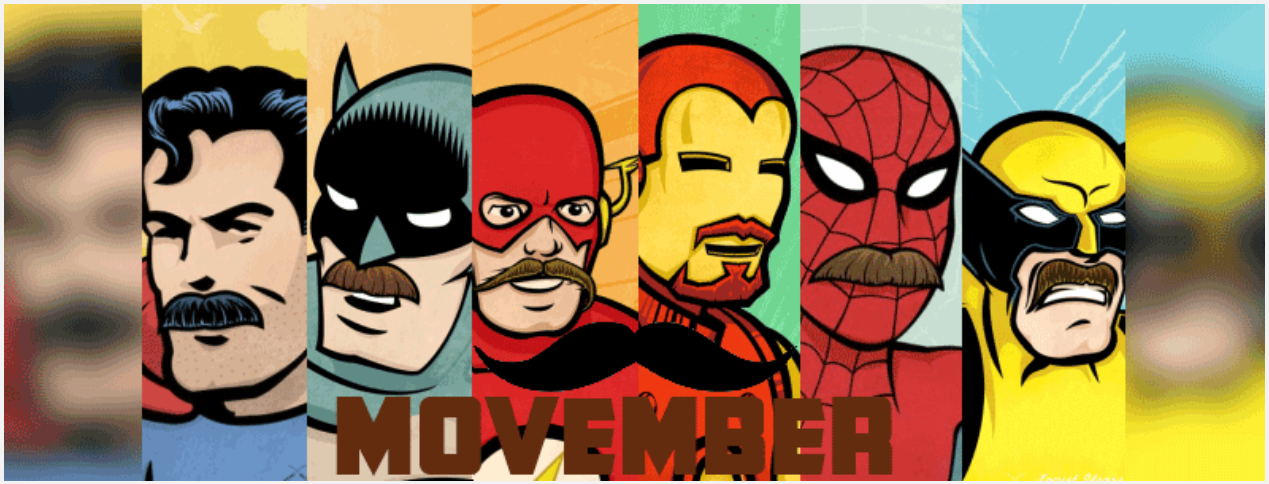


Place de l'IRM dans le cancer de prostate

Van Nieuwenhove Sandy

Département d'imagerie médicale

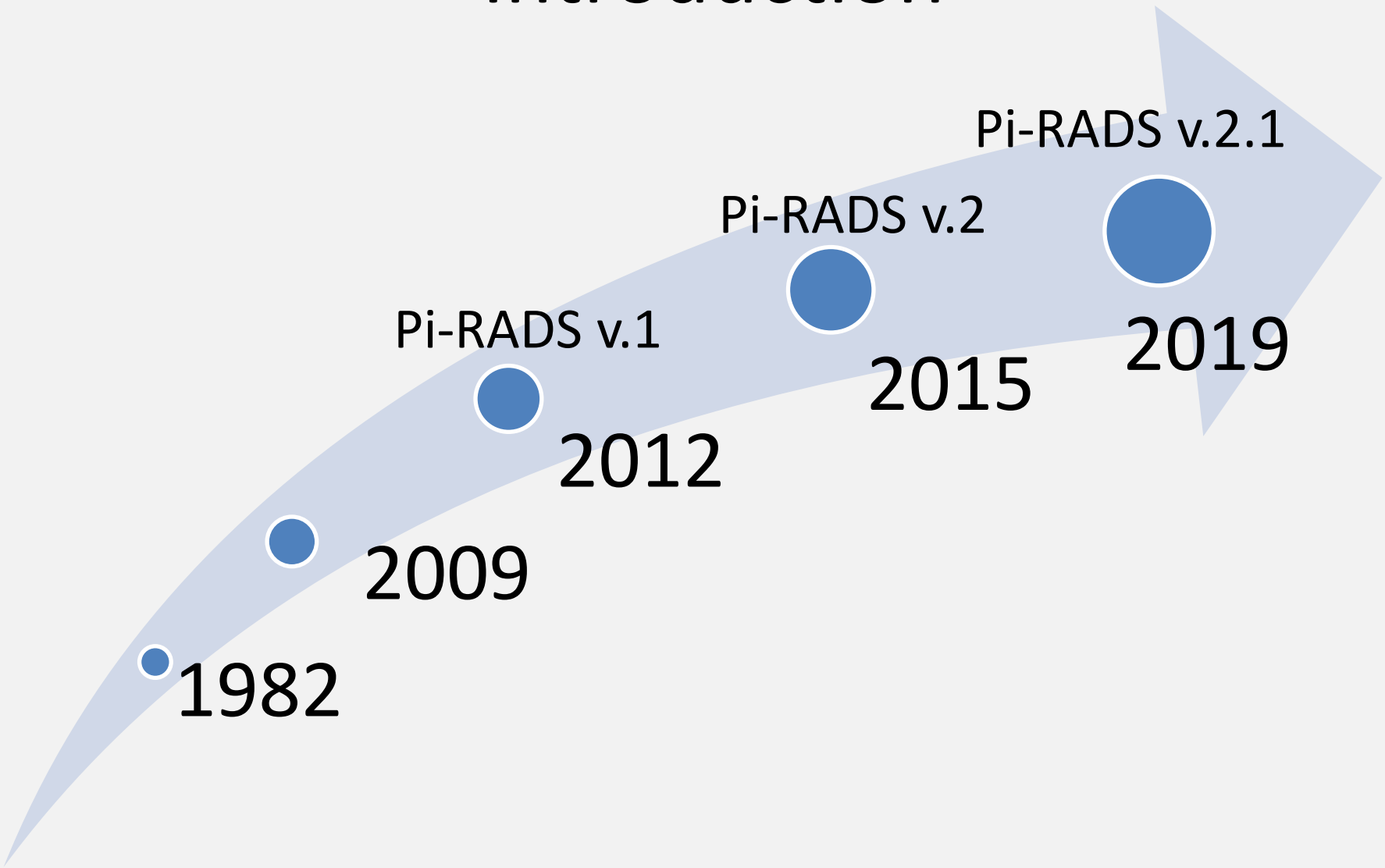
Cliniques universitaires SAINT-LUC UCL BRUXELLES

PLAN

- INTRODUCTION
- AVANT L'EXAMEN
- DEROULEMENT DE L'EXAMEN
- BASES D'INTERPRETATION
- CAS CLINIQUES
- Futures directions

INTRODUCTION

Introduction



Introduction

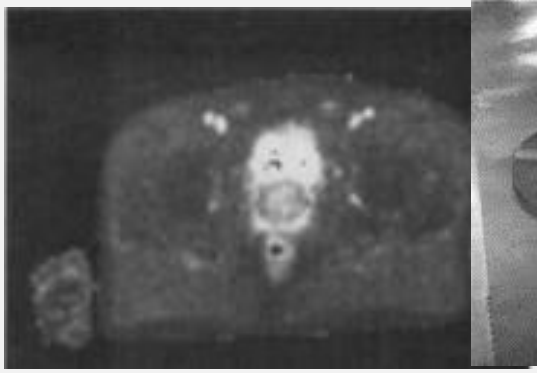
P

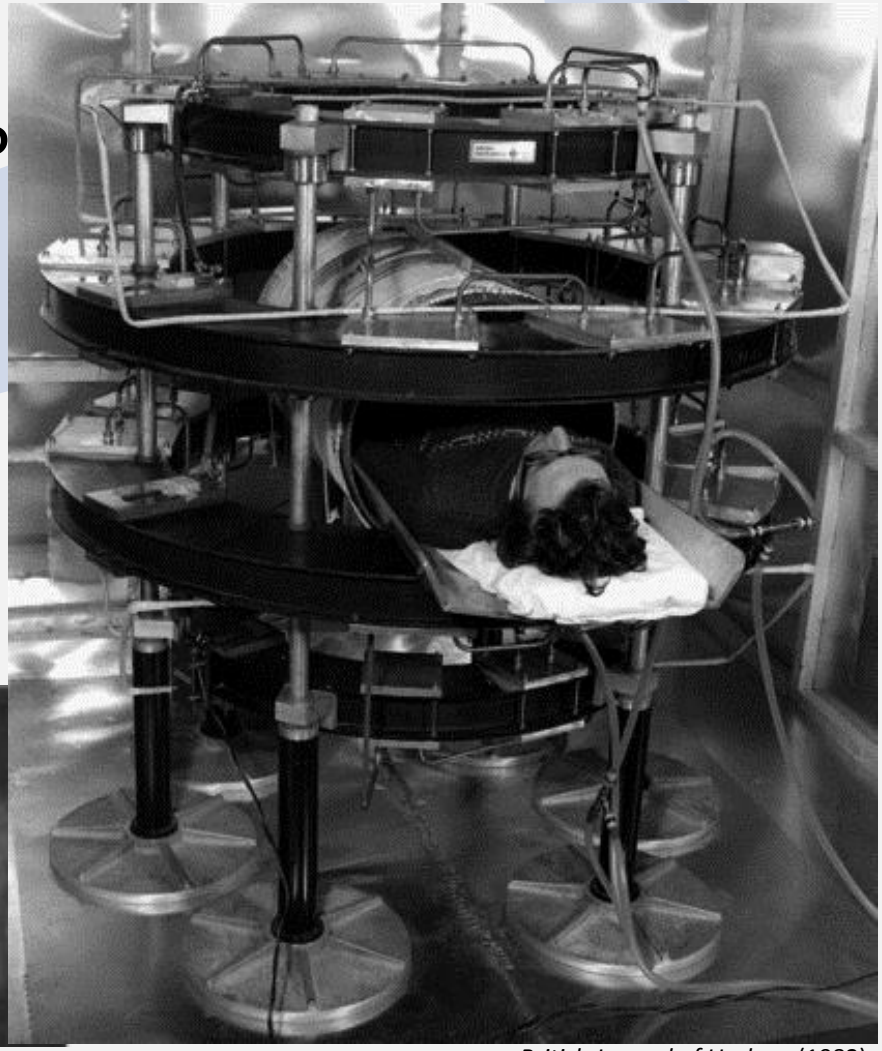
Pi-RADS v.1

2012

2009

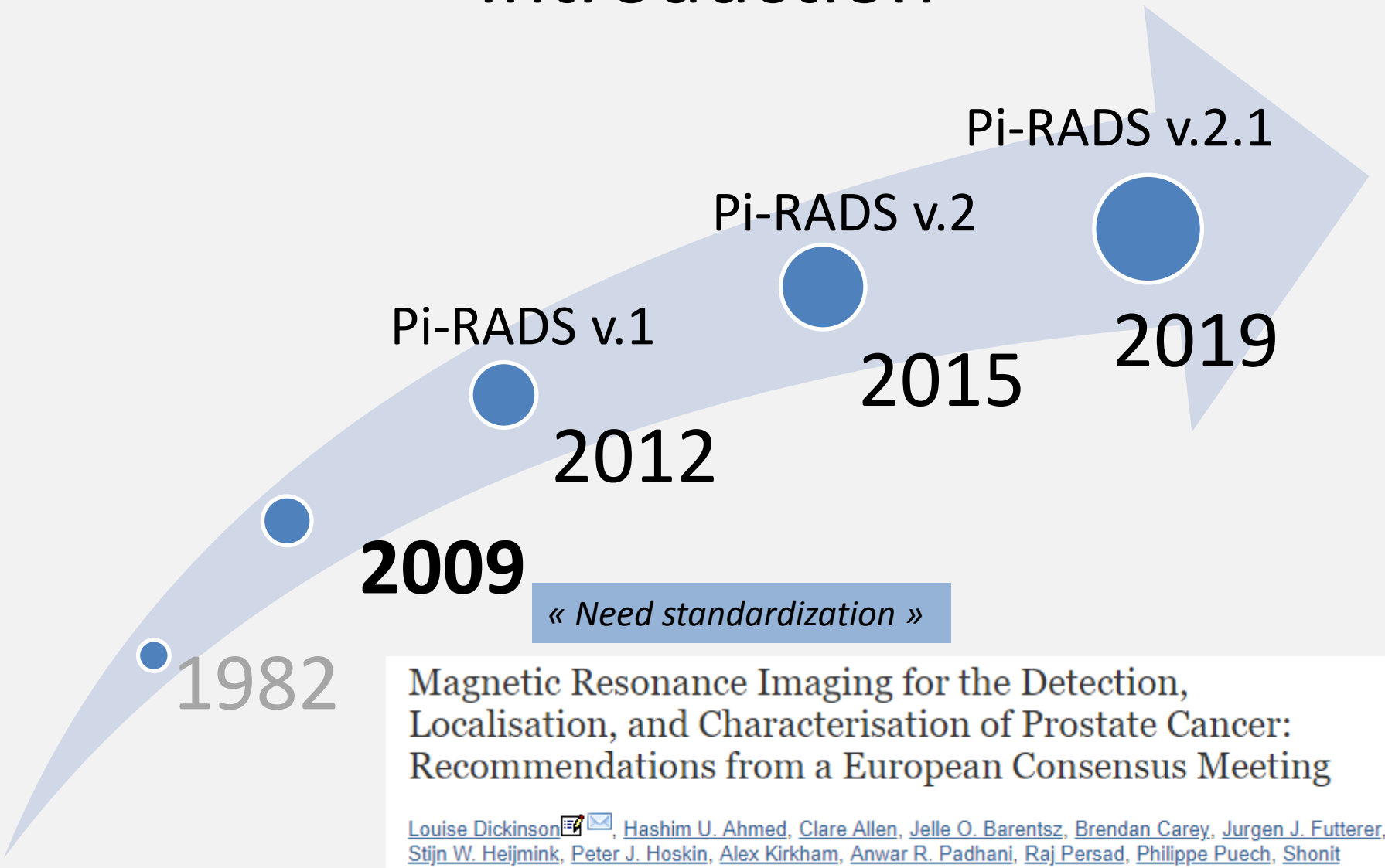
1982





British Journal of Urology (1982). **54**, 726-72800

Introduction



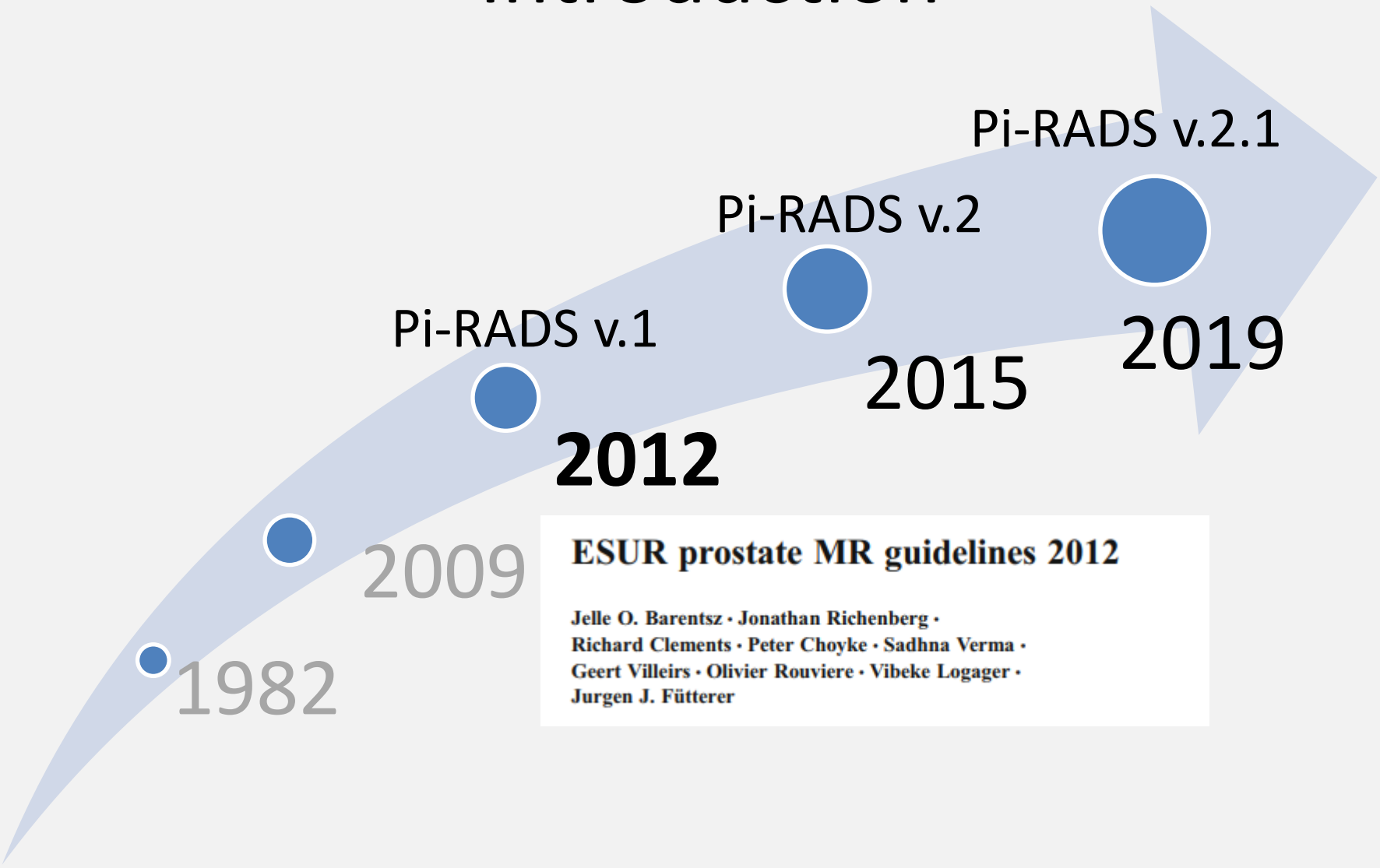
« Need standardization »

Magnetic Resonance Imaging for the Detection, Localisation, and Characterisation of Prostate Cancer: Recommendations from a European Consensus Meeting

Louise Dickinson, Hashim U. Ahmed, Clare Allen, Jelle O. Barentsz, Brendan Carey, Jurgen J. Futterer, Stijn W. Heijmink, Peter J. Hoskin, Alex Kirkham, Anwar R. Padhani, Raj Persad, Philippe Puech, Shonit Punwani, Aslam S. Sohaib, Bertrand Tombal, Arnauld Villers, Jan van der Meulen, Mark Emberton

European Urology , Volume 59 , Issue 4 , 477 - 494

Introduction



ESUR prostate MR guidelines 2012

Jelle O. Barentsz · Jonathan Richenberg · Richard Clements · Peter Choyke · Sadhna Verma · Geert Villeirs · Olivier Rouviere · Vibeke Logager · Jurgen J. Fütterer

Score : 4+5+2+1+1=13/15

Introduction

Pi-RADS v.2.1

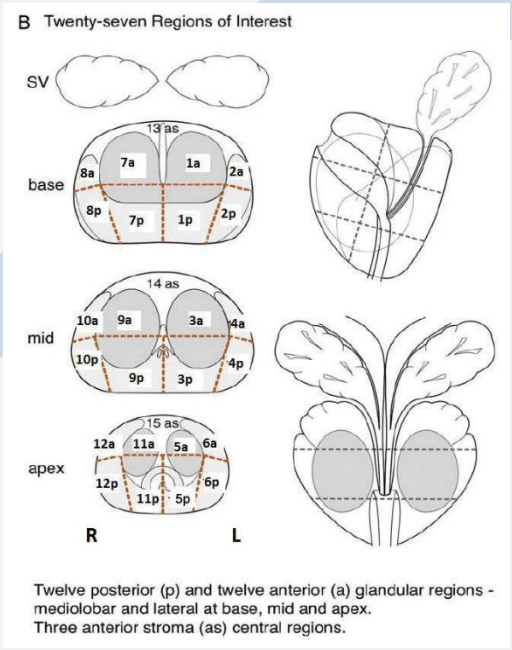
Pi-RADS v.2

Pi-RADS v.1

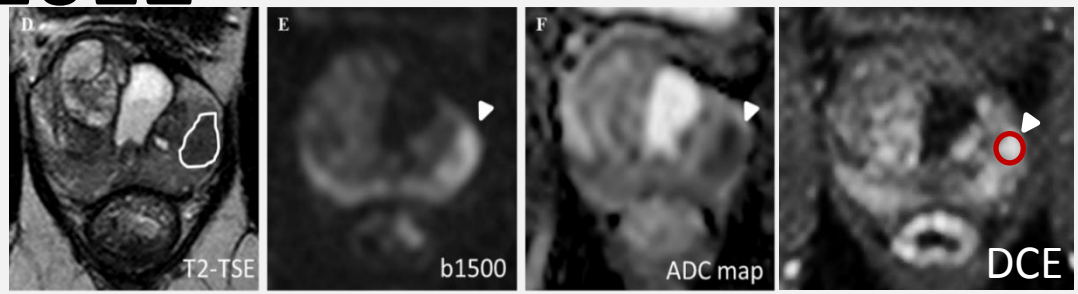
2019

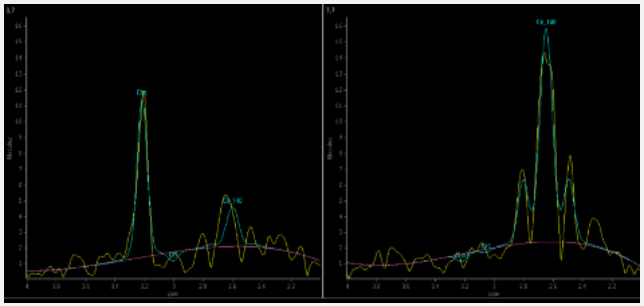
2015

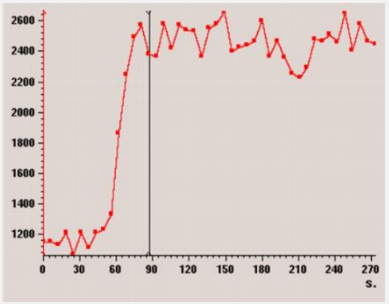
2012



Twelve posterior (p) and twelve anterior (a) glandular regions - mediolobar and lateral at base, mid and apex.
Three anterior stroma (as) central regions.







Introduction

Pi-RADS v.2.1

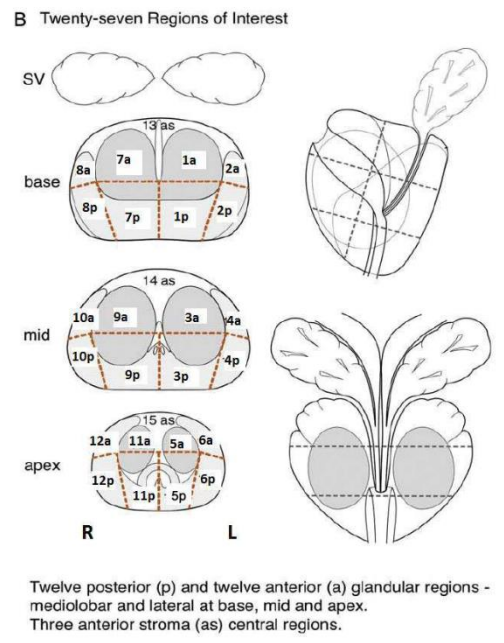
Pi-RADS v.2

Pi-RADS v.1

2019

2015

2012



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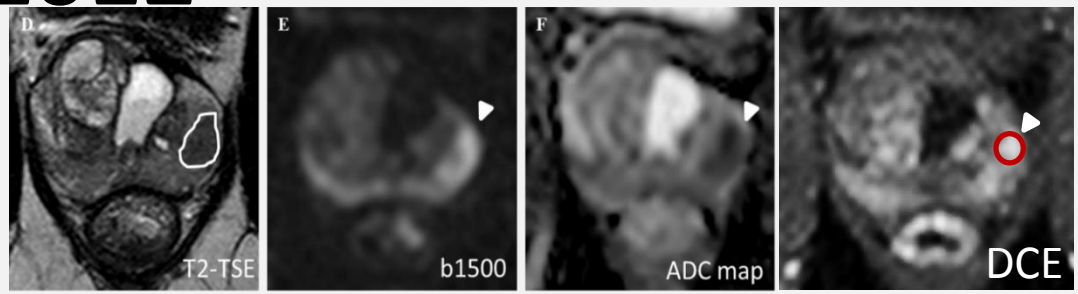
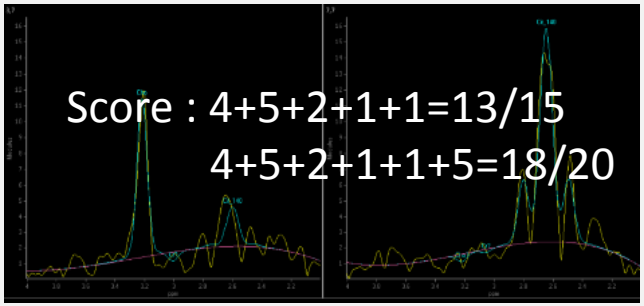
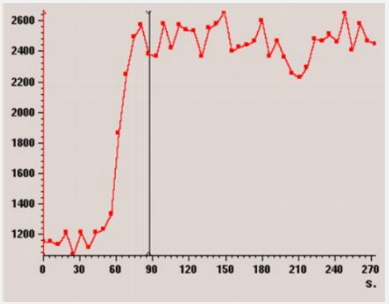
Three anterior stroma (as) central regions.







Introduction

Pi-RADS v.2.1

Pi-RADS v.2

Pi-RADS v.1

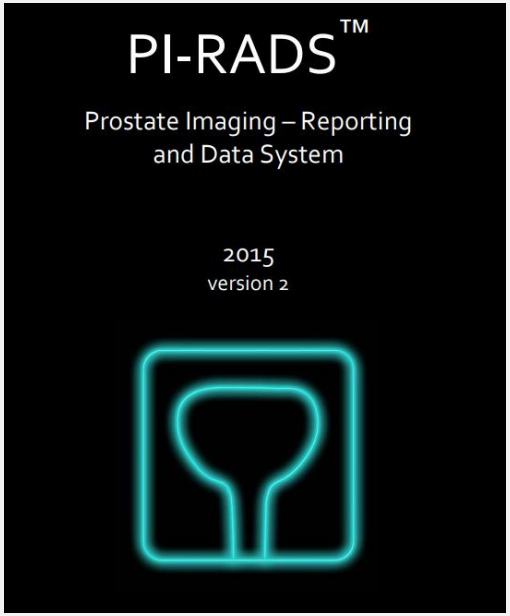
2019

2015

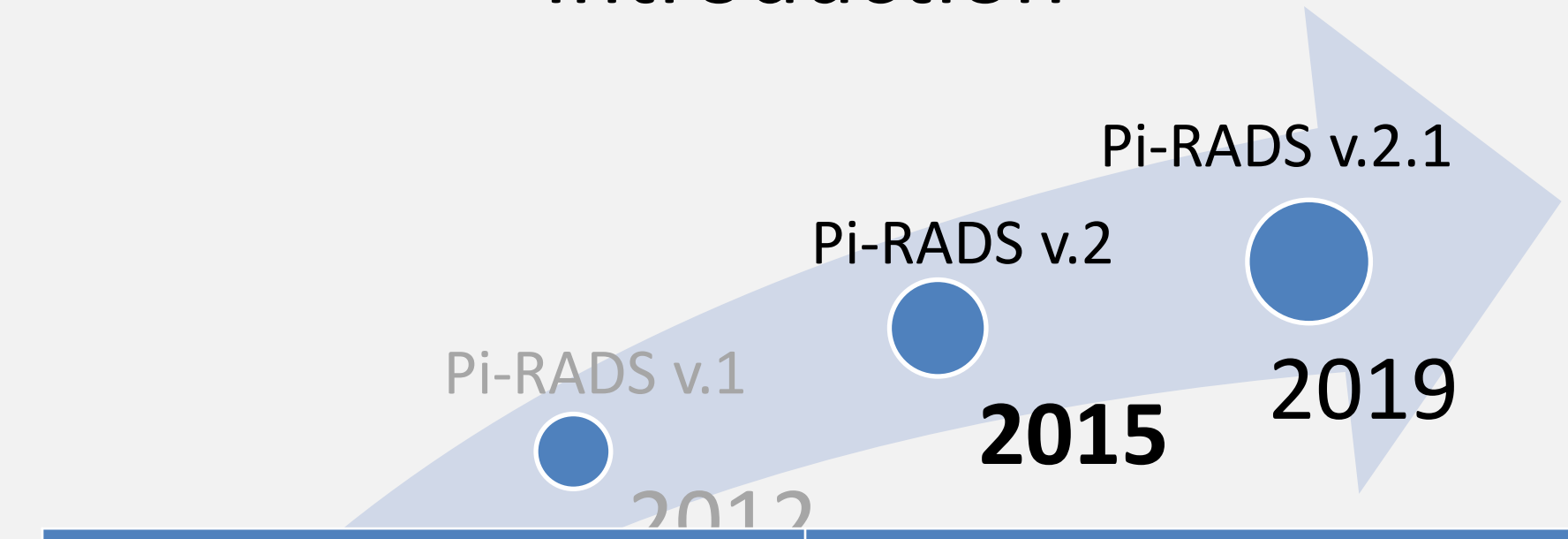
2012

2009

1982

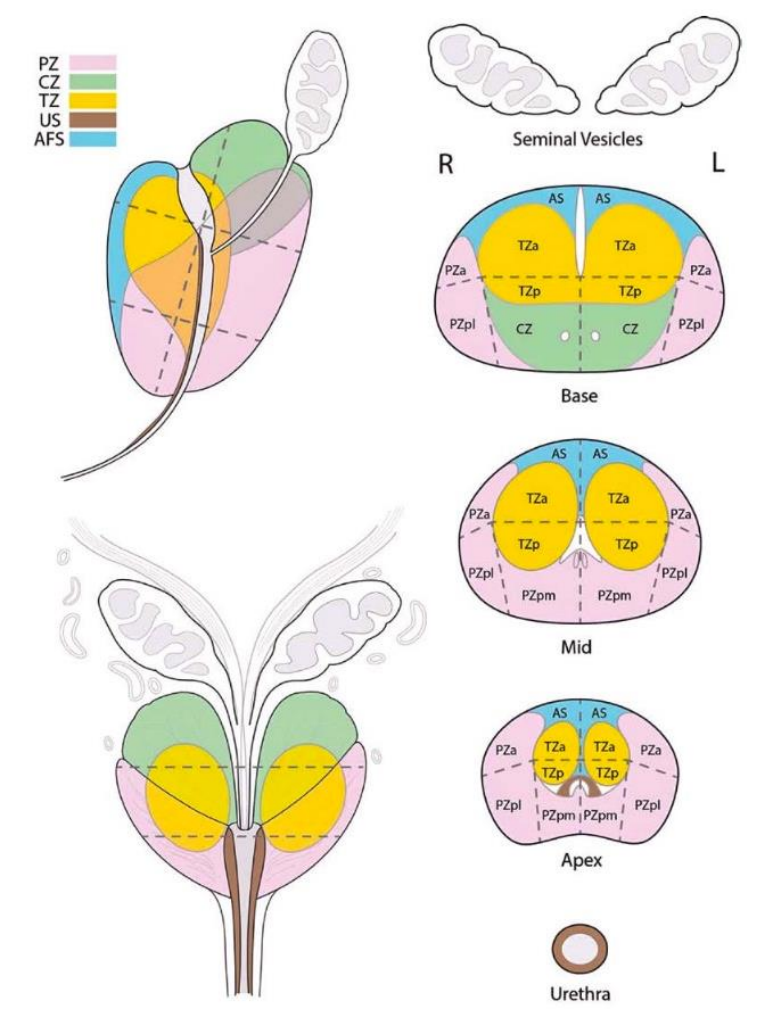


Introduction



Pi-RADS v.1	Pi-RADS v.2
27 secteurs	39 secteurs
Spectroscopie	Spectroscopie
Rôle perfusion équivalent PZ-TZ (5 points)	Rôle mineur perfusion - PZ
Pas de cut off	Cut off 15mm Pi-RADS 4 -> Pi-RADS 5
Pas de séquence dominante	Séquence dominante DWI (PZ) et T2 (TZ)
Score total /15 ou /20	Score total /5

Introduction

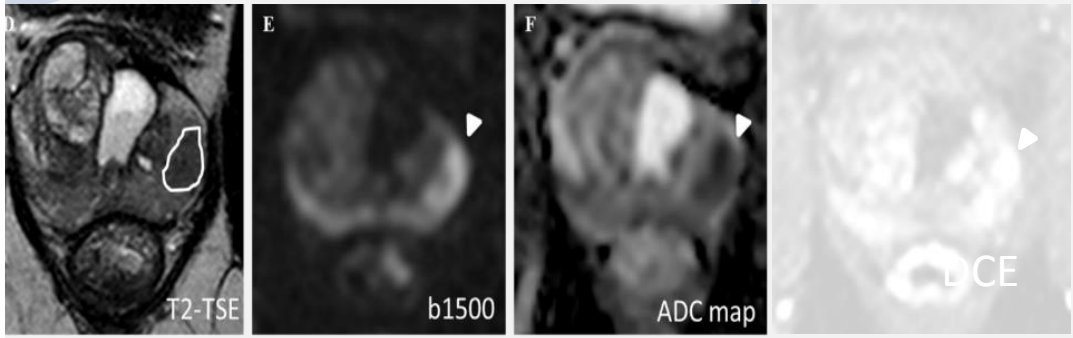


Pi-RADS v.2

2015

Pi-RADS v.2.1

2019



59 ans – PSA 5,2 ng/ml – volume 30 cc
Lésion Pi-RADS 4 de 10mm lobe G (Pza-PZpl)
pT2c – Gleason 4+4
Pas de contraste nécessaire

Introduction

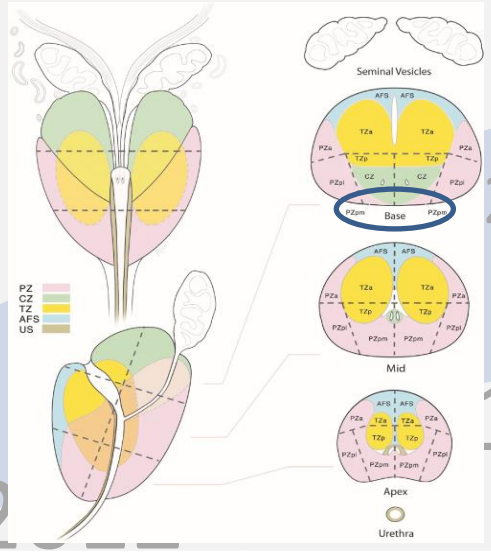
Pi-RADS

2

15

2019-...

Pi-RADS v.2.1



Pi-RADS v.2	Pi-RADS v.2.1
Score T2 PZ	Pas de changement
Score T2 TZ	Changement score 1 et 2
Diffusion	Changement score 2 et 3
Perfusion	0 = pas de lésion T2 ni diffusion , BPH 1 = rehaussement précoce et focal correspondant à une lésion

Introduction

NICE

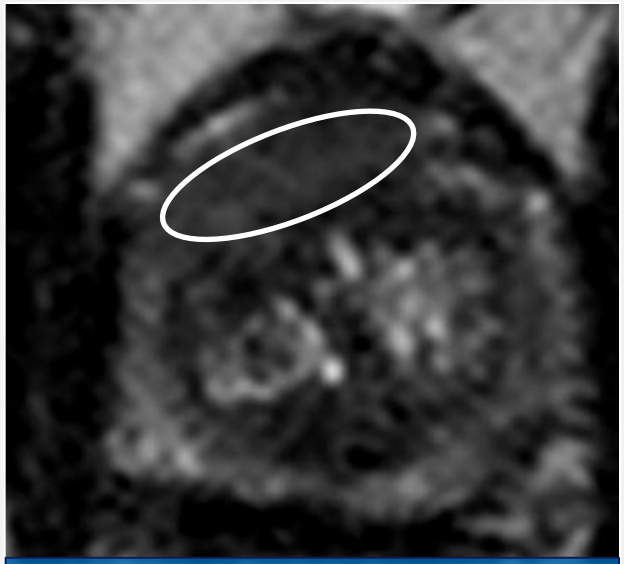
Timing	Tests[1]
At enrolment in active surveillance	Multiparametric MRI if not previously performed

1 If there is concern about clinical or PSA changes at any time during active surveillance, reassess with multiparametric MRI and/or rebiopsy

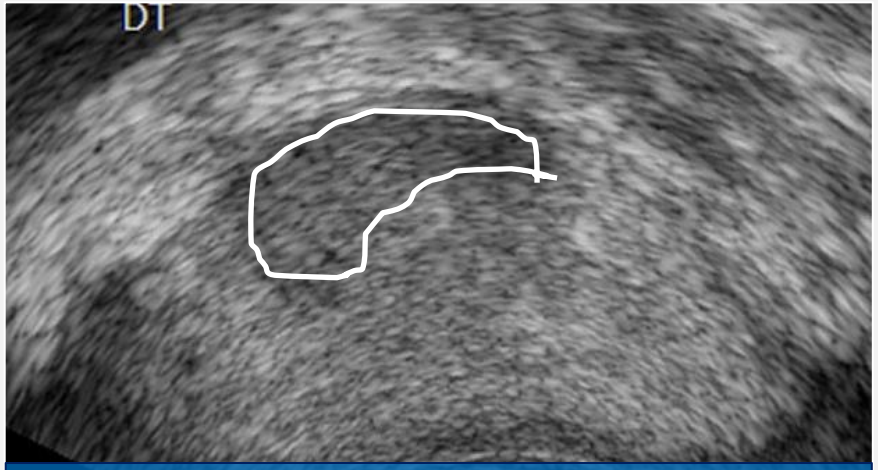
Recommendations in men on active surveillance	LE	Strength rating
Perform mpMRI before confirmatory prostate biopsy if not done before the first biopsy.	1a	Strong
Perform the combination of targeted biopsy (of any PI-RADS ≥ 3 lesion) and systematic biopsy at confirmatory biopsy.	2a	Weak

At confirmatory biopsy according to EAU/ASTRO Guidelines

Introduction



VPN 72-89%



US + biopsies ne détecte pas 30-40% csPCa

IRMmp + biopsies ciblées = 13,2-50% csPCa

-> reclassification 12-18%

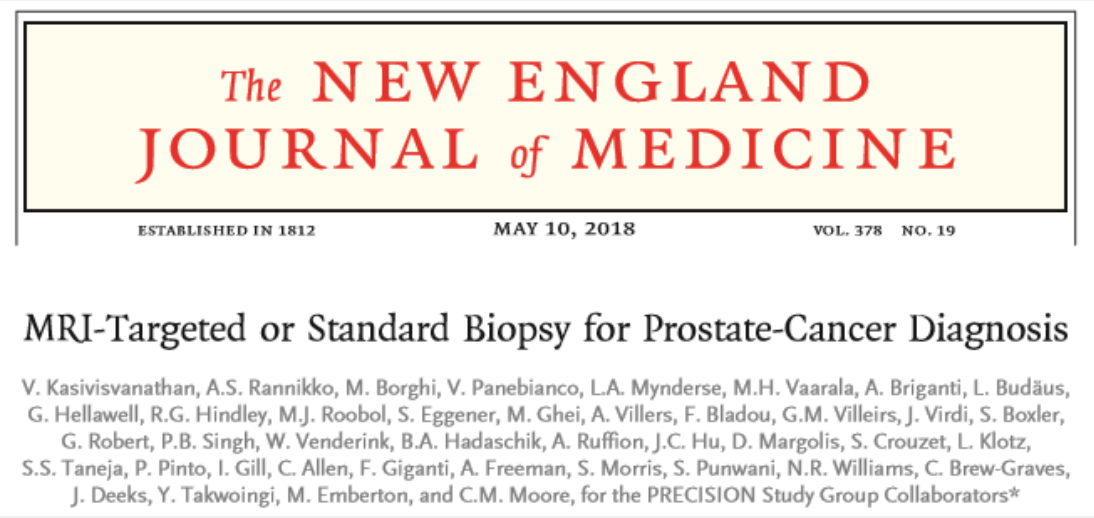
Welty CJ et al. Eur Urol 2014

Introduction

Diagnostic accuracy of multi-parametric MRI and TRUS biopsy in prostate cancer (PROMIS): a paired validating confirmatory study

Hashim U Ahmed*, Ahmed El-Shater Bosaily*, Louise C Brown*, Rhian Gabe, Richard Kaplan, Mahesh K Parmar, Yolanda Collaco-Moraes, Katie Ward, Richard G Hindley, Alex Freeman, Alex P Kirkham, Robert Oldroyd, Chris Parker, Mark Emberton, and the PROMIS study group†

- 27% biopsie
+ 18% csPCa
- 5% PCa indolent
VPN 72-89%



The NEW ENGLAND JOURNAL of MEDICINE

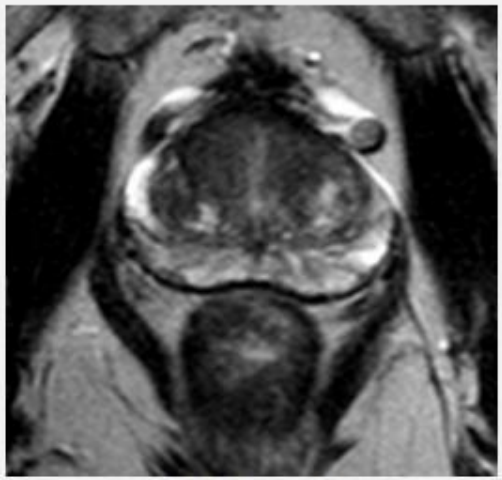
ESTABLISHED IN 1812 MAY 10, 2018 VOL. 378 NO. 19

MRI-Targeted or Standard Biopsy for Prostate-Cancer Diagnosis

V. Kasivisvanathan, A.S. Rannikko, M. Borghi, V. Panebianco, L.A. Mynderse, M.H. Vaarala, A. Briganti, L. Budäus, G. Hellawell, R.G. Hindley, M.J. Roobol, S. Eggener, M. Ghei, A. Villers, F. Bladou, G.M. Villeirs, J. Virdi, S. Boxler, G. Robert, P.B. Singh, W. Venderink, B.A. Hadaschik, A. Ruffion, J.C. Hu, D. Margolis, S. Crouzet, L. Klotz, S.S. Taneja, P. Pinto, I. Gill, C. Allen, F. Giganti, A. Freeman, S. Morris, S. Punwani, N.R. Williams, C. Brew-Graves, J. Deeks, Y. Takwoingi, M. Emberton, and C.M. Moore, for the PRECISION Study Group Collaborators*

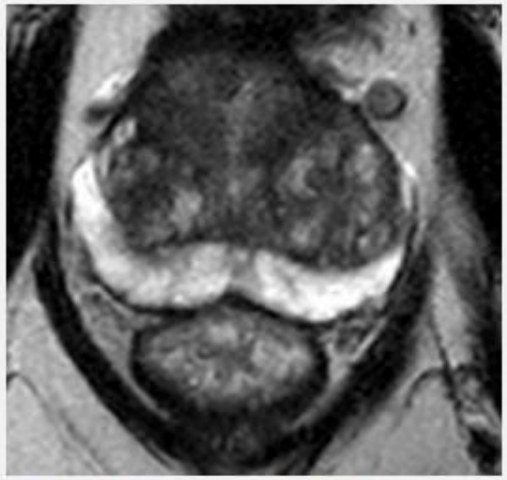
- 28% biopsie
+ 12% cs Pca
- 13% PCa indolent

Introduction



AXIAL T2 TSE **2010**

AXIAL T2 TSE **2012**



AXIAL T2 TSE **2018**

Table 3 – Assessment of likelihood of radiologic progression on magnetic resonance imaging in men on active surveillance

Likert	Assessment of likelihood of radiologic progression	Example
1	Resolution of previous features suspicious on MRI	Previously enhancing area no longer enhances
2	Reduction in volume and/or conspicuity of previous features suspicious on MRI	Reduction in size of previously seen lesion that remains suspicious for clinically significant disease
3	Stable MRI appearance: no new focal/diffuse lesions	Either no suspicious features or all lesions stable in size and appearance
4	Significant increase in size and/or conspicuity of features suspicious for prostate cancer	Lesion becomes visible on diffusion-weighted imaging; significant increase in size of previously seen lesion
5	Definitive radiologic stage progression	Appearance of extracapsular extension, seminal vesicle involvement, lymph node involvement, or bone metastasis

PRECISE recommandations

Introduction

4.3. *mp-MRI during AS*

4.3.1. *Statement*

At present, there are no robust published data to support the use of, or timing of, mp-MRI instead of repeat standard biopsy to detect progression over time. Therefore, at present mp-MRI should not solely replace repeat biopsy during AS. Moreover, use of mp-MRI prior to any follow-up biopsy is not supported by any strong evidence. However, it might be of interest to better target mp-MRI-detected lesions. In case of negative mp-MRI during follow-up, men should undergo systematic biopsies. In case of low-risk PCa detected at targeted and/or systematic biopsy despite a positive mp-MRI, patients should continue AS provided fulfillment of all previously listed inclusion criteria.

Active surveillance for low-risk prostate cancer : the European Association of Urology Position in 2018

AVANT L’EXAMEN

Prescription

QUESTIONNAIRE A REMPLIR PAR LE MEDECIN PRESCRIPTEUR :

Le patient est-il porteur d'un pace-maker ou d'une électrode implantée ? OUI - NON

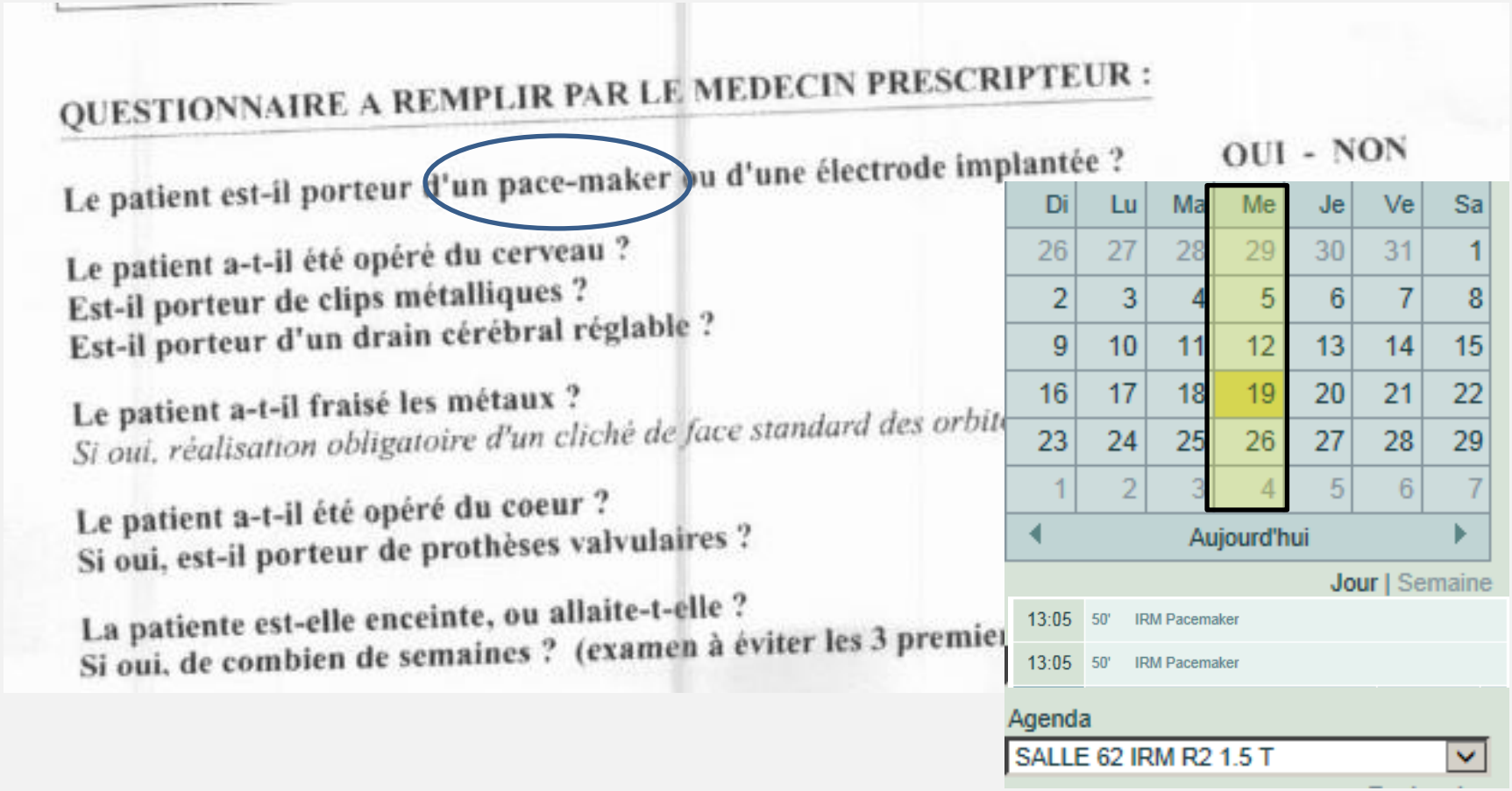
Le patient a-t-il été opéré du cerveau ? OUI - NON
Est-il porteur de clips métalliques ? OUI - NON
Est-il porteur d'un drain cérébral réglable ? OUI - NON

Le patient a-t-il fraisé les métaux ? OUI - NON
Si oui, réalisation obligatoire d'un cliché de face standard des orbites.

Le patient a-t-il été opéré du coeur ? OUI - NON
Si oui, est-il porteur de prothèses valvulaires ? OUI - NON

La patiente est-elle enceinte, ou allaite-t-elle ? OUI - NON
Si oui, de combien de semaines ? (examen à éviter les 3 premiers mois)

Prescription



QUESTIONNAIRE A REMPLIR PAR LE MEDECIN PRESCRIPTEUR :

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Est-il porteur d'un drain cérébral réglable ?

Le patient a-t-il fraisé les métaux ?
Si oui, réalisation obligatoire d'un cliché de face standard des orbit

Le patient a-t-il été opéré du coeur ?
Si oui, est-il porteur de prothèses valvulaires ?

La patiente est-elle enceinte, ou allaite-t-elle ?
Si oui, de combien de semaines ? (examen à éviter les 3 premie

Di	Lu	Ma	Me	Je	Ve	Sa
26	27	28	29	30	31	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
1	2	3	4	5	6	7

Aujourd'hui

Jour | Semaine

13:05 50' IRM Pacemaker
13:05 50' IRM Pacemaker

Agenda

SALLE 62 IRM R2 1.5 T

Prescription

QUESTIONNAIRE A REMPLIR PAR LE MEDECIN PRESCRIPTEUR :

Le patient est-il porteur d'un pace-maker ou d'une électrode implantée ? OUI - NON

Le patient a-t-il été opéré du cerveau ? OUI - NON
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Le patient a-t-il fraisé les métaux ? OUI - NON
Si oui, réalisation obligatoire d'un cliché de face standard des orbites.

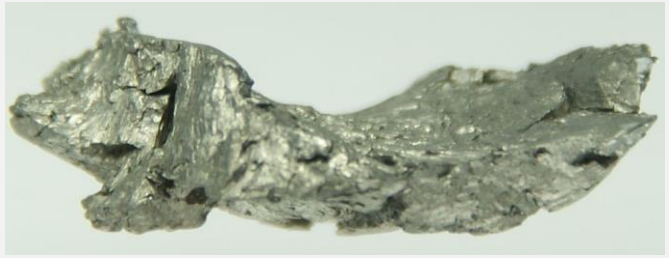
Attente de 6 W

Le patient a-t-il été opéré du coeur ? OUI - NON
Si oui, est-il porteur de prothèses valvulaires ? OUI - NON

La patiente est-elle enceinte, ou allaite-t-elle ? OUI - NON
Si oui, de combien de semaines ? (examen à éviter les 3 premiers mois)

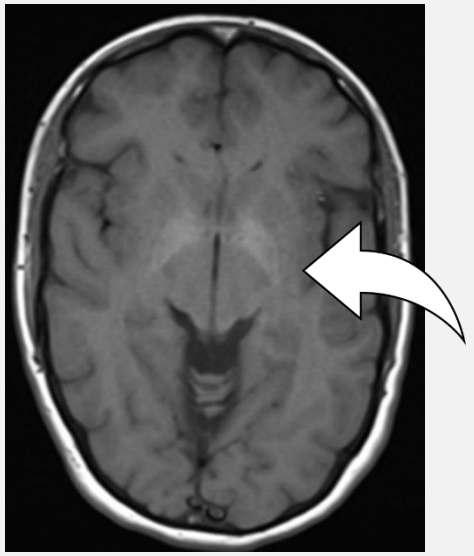
PRESCRIPTION – injection

Prudence à l'injection (Multihance®, Dotarem®)



COMPLEMENTARY AND ALTERNATIVE MEDICINE | MEDICINE | POPULAR CULTURE

Did a gadolinium contrast agent used for MRIs "poison" Chuck Norris' wife Gena?



PRESCRIPTION – injection

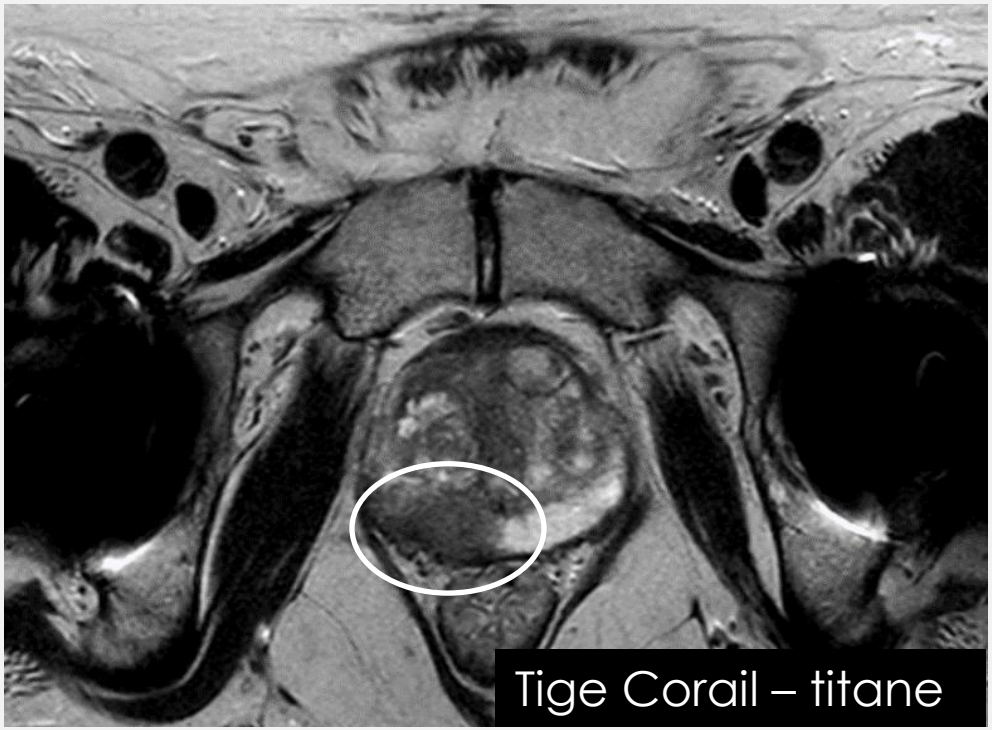
Prudence à l'injection (Multihance®, Dotarem®)

- IRC (GFR <30 ml/min)
- Délais 7 j entre 2 injections
- Hémodialyse à organiser après l'examen
- GFR>30ml/min : 4h entre IV iode et gado

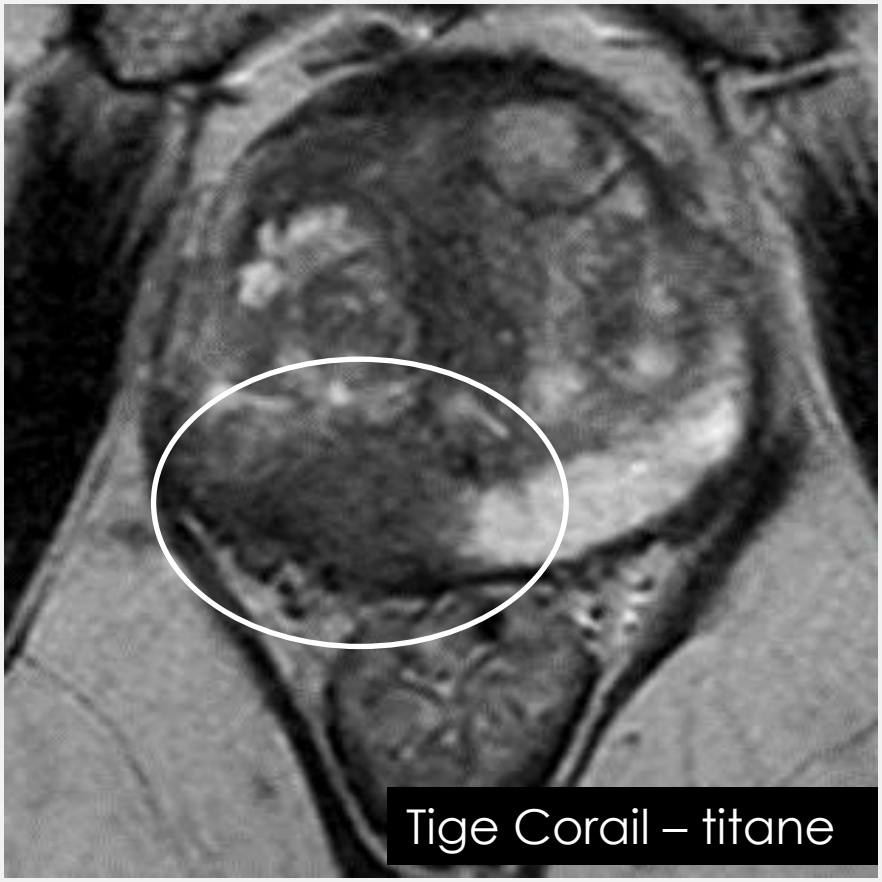
ESUR Guidelines on Contrast Agents v 10.0

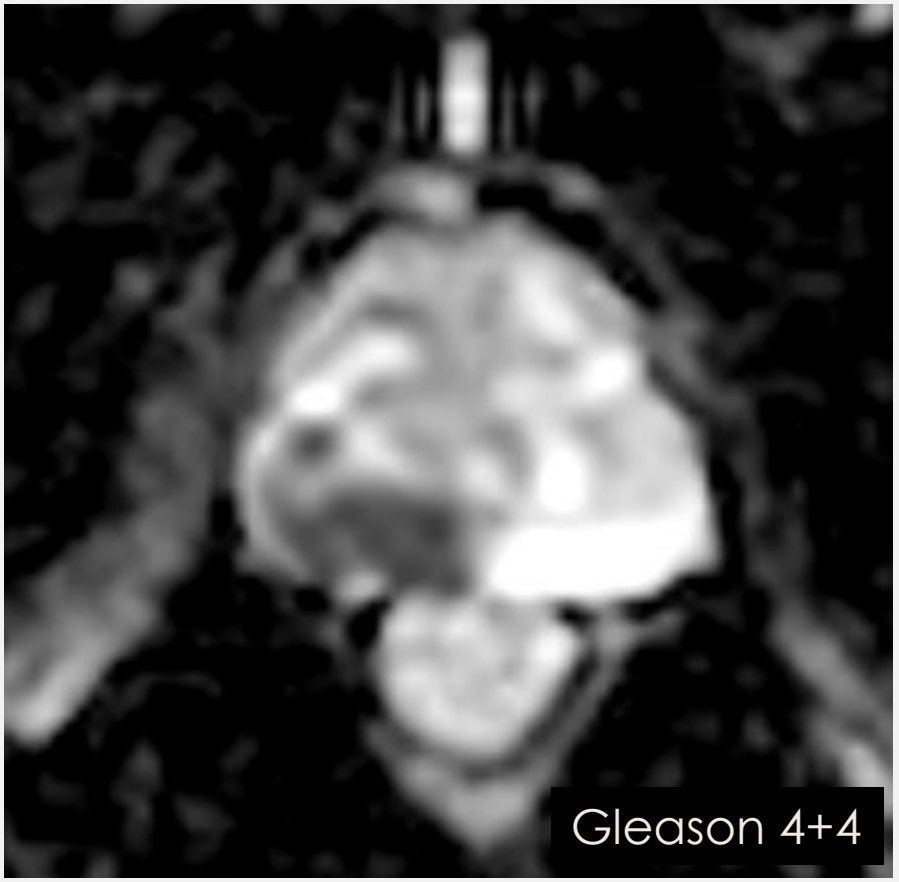
Artéfacts métalliques

ACIER / CHROME-COBALT >> TITANE

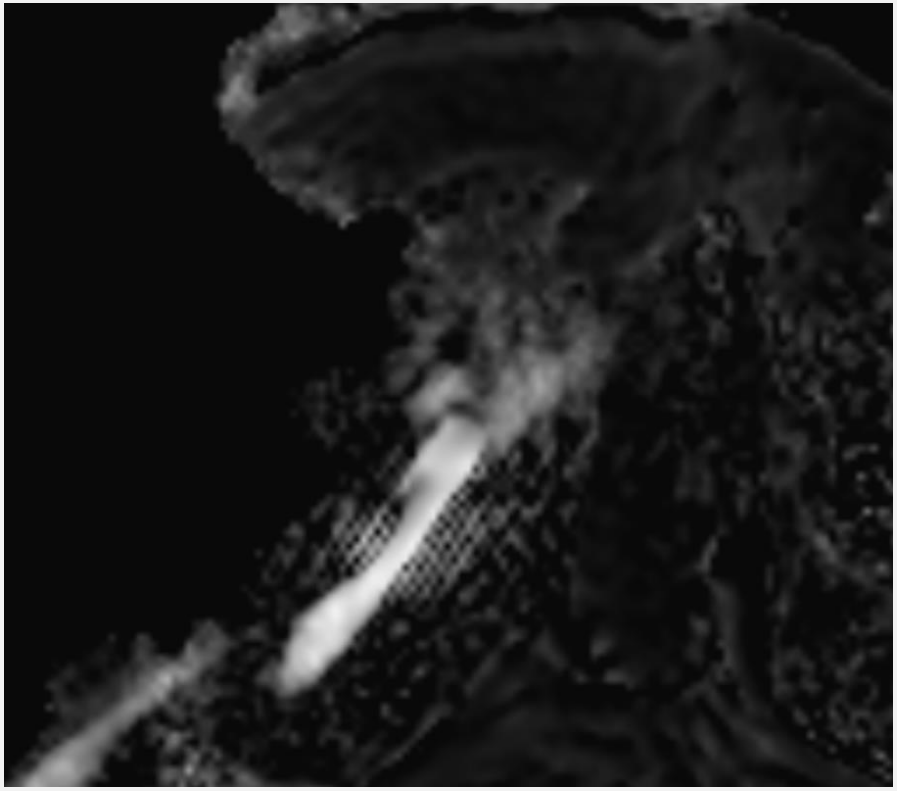


Artéfacts métalliques





Artéfacts métalliques

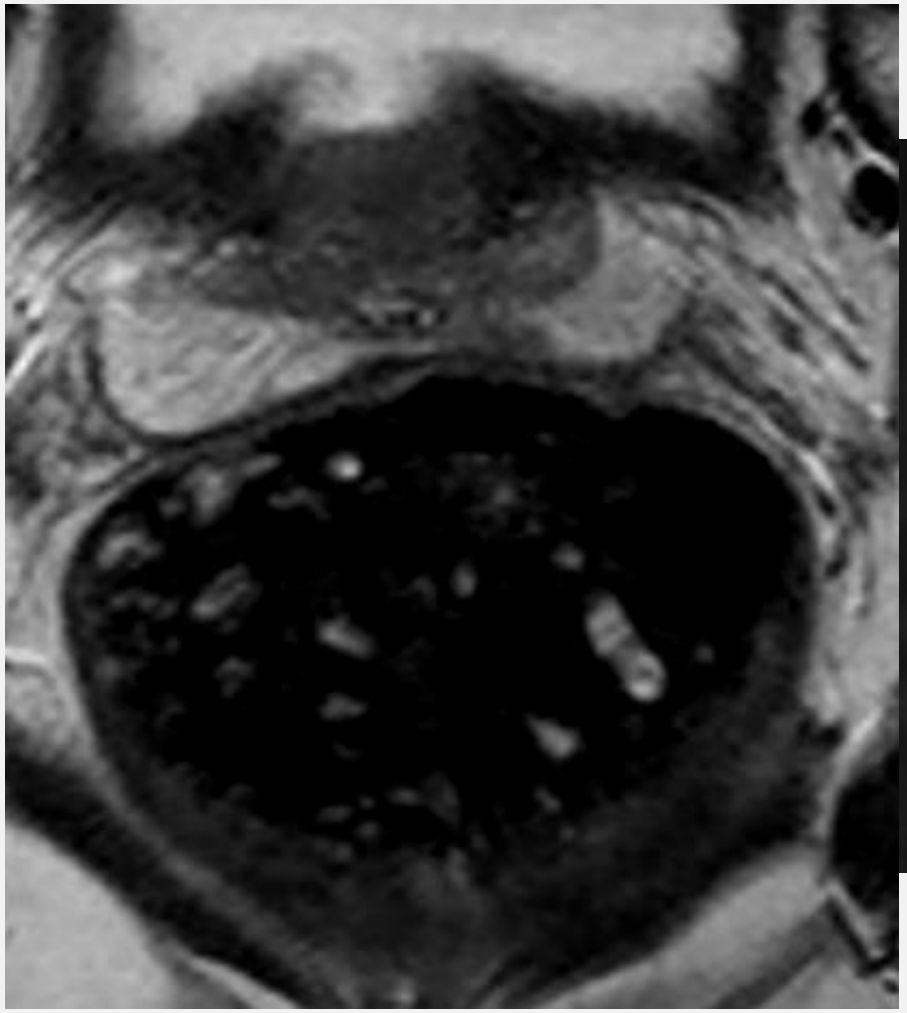


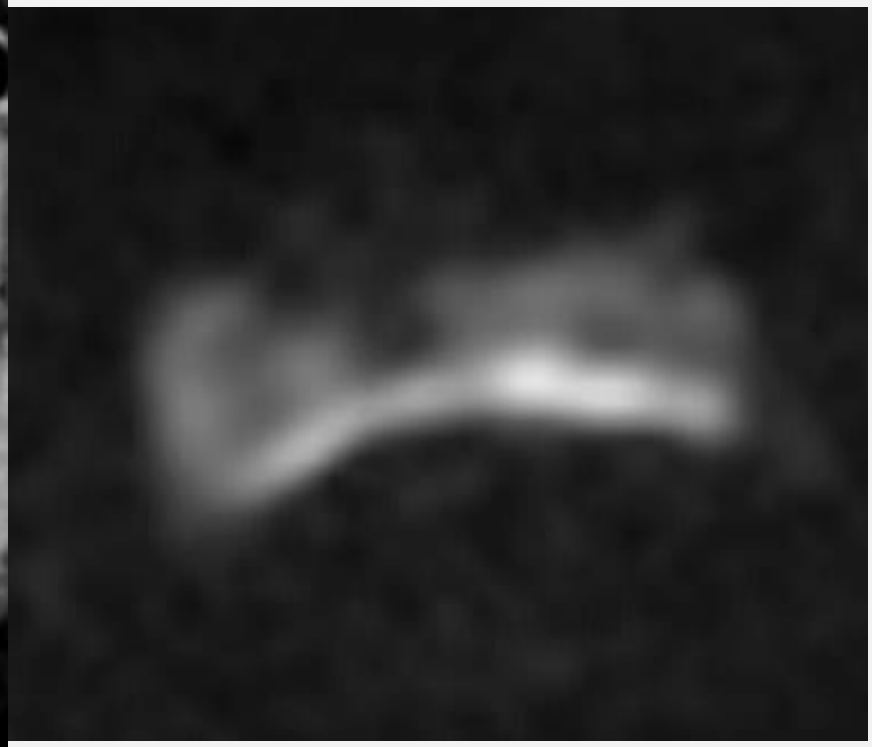
Egalement vrai pour les clips chirurgicaux

DÉROULEMENT DE L’EXAMEN

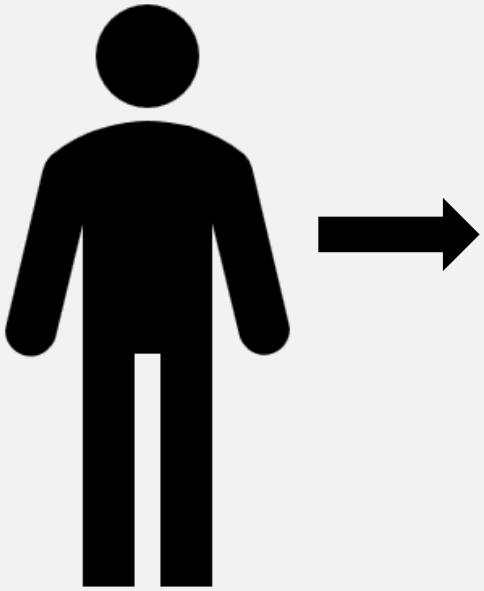
45 min avant l’examen

… Pour éviter cela





5-10 minutes avant l'examen

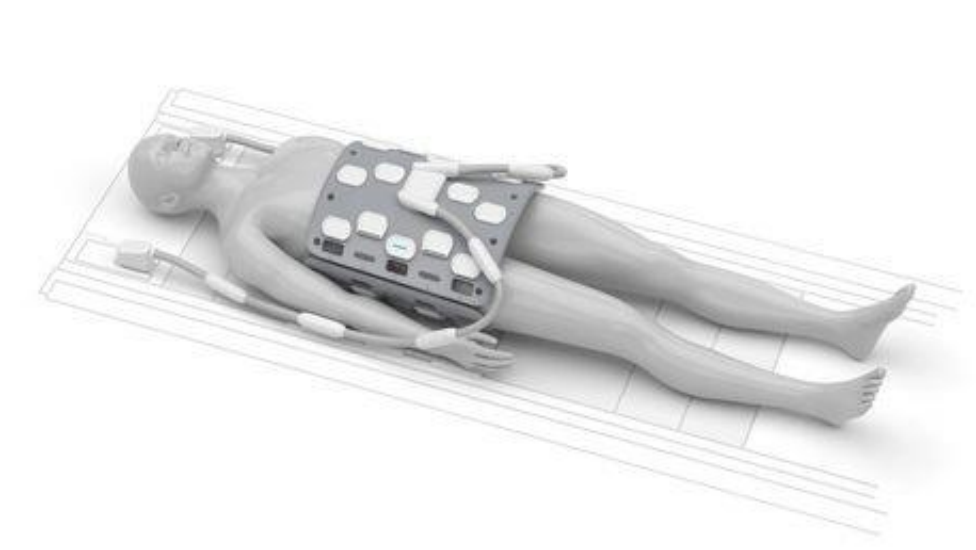


- 1 ampoule IV de Glucagen® ↙ mvts digestifs
  (vs Buscopan® ou rien)

… pour éviter cela

L’examen

- Durée totale : < 30 minutes



- Injection IV de Dotarem® (15 cc) – perfusion
- 1 seule apnée (17 sec) en fin d’examen (ggls)

Types d'IRM

1,5T

3T

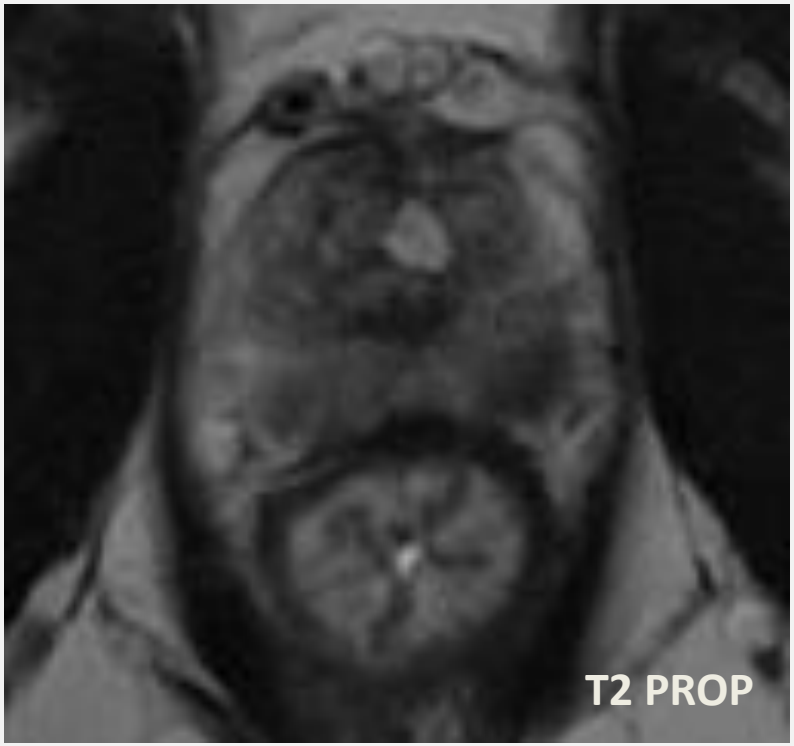
Diamètre 70-90 cm / Longueur du tunnel 125-175 cm

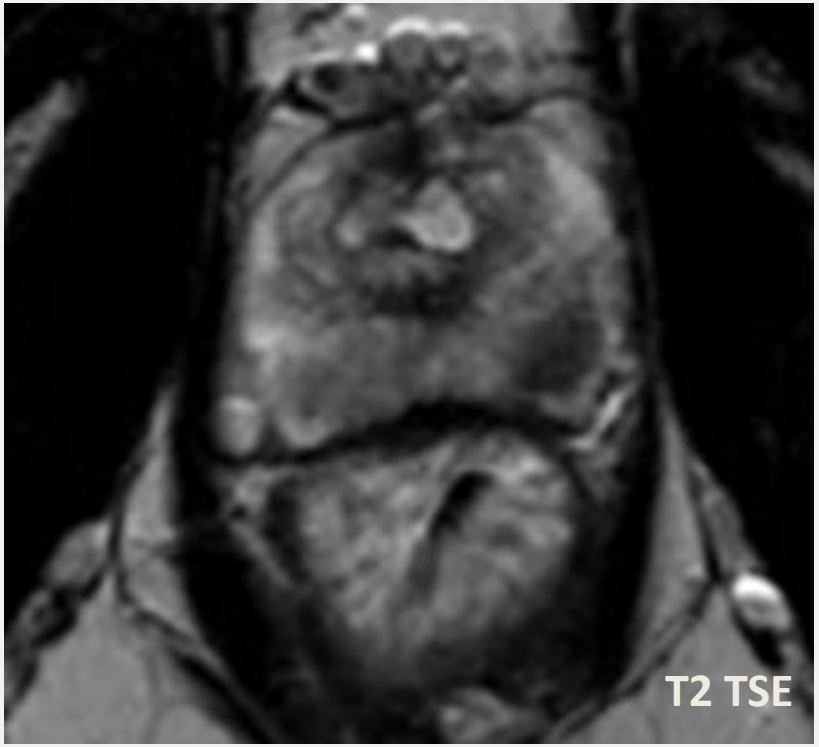
Antennes de surface

1,5 vs 3T ?

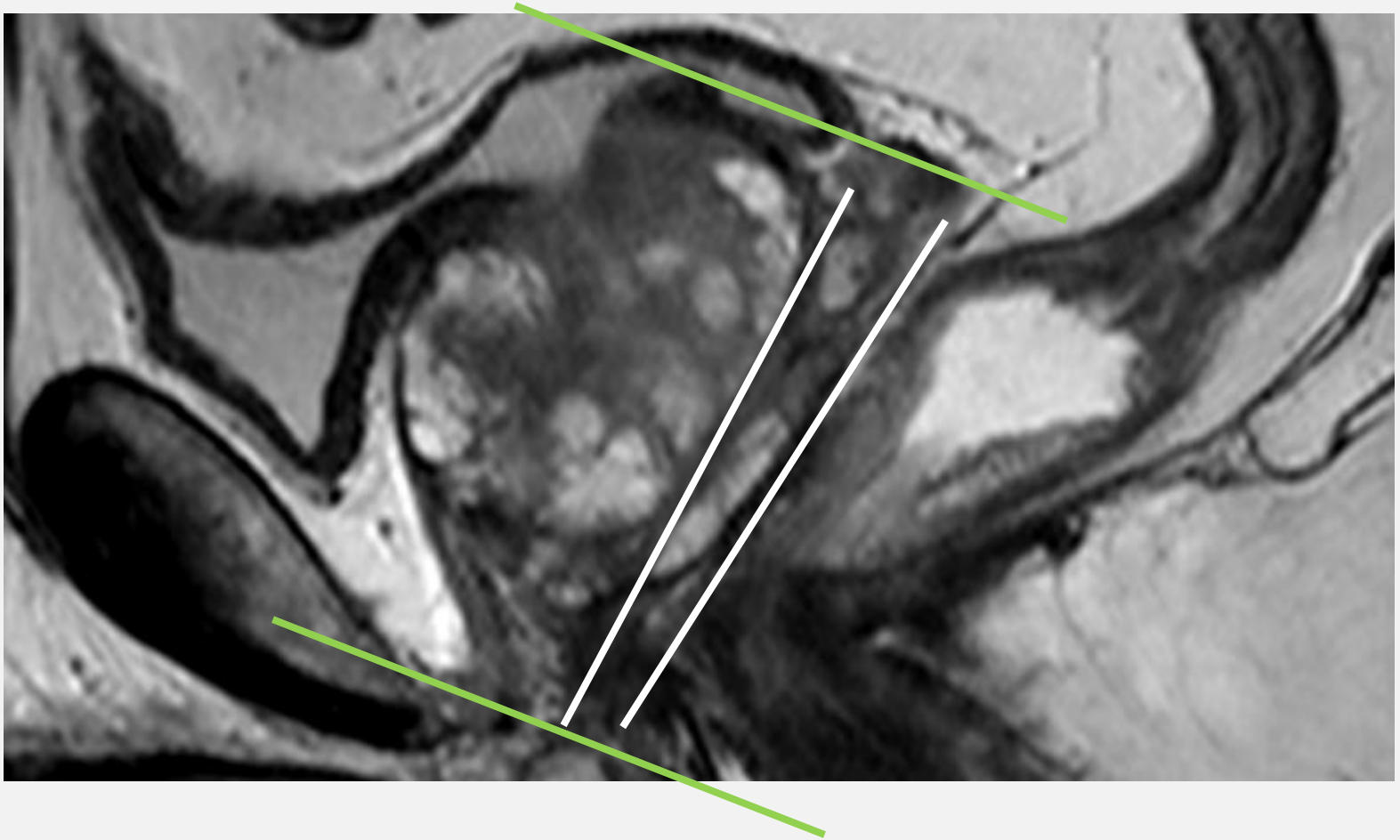
Implants, PMK, - artéfacts DWI

+ rapide / meilleur SNR

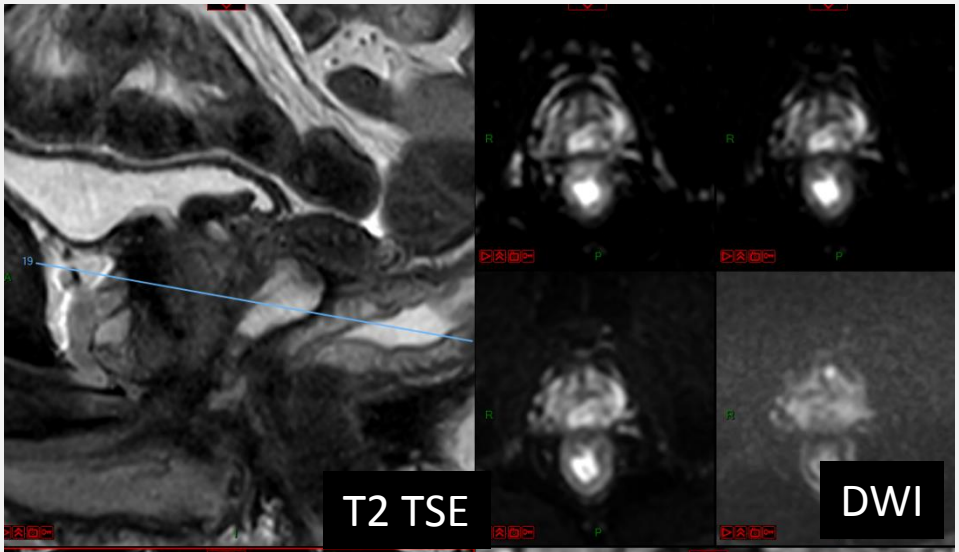


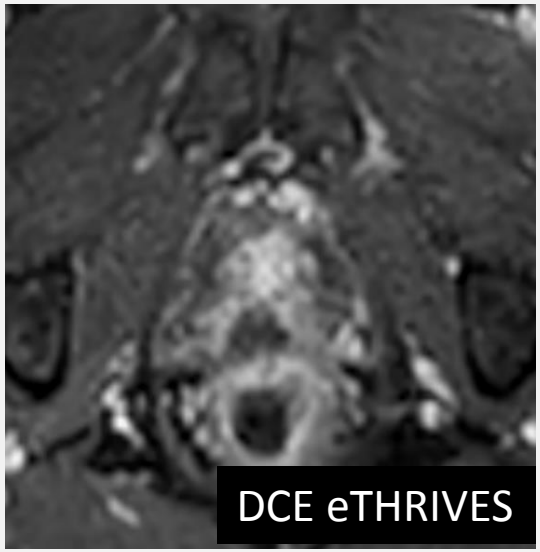


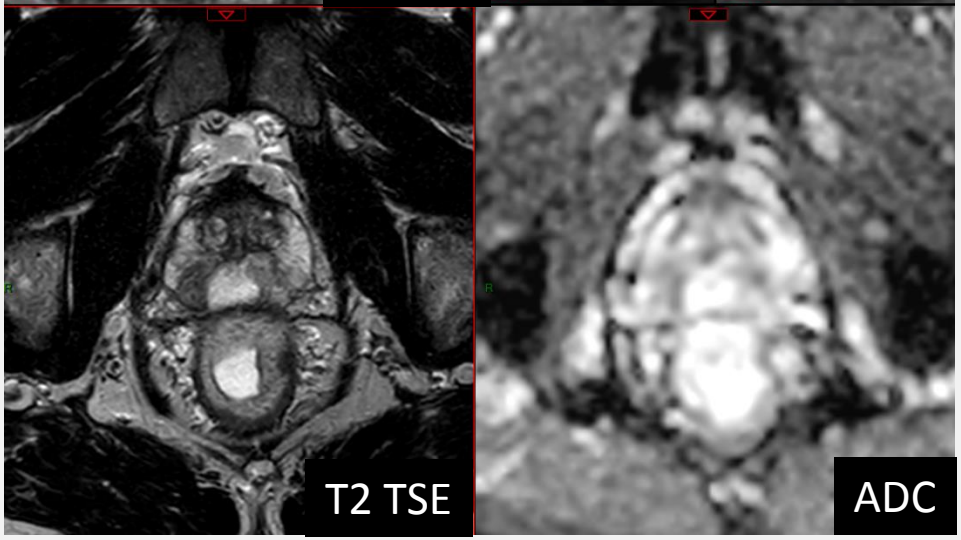
Mise en place des plans

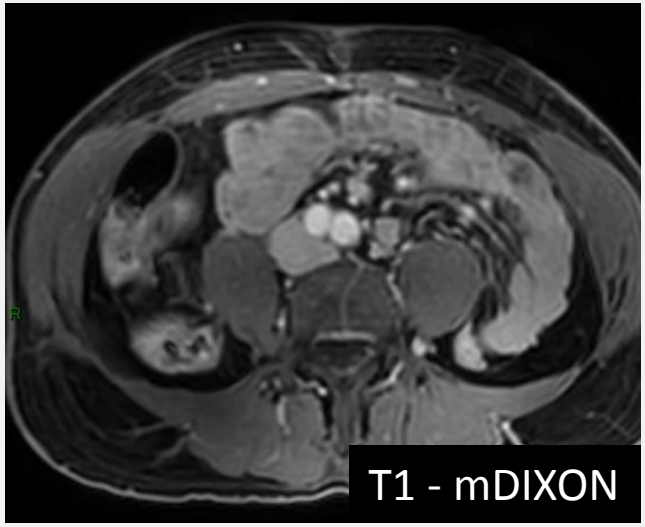


Séquences à faire



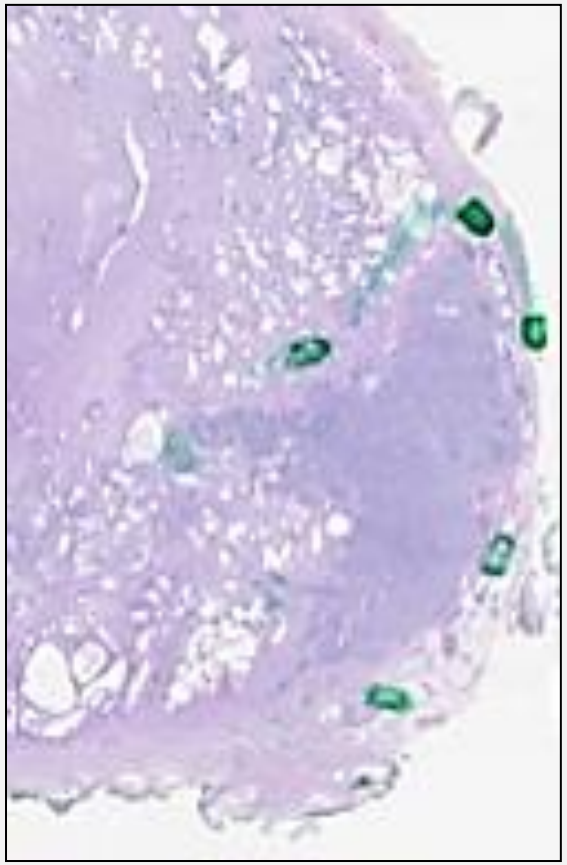






BASES D’INTERPRÉTATION

Séquences de base

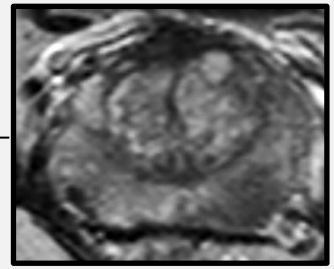


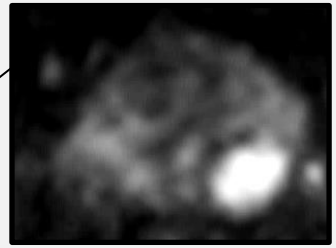
Coupe histologique
Gleason 3+4

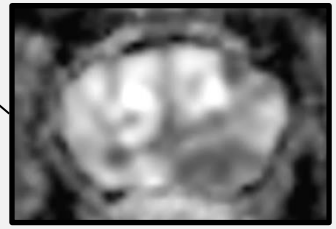
=

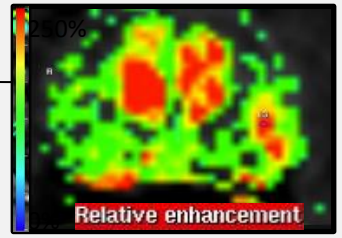
IRM multi-paramétrique

- Anatomie (T2 WI ⬇)
- Cellularité DWI(ADC ⬇)
- Angiogenèse (DCE ⬆)





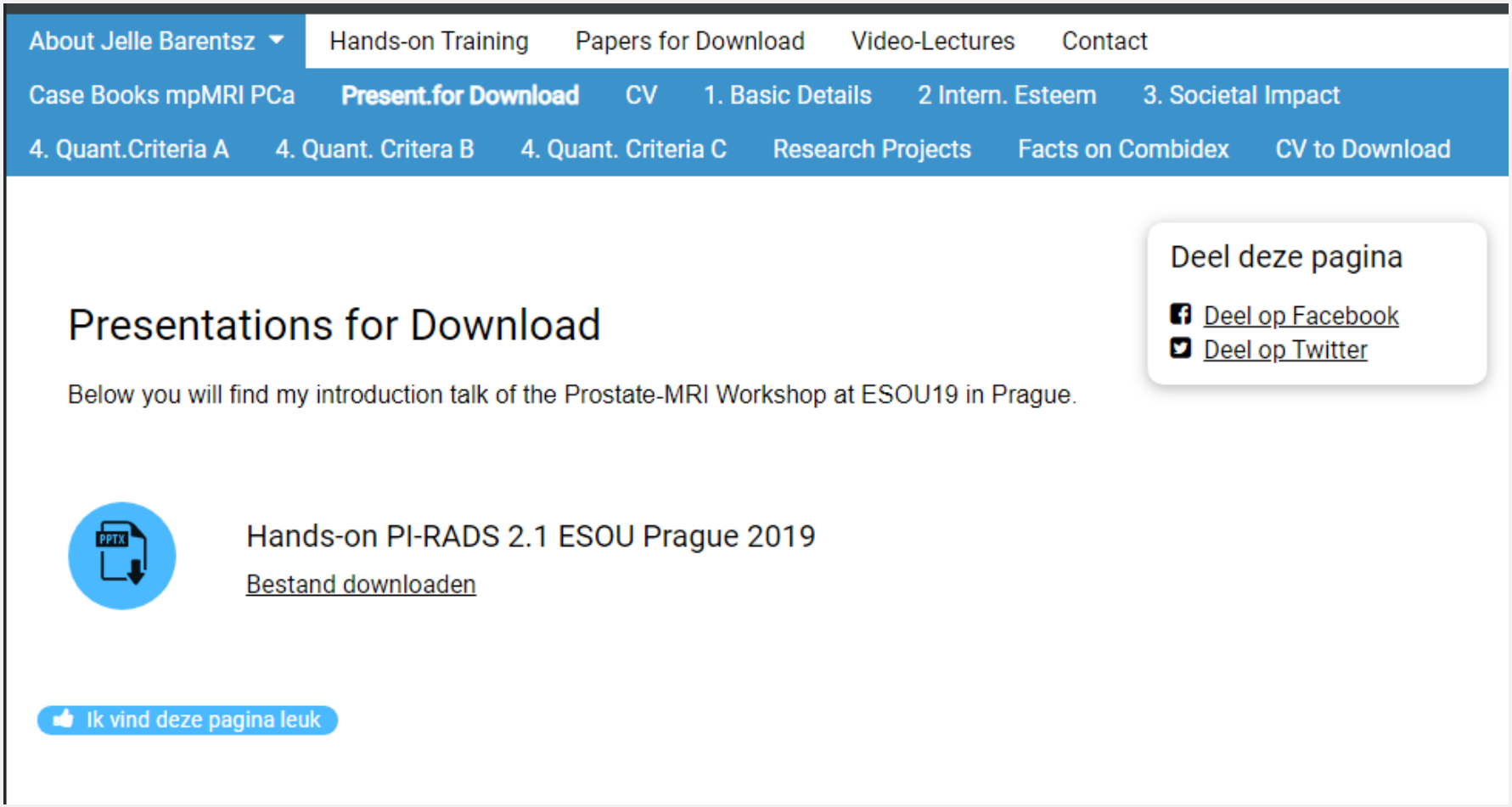




Score Pi-RADS

score de prédiction d’un cancer significatif

http://www.mri-prostate-barentsz.nl/441619543



Review – Prostate Cancer

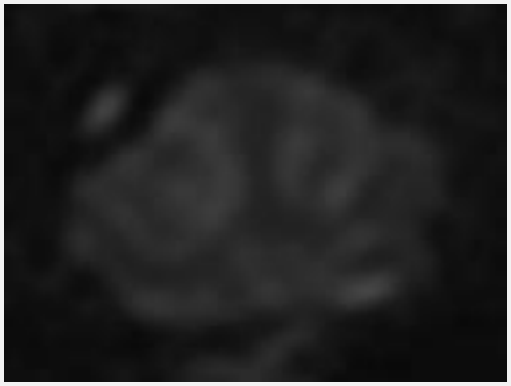
Prostate Imaging Reporting and Data System Version 2.1: 2019 Update of Prostate Imaging Reporting and Data System Version 2

Baris Turkbey[a,†,*], *Andrew B. Rosenkrantz*[b,†,*], *Masoom A. Haider*[c], *Anwar R. Padhani*[d], *Geert Villeirs*[e], *Katarzyna J. Macura*[f], *Clare M. Tempany*[g], *Peter L. Choyke*[a], *Francois Cornud*[h], *Daniel J. Margolis*[i], *Harriet C. Thoeny*[j], *Sadhna Verma*[k], *Jelle Barentsz*[l,‡], *Jeffrey C. Weinreb*[m,‡]

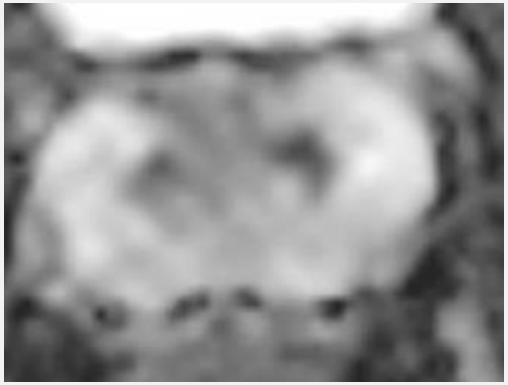
https://doi.org/10.1016/j.eururo.2019.02.033
0302-2838/Published by Elsevier B.V. on behalf of European Association of Urology.

Pi-RADS v.2 et v.2.1 - ZP

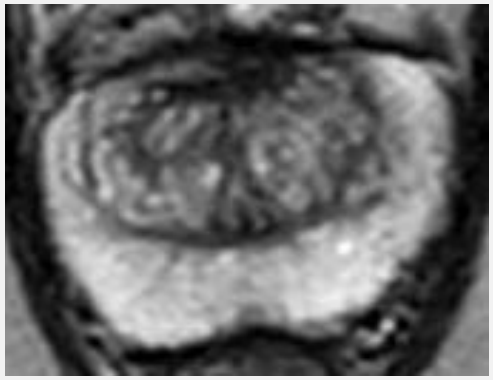
Pi-RADS 1



DWI nle

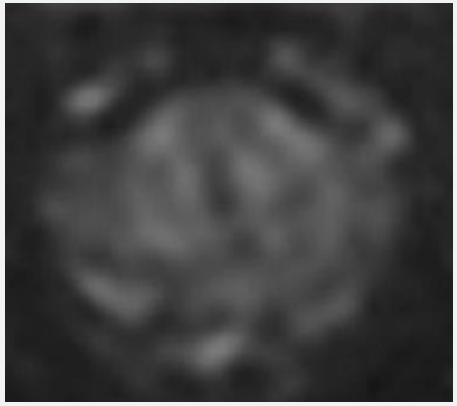


ADC élevé

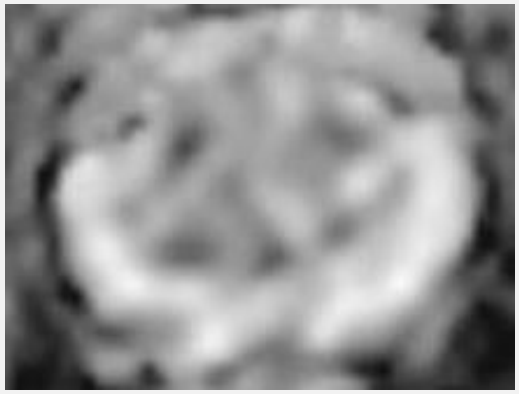


HyperT2

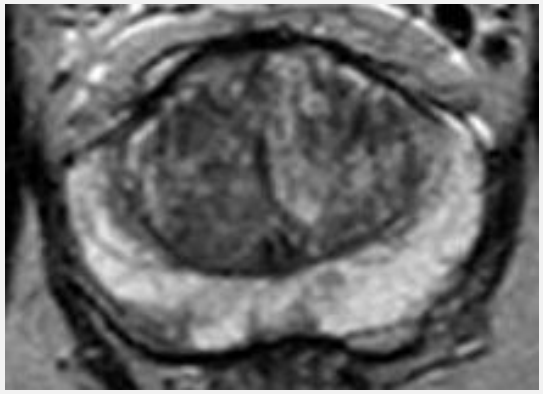
Pi-RADS 2



DWI
Non distinct



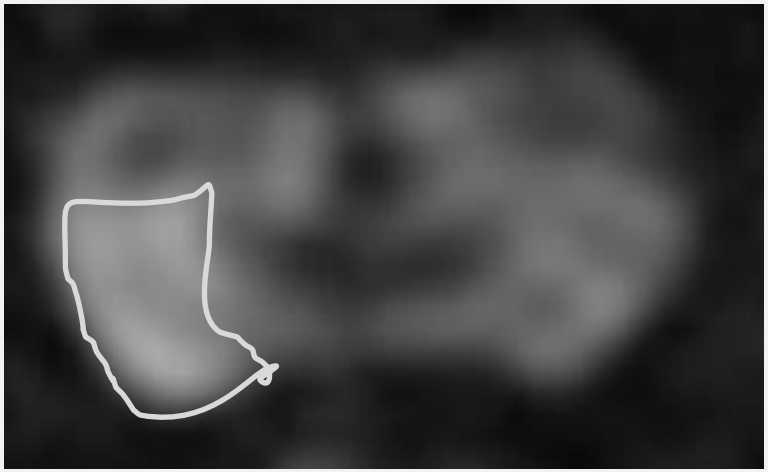
HypoADC
Non distinct



Zone hypoT2
linéaire, triangulaire

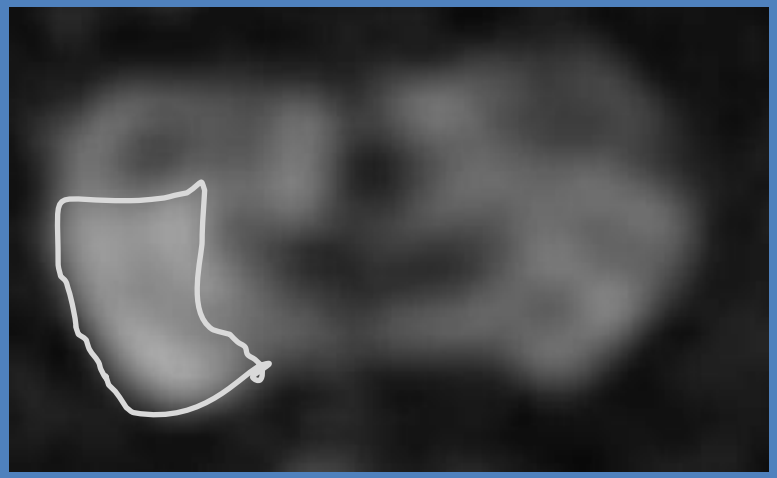
Changements ZP !

Pi-RADS v.2



SCORE Pi-RADS 3

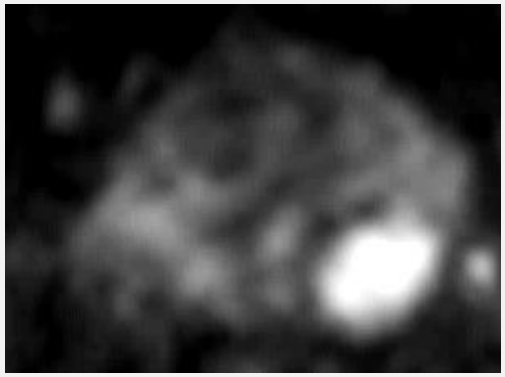
Pi-RADS v.2.1



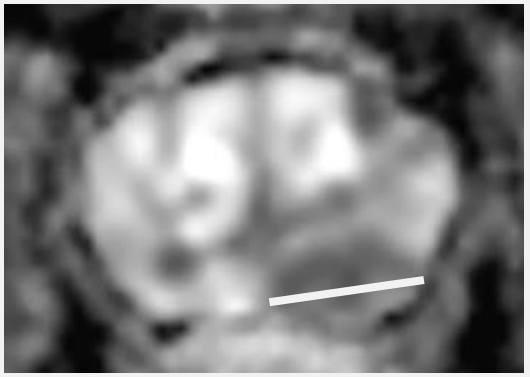
SCORE Pi-RADS 2

Pi-RADS v.2 et v.2.1 - ZP

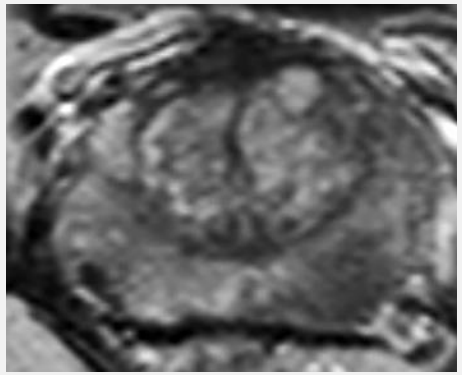
Pi-RADS 4



HyperDWI marqué

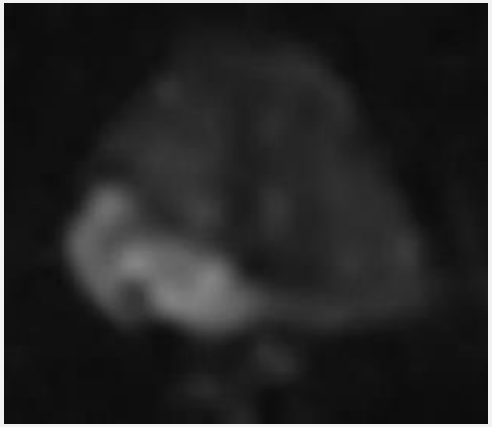


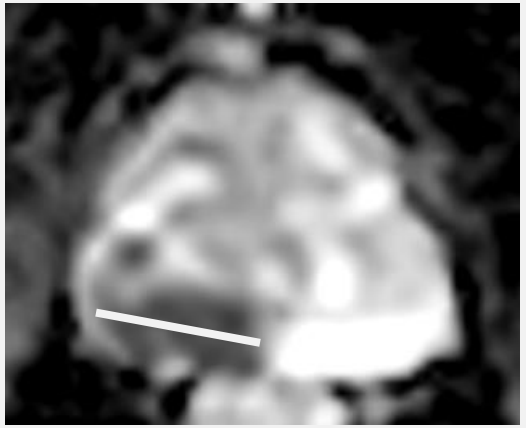
HypoADC marqué

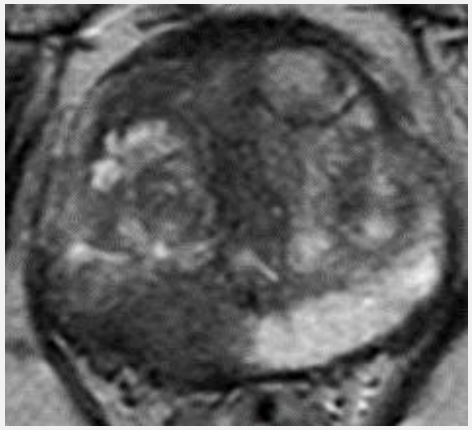


<1,5cm, nodule hypo

Pi-RADS 5



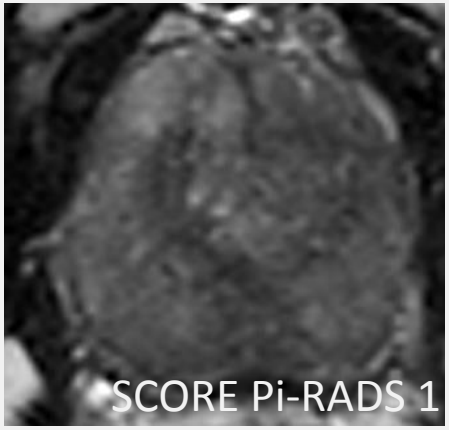


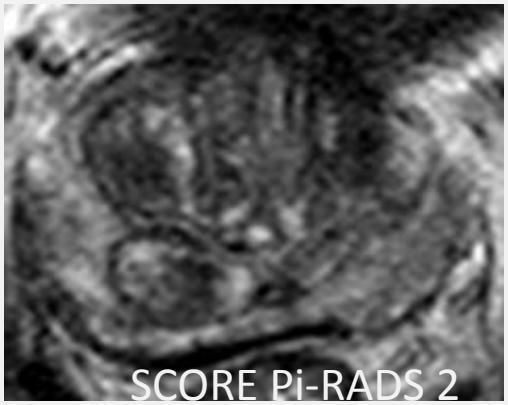


≥ 1,5cm ; extension extra-prostatique

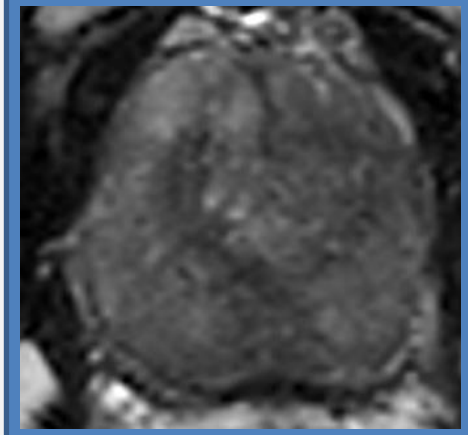
Changements ZT!

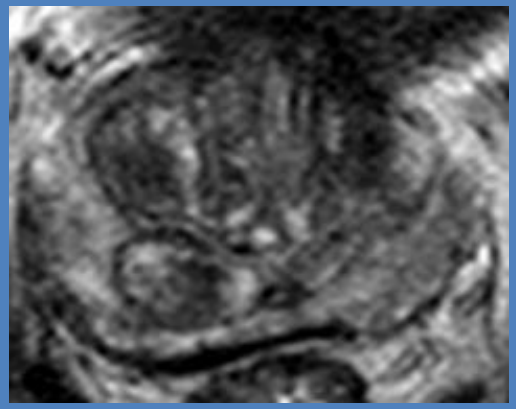
Pi-RADS v.2





Pi-RADS v.2.1

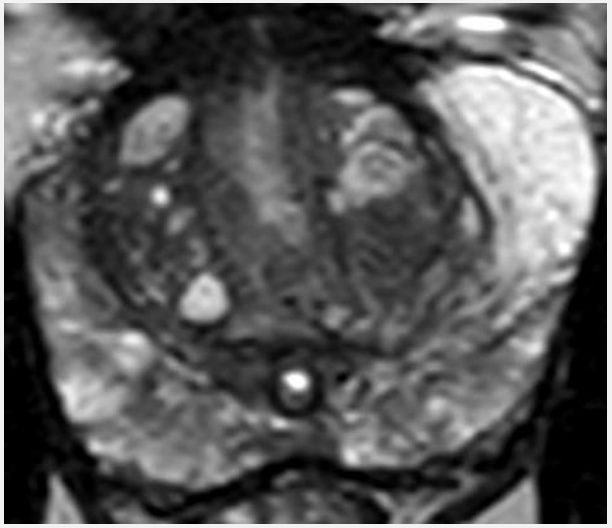




SCORE Pi-RADS 1

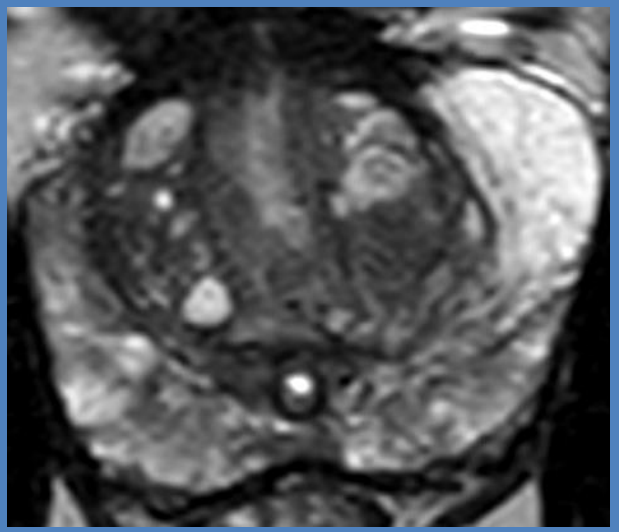
Changements ZT!

Pi-RADS v.2



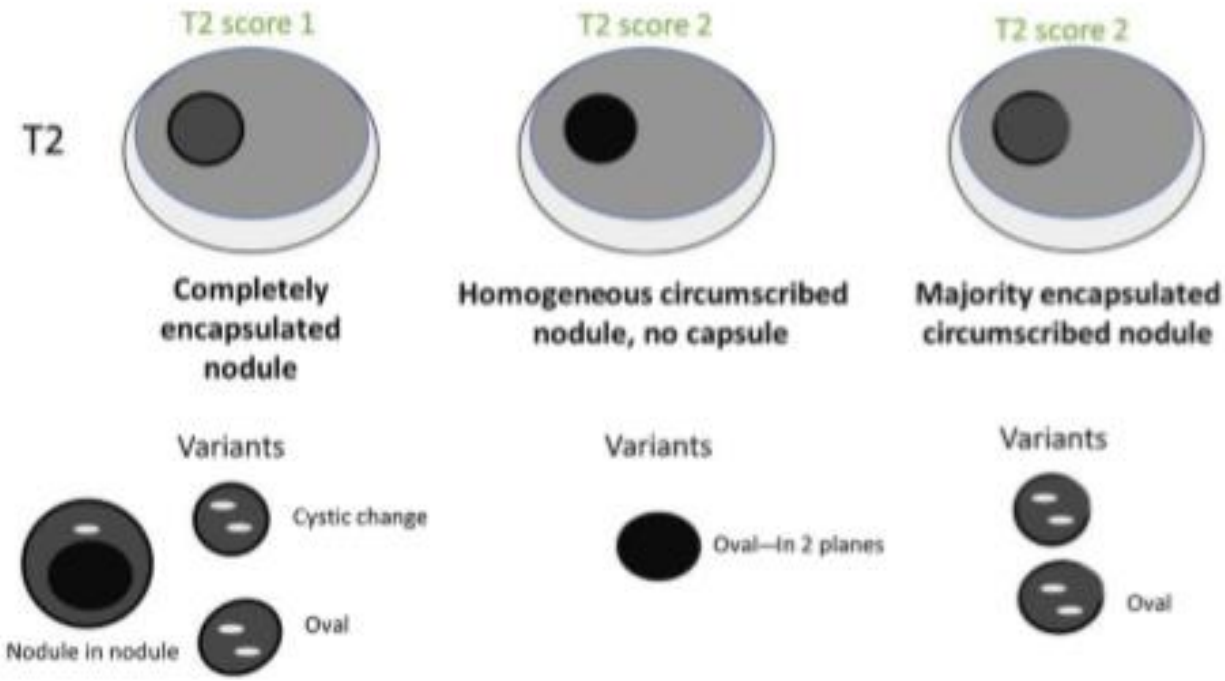
SCORE Pi-RADS 3

Pi-RADS v.2.1



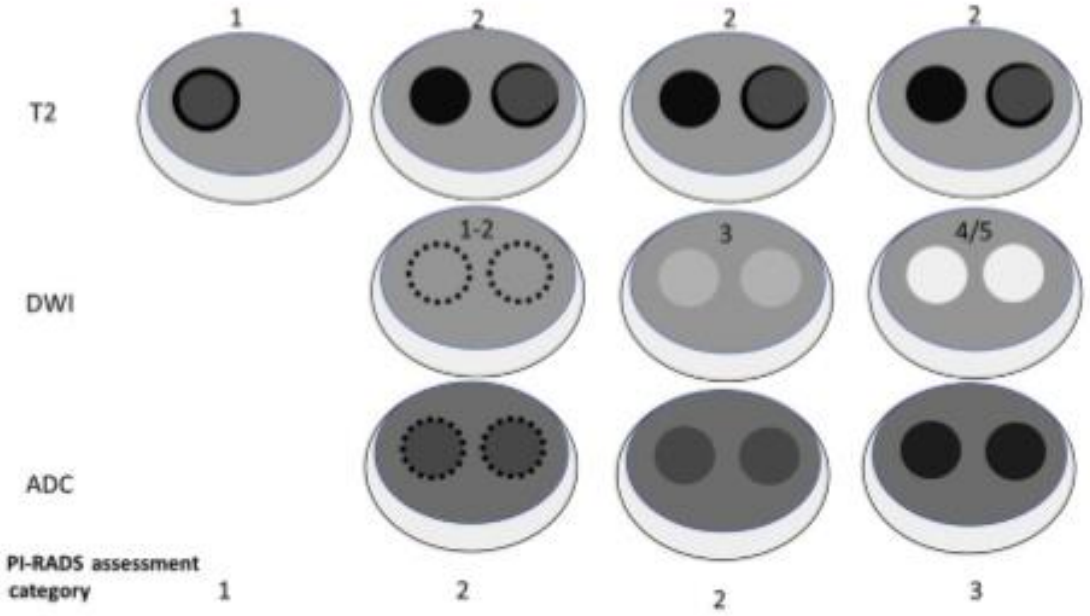
SCORE Pi-RADS 2

Pi-RADS v.2 - ZT



Prostate Imaging Reporting and Data System Version 2.1: 2019 Update of Prostate Imaging Reporting and Data System Version 2

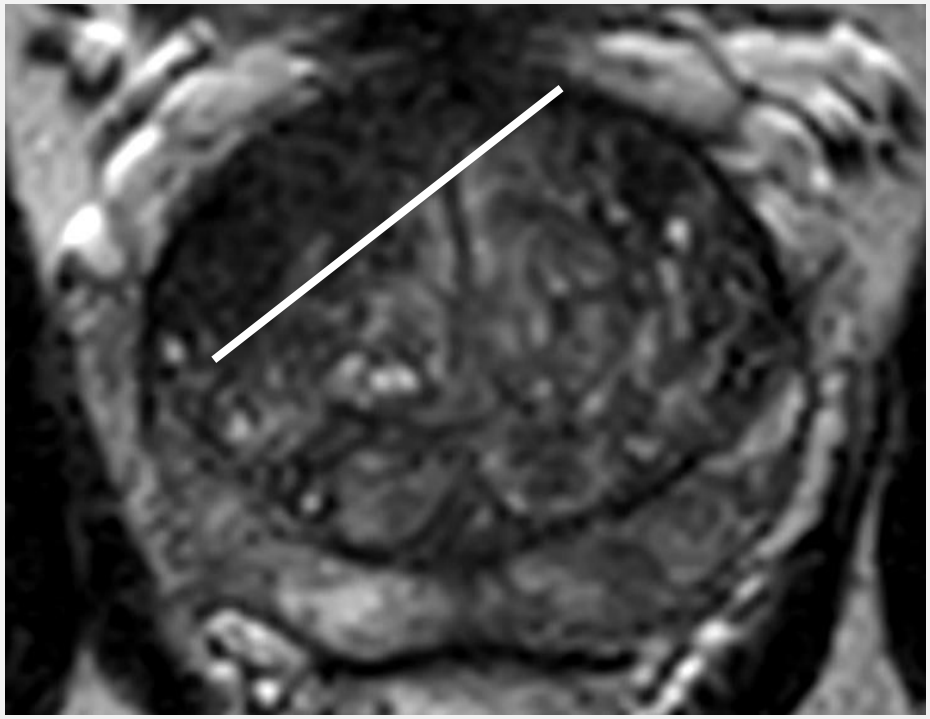
Pi-RADS v.2.1 - ZT



Prostate Imaging Reporting and Data System Version 2.1: 2019 Update of Prostate Imaging Reporting and Data System Version 2

Pi-RADS v.2 et v.2.1- ZT

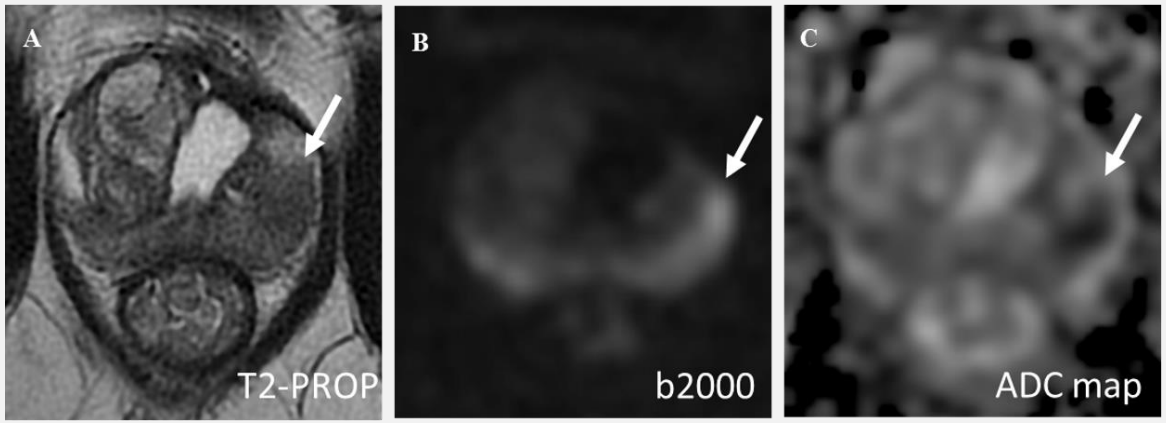
Pi-RADS 4 / 5



Lenticulaire, non circonscrite, homogène, modérément hypoT2 < ou ≥ 1,5 cm

Peut-on omettre l'IV de Gado?

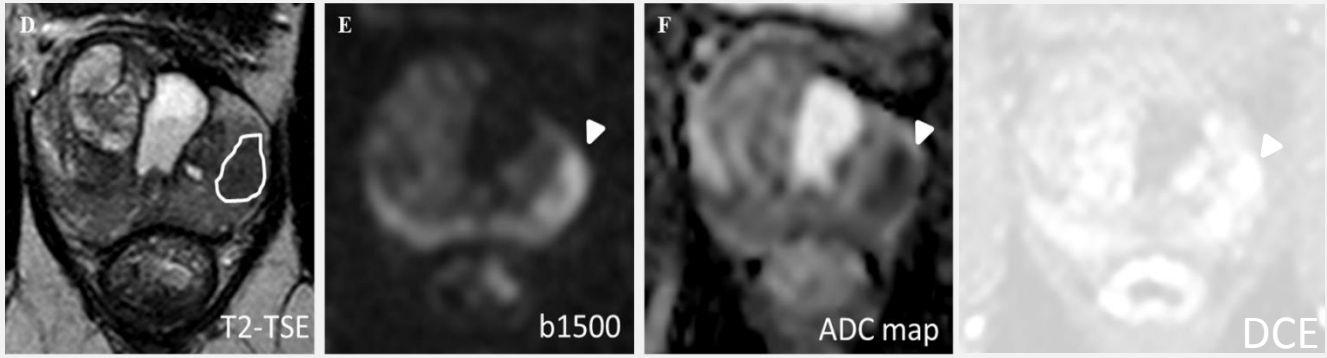
15'



?

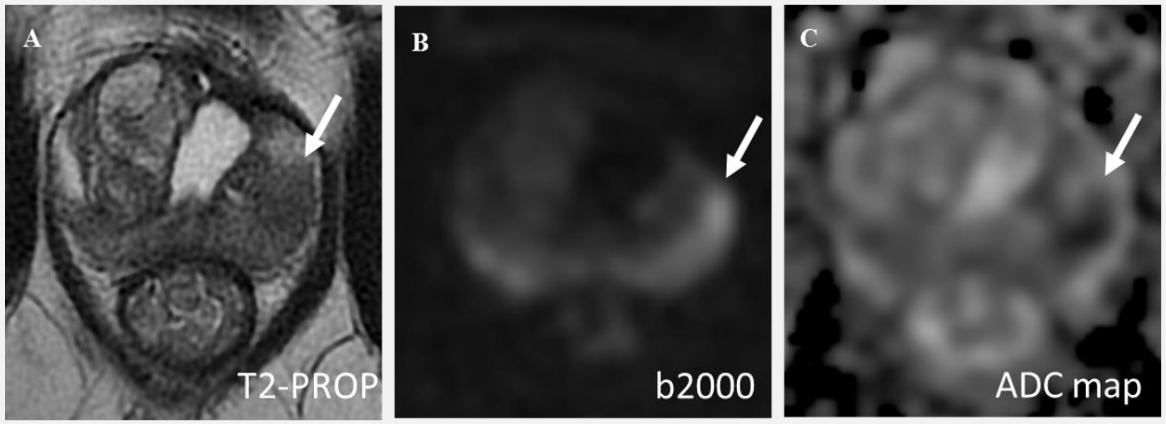
IV

25'



Peut-on omettre l'IV de Gado?

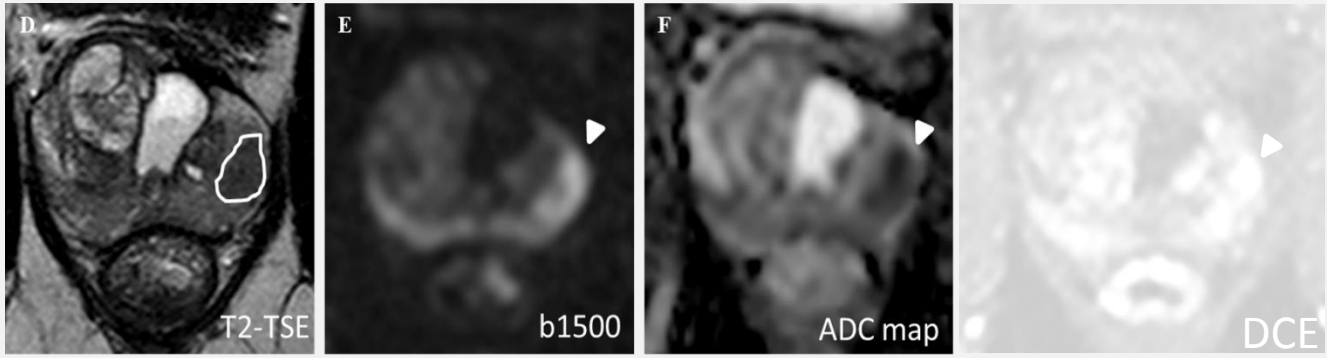
15'



Pas de données suffisantes

IV

25'



IRM prostate biparamétrique

JAMA Network | Open

Original Investigation | Urology

Assessment of the Diagnostic Accuracy of Biparametric Magnetic Resonance Imaging for Prostate Cancer in Biopsy-Naive Men

The Biparametric MRI for Detection of Prostate Cancer (BIDOC) Study

Lars Boesen, MD, PhD; Nis Nørgaard, MD; Vibeke Løgager, MD; Ingegerd Balslev, MD; Rasmus Bisbjerg, MD; Karen-Cecilie Thestrup, MD; Mads D. Winther; Henrik Jakobsen, MD; Henrik S. Thomsen, DMC

- 30% biopsie

+ 11% cs Pca
- 40% PCa indolent
NPV 97%

JMRI Journal of Magnetic Resonance Imaging | ISMRM ONE

Original Research

Novel biparametric MRI and targeted biopsy improves risk stratification in men with a clinical suspicion of prostate cancer (IMPROD Trial)

Ivan Jambor MD, Peter J. Boström MD, PhD, Pekka Taimen MD, PhD, Kari Syvänen MD, PhD, Esa Kähkönen MD, Markku Kallajoki MD, PhD, Ileana Montoya Perez MSc, ... See all authors

- 24% biopsie

+ 16% cs Pca
- 8 % PCa indolent

IRM prostate biparamétrique

Genitourinary Imaging • Original Research

Sensibilité mpMRI>bpMRI

Diagnostic Performance of Biparametric MRI for Detection of Prostate Cancer: A Systematic Review and Meta-Analysis

Spécificité bp = mpMