



EESNÄÄRME FUSIOONBIOPSIA

Anastassia Naidenkova
21.10.2020 kolmapäevaseminar
Tallinn



Eesnäärme fusioonbiopsia – MRT ja UH kujutiste fusioon suunatud biopsia teostamiseks

1. Eesnäärme MRT - **radioloog**
2. Eesnäärme ja kolde/kollete kontureerimine MRT-uuringul - **radioloog**
3. MRT uuringu alusel joonistatud kontuuri järgi eesnäärme kolde suunatud biopsia võtmine transrektaalse UH kontrolli all - **uroloog**

PI-RADS hindamise kategooriad

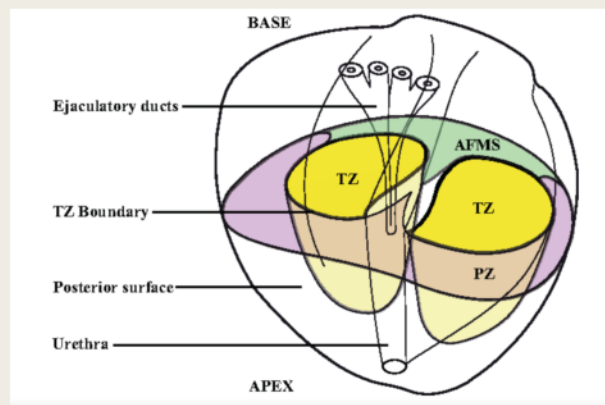
- PIRADS 1 väga madal risk kliiniliselt olulise kasvaja olemasolule
- PIRADS 2 madal
- PIRADS 3 mõõdukas
- PIRADS 4 kõrge
- PIRADS 5 väga kõrge

Kliiniliselt oluliseks kasvajaks loetakse patohistoloogiliselt Gleason ≥ 7 ja/või mathu $> 0,5$ ml ja/või ekstraprostaatilisest levikut (EPE)

PIRADS ei anna soovitusi edaspidise käsitluse ega biopsia suhtes

Eesnäärmes eristatakse 4 histoloogilist tsooni

- Anterioorne fibromuskulaarne strooma (AFMS)
- Transitoorne tsoon (TZ), ümbritseb ureetrat, sisaldab 5% näärmekoest
- Tsentraalne tsoon (CZ), ümbritseb ejakuloorseid juhasid, sisaldab 20% näärmekoest
- Perifeerne tsoon (PZ), sisaldab 70-80% näärmekoest



Standartne TRUS biopsia

1. Parem apikaalne mediaalsem
2. Parem apikaalne lateraalsem
3. Parem keskosa mediaalsem
4. Parem keskosa lateraalsem
5. Parem basaalne mediaalsem
6. Parem basaalne lateraalsem
7. Vasak apikaalne mediaalsem
8. Vasak apikaalne lateraalsem
9. Vasak keskosa mediaalsem
10. Vasak keskosa lateraalsem
11. Vasak basaalne mediaalsem
12. Vasak basaalne lateraalsem

MRT-UH fusioonibiopsia

- Kolde biopsia (mitu bioptaati) +/- standartne biopsia

Näidustused:

Standartne TRUS biopsia

- DRE leid
- PSA >4 ng/ml
- PI-RADS 4-5 (3)

MRT-UH fusioonbiopsia

- Vähi kliiniline kahtlus negatiivse standartse biopsia korral
- Kliiniliselt olulise vähi kahtlus MRT uuringul

Biopsia ja siis MRT või MRT ja siis biopsia???

The role of magnetic resonance imaging in prostate cancer

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[Contributor Disclosures](#)

All topics are updated as new evidence becomes available and our [peer review process](#) is complete.

Literature review current through: **Sep 2020**. | This topic last updated: **May 04, 2020**.

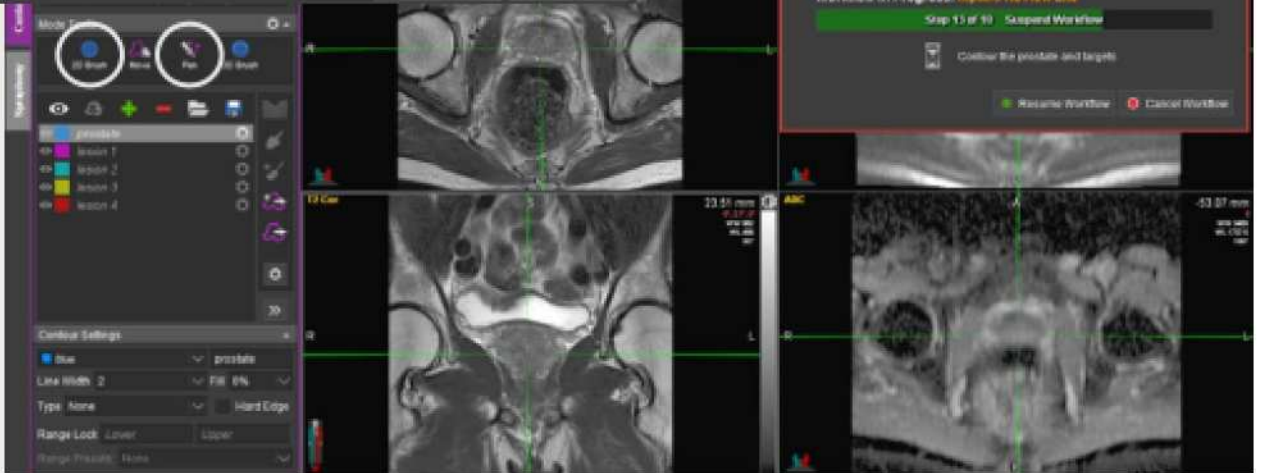
- [Updated guidelines](#) for prostate cancer diagnosis and management from the [United Kingdom National Institute for Health and Care Excellence \(NICE\)](#) suggest offering multiparametric [MRI as the first-line investigation](#) for all people with suspected clinically localized prostate cancer.
- National Comprehensive Cancer Network (NCCN) guidelines recommend consideration of MRI, but they do not provide any guidelines for selecting appropriate candidates [\[46\]](#).
- [American Urological Association \(AUA\)](#) guidelines state that there are insufficient data to recommend routine MRI in every biopsy-naïve patient under consideration for prostate biopsy. [Its use may be considered in men for whom the clinical indications for biopsy are uncertain](#) (minimal PSA increase, abnormal digital rectal examination [DRE] with normal PSA, or very young or old patients).
- Updated year 2019 guidelines from the [European Association of Urology \(EAU\)](#) endorse [MRI prior to initial biopsy](#).
- Guidelines from [Cancer Care Ontario \(CCO\)](#) do not advocate MRI prior to initial TRUS-guided biopsy.

Targets Exclusions

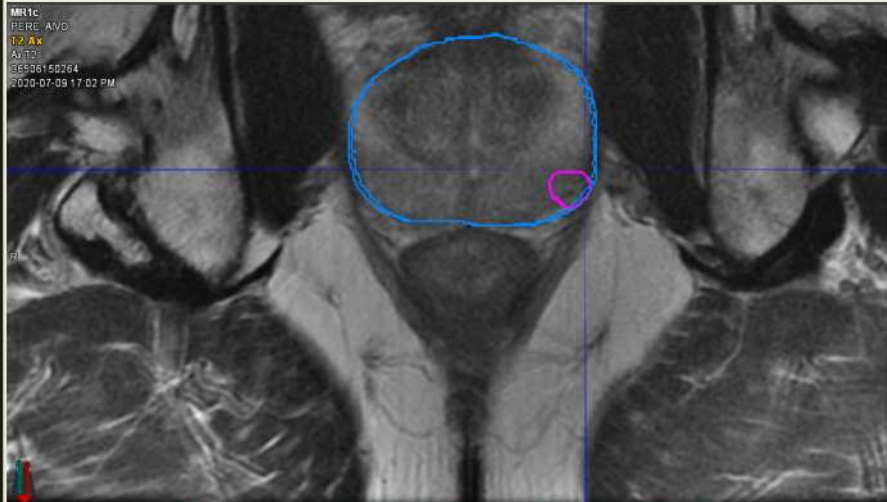
Target	Assignment
 MR T2 Ax	MR 23 Slices 2013-09-19 12:35:58 [] Ax T2 TSE high res_106TE_200BW () Ax T2 TSE high res 106TE 200BW
 MR T2 Cor	MR 20 Slices 2013-09-19 12:31:16 [] Cor T2 TSE high res_106TE_BW () Cor T2 TSE high res 106TE BW
 MR ADC	MR 18 Slices 2013-09-19 12:52:50 [] ep2d_DWI_b0_b100_b300_b800_b1000_ADC () ep2d DWI b0 b100 b300 b800 b1000 ADC
 MR DWI	MR 18 Slices 2013-09-19 12:58:31 [] ep2d_DWI_b2000 () ep2d DWI b2000

Clear All Assignments

Confirm Cancel

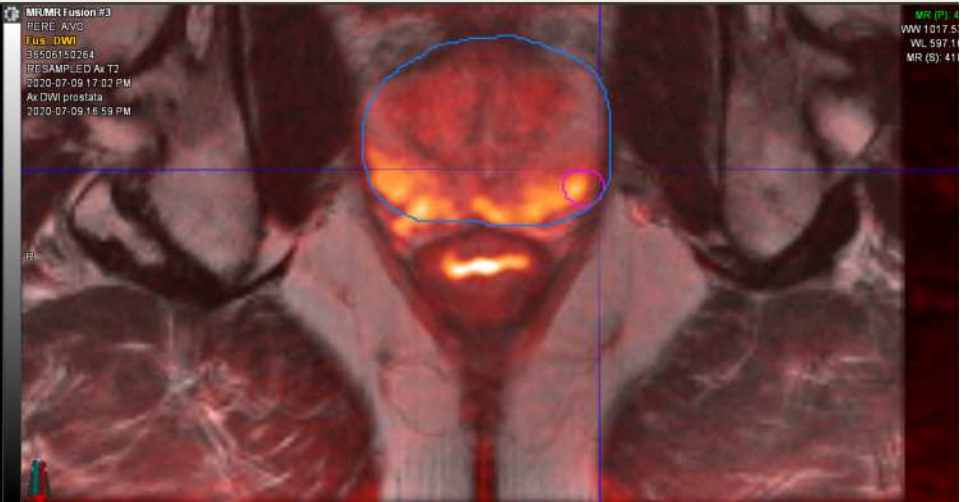


MR1c
PERE: AVG
T2: Ax
Ax T2
36506150264
2020-07-09 17:02 PM



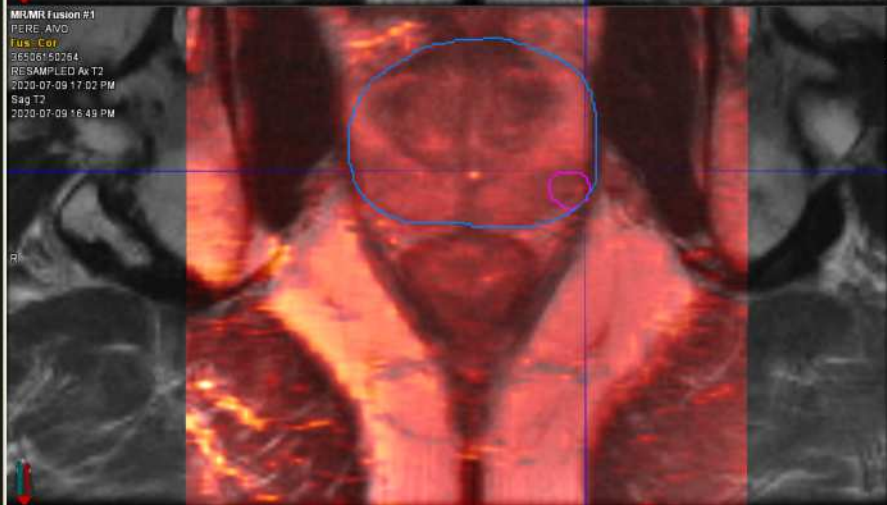
16
WW 6392
WL 3380
1503

MR1MR Fusion #3
PERE: AVG
Fus: DWI
36506150264
RESAMPLED Ax T2
2020-07-09 17:02 PM
Ax DWI prostate
2020-07-09 16:59 PM



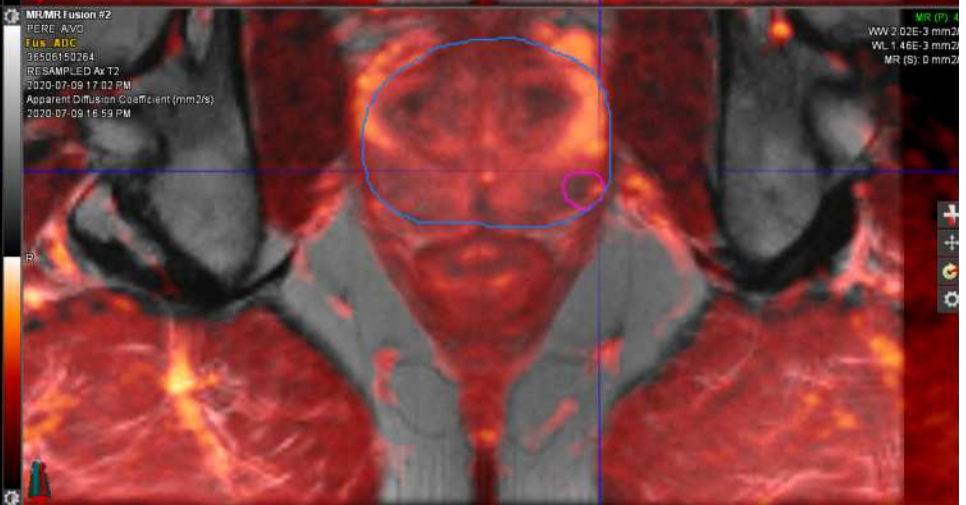
MR (P): 4
WW 1017.5
WL 597.1
MR (S): 41

MR1MR Fusion #1
PERE: AVG
Fus: Cor
36506150264
RESAMPLED Ax T2
2020-07-09 17:02 PM
Sag T2
2020-07-09 16:49 PM



MR (P): 40
WW 7766
WL 4098
MR (S): 2684

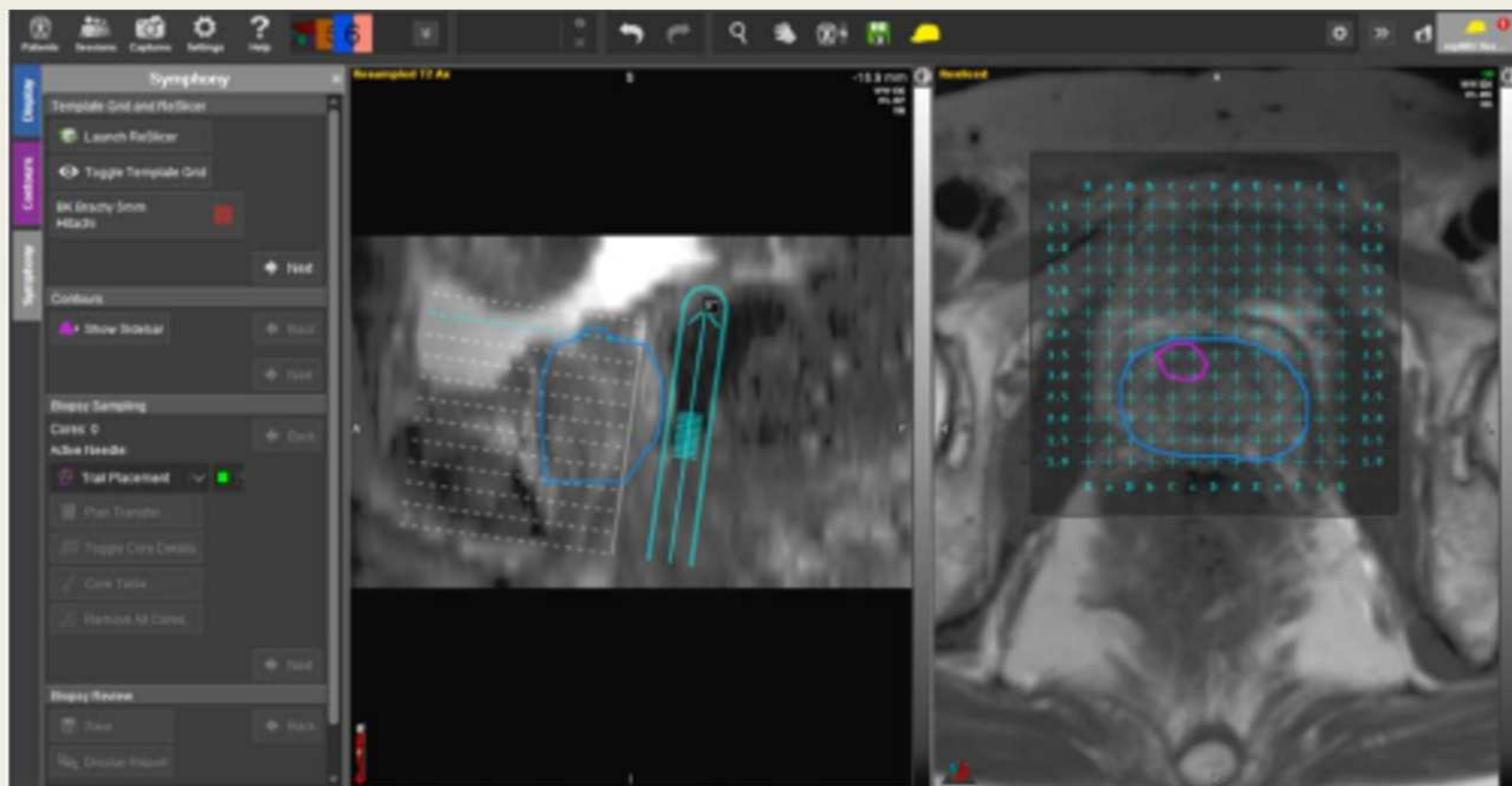
MR1MR Fusion #2
PERE: AVG
Fus: ADC
36506150264
RESAMPLED Ax T2
2020-07-09 17:02 PM
Apparent Diffusion Coefficient (mm2/s)
2020-07-09 16:59 PM

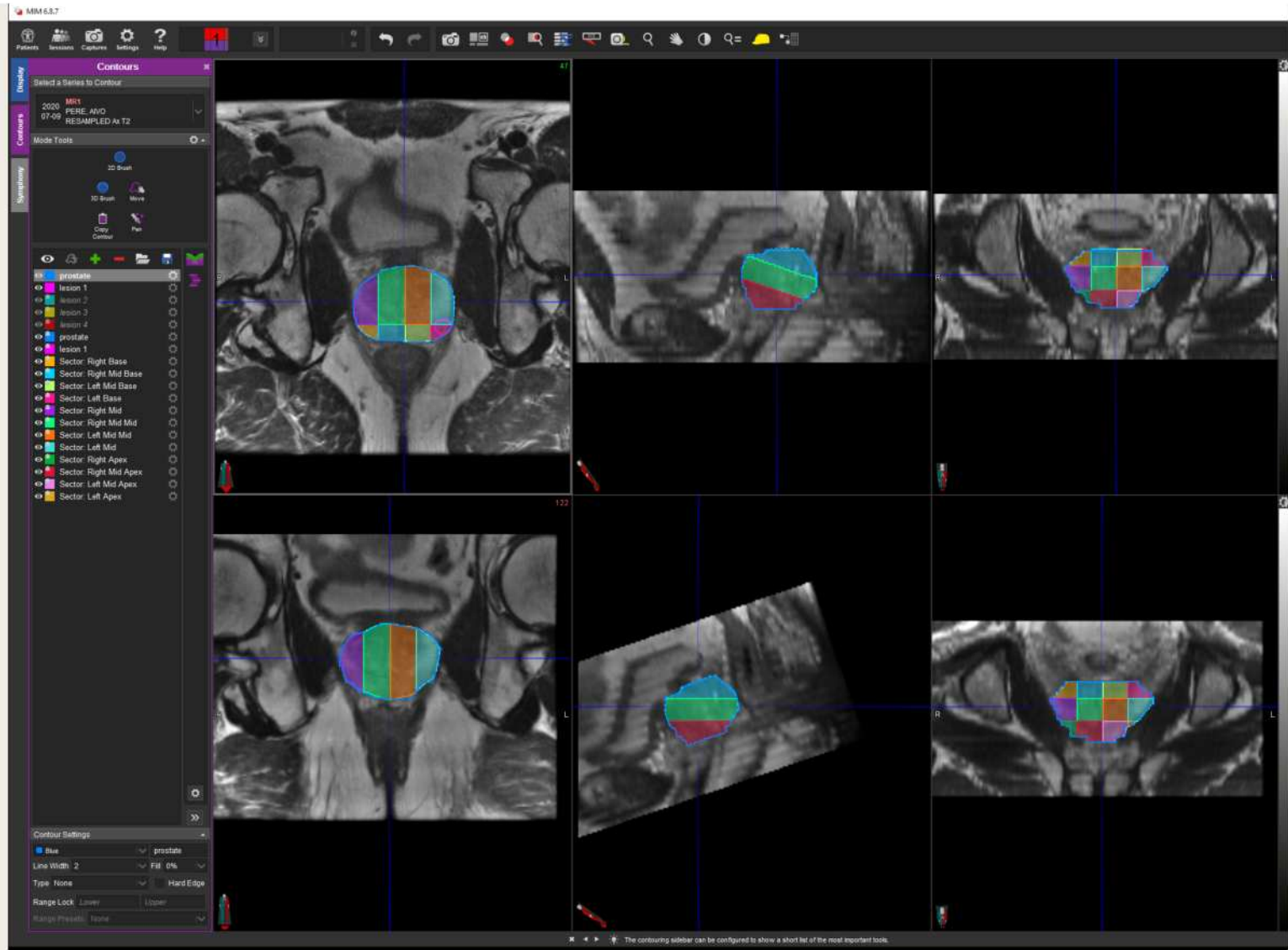


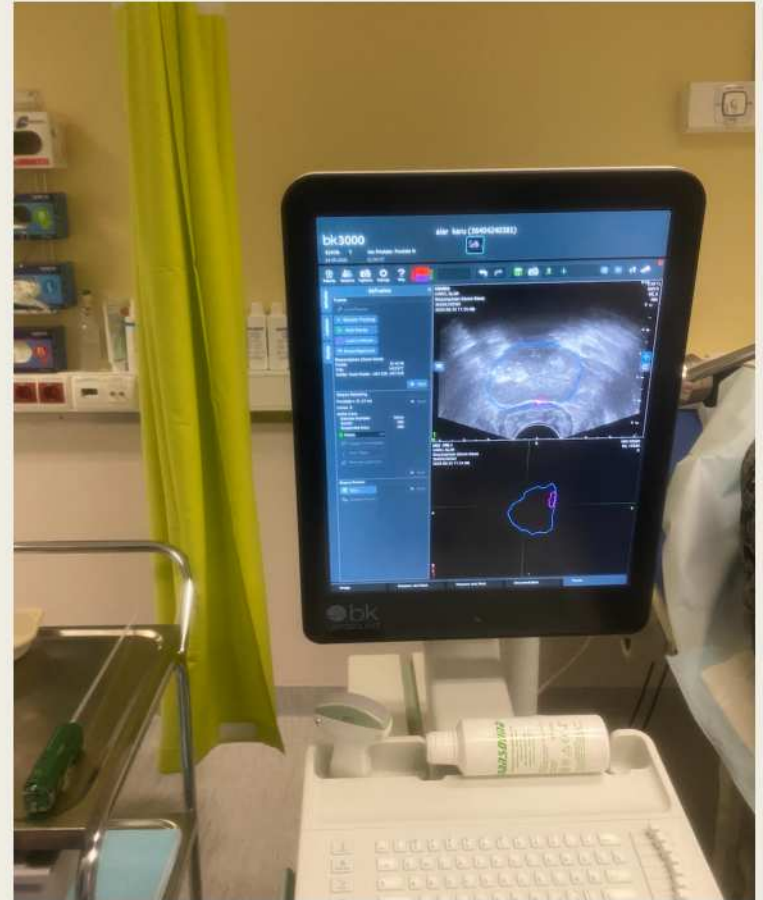
MR (P): 4
WW 2.02E-3 mm2/s
WL 1.46E-3 mm2/s
MR (S): 0 mm2/s

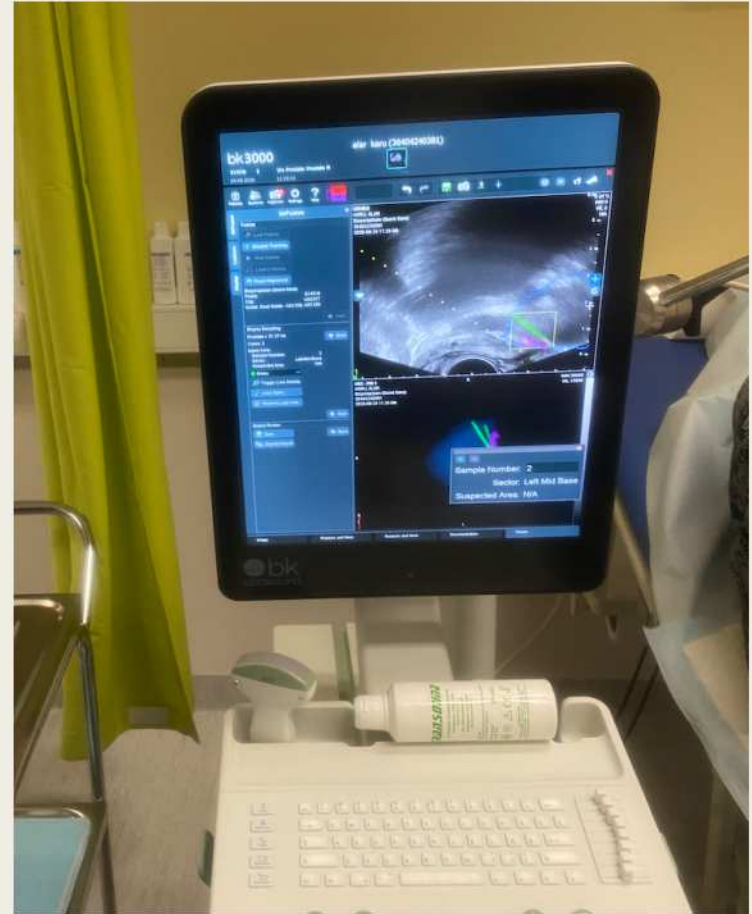


The software interface is divided into several panels. On the left is a sidebar with a 'Symptoms' section containing text and a 'Cases' section with a list of items. The main area is split into two vertical panels. The left panel shows a sagittal MRI slice with a blue contour. The right panel shows an axial MRI slice with a blue contour and a green grid overlay. The grid has vertical labels 'A' through 'G' and horizontal labels '1.0' through '7.0'. The interface includes a top toolbar with various icons and a bottom status bar.





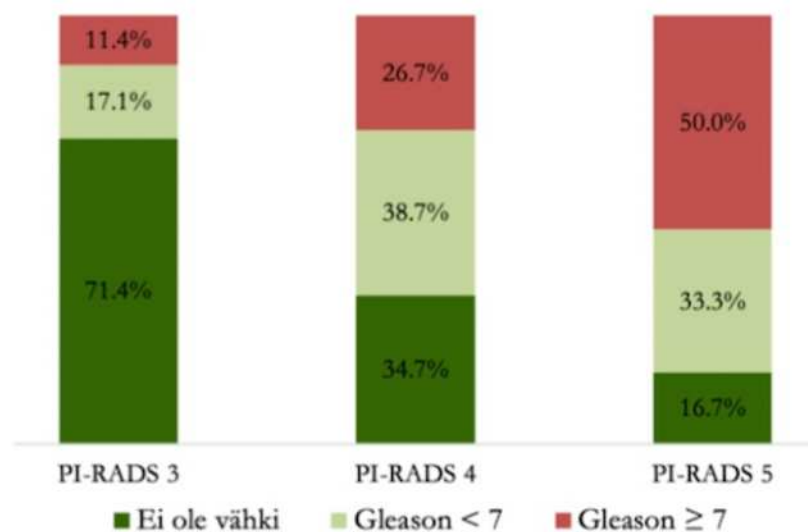




Magnetresonanstomograafia ja ultraheli ühendmeetodi kasutamine eesnäärme suunatud biopsia teostamisel eelneva negatiivse biopsiaga meestel: ühe keskuse 3 aasta kogemus

Aleksandra Rautio, Dmitri Nelzin, Martin Kivi, Katrin Kõdar
Ida-Tallinna Keskhaigla

Histoloogiliste diagnooside jaotus fusioonbiopsia materjali alusel PI-RADS gruppide kaupa.

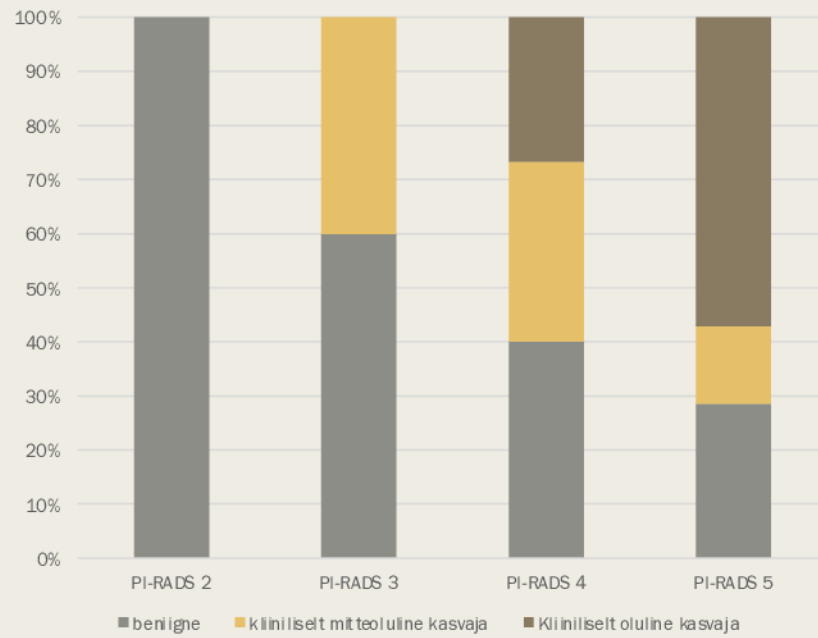


Tabel 1.

PSA tase ja eesnäärmevähi sedastamissagedus PI-RADS gruppide kaupa.

- ITKH
- Jaanuar 2017 – veebruar 2020
- 146 patsienti

Fusioonbiopsiad



- PERH
- 01.01.2020 - 01.10.2020
- 28 patsienti