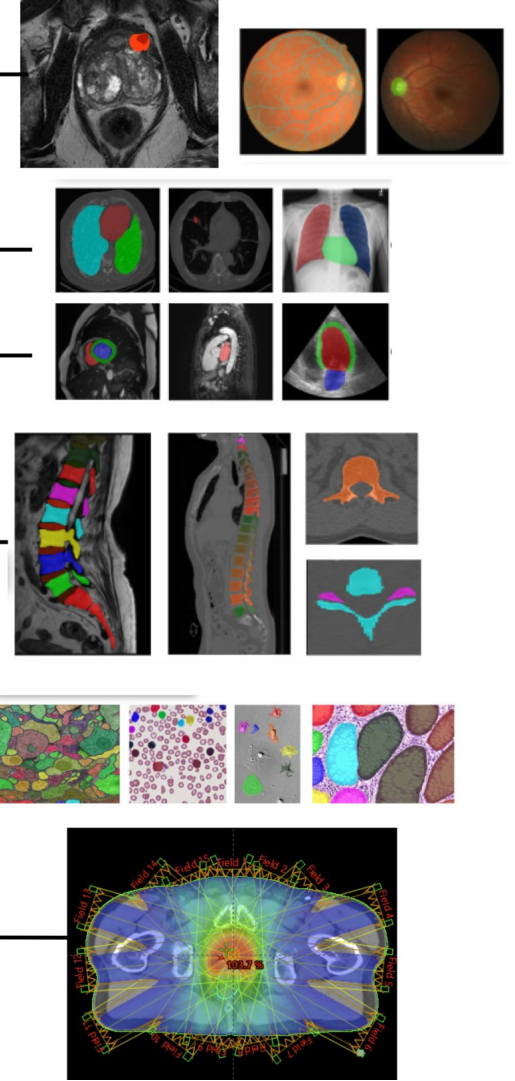
Expertiza Deep Art Medicine

- Medical Image analysis
- Radiológia
- Radioterapia
- Patológia

MRI, CT, US, PET, X-Ray



Segmentation, Detection, Classification



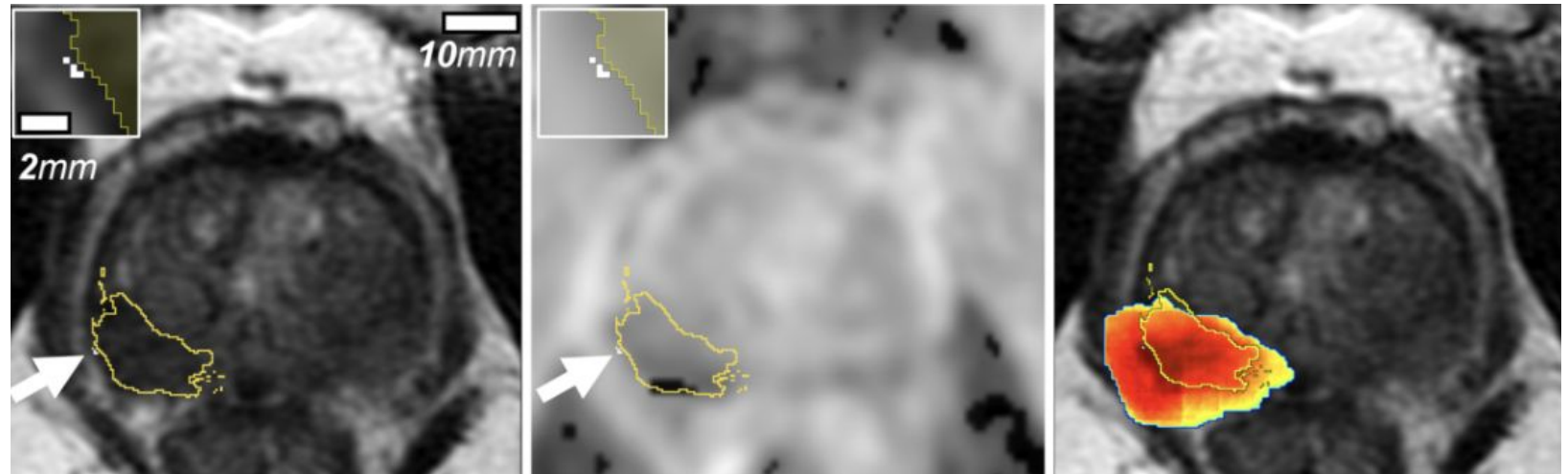
Súčasnú výzvy v rádiológii: PCa

Úspešnosť interpretácie z mpMRI

- **Radiológ junior** vs **senior** vs **AI** vs **junior + AI** vs **senior + AI**
(Sensitivity/Specificity)
- 0.59/0.7, 0.69/0.77, 0.71/0.69, 0.79/0.72, 0.81/0.84

Pracujeme na vývoji nástrojov založených na:

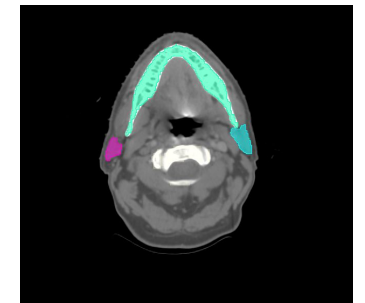
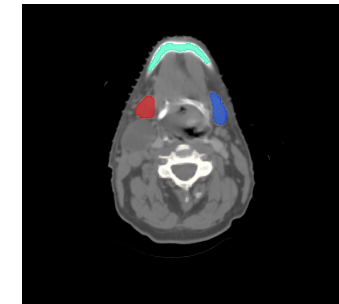
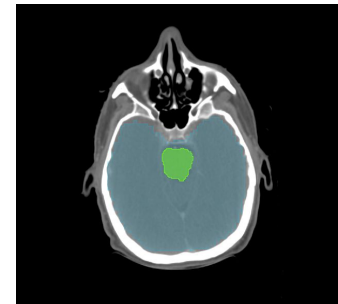
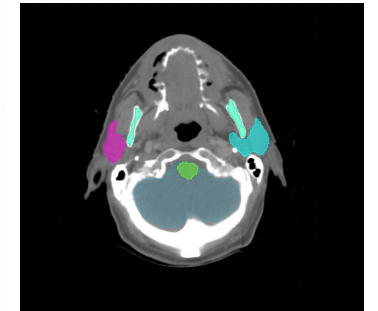
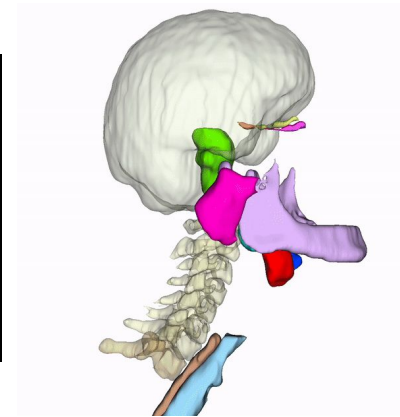
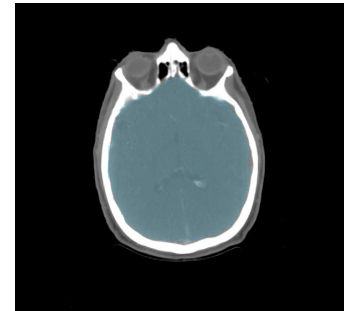
- CNN
- Vision transformeroch
- Diffusion modeloch



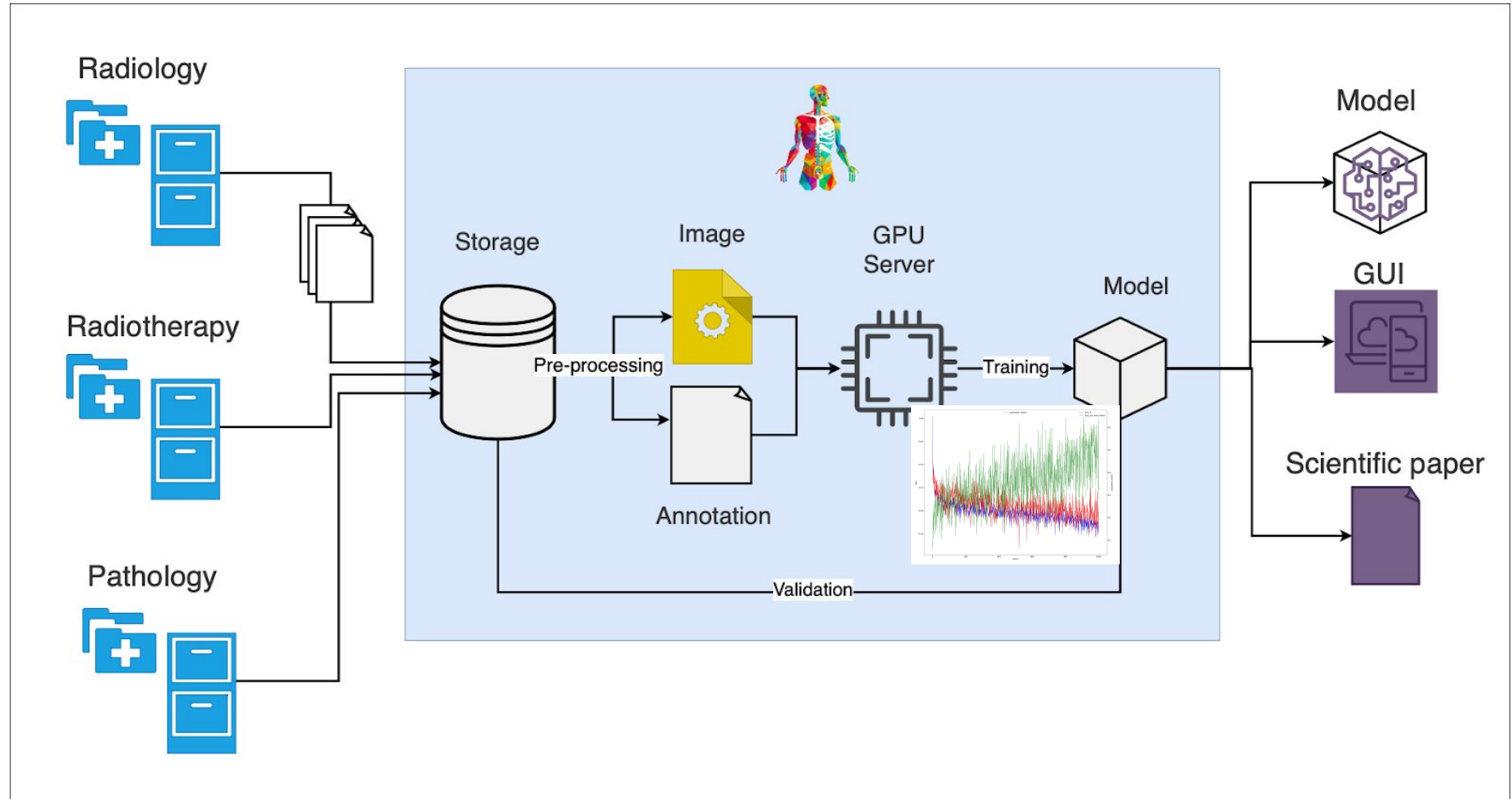
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8793798/>

Aktuálne projekty

- So zahraničnými aj domácimi partnermi



Workflow



Inferencia

Channel	Value
Channel 1	0.000000
Channel 2	0.000000
Channel 3	0.000000
Channel 4	0.000000

Deep Art Medicine

Plane: Axial | Coronal | Sagittal

Logged in as denis.kutnar@gmail.com | Sign Out

Upload NIFTI | Predict

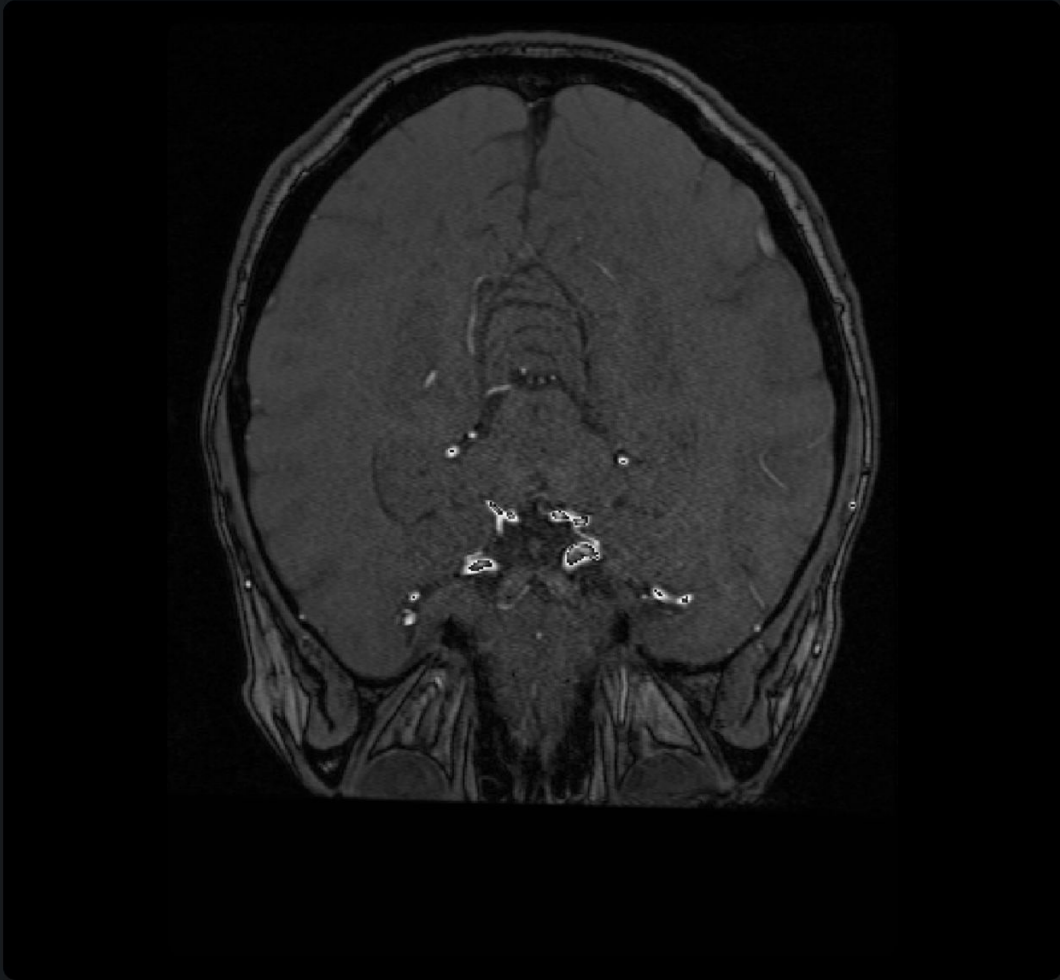
Uploaded file: TOF-MRA.nii.gz

Scroll:

Brightness:

Contrast:

Prediction: Hide prediction mask



Background

- Premostenie sektorov
- Akadémia & Nemocnice & MSP



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CEO



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CTO,
PhD at KU



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CMIO,
PhD at ETH



D
A
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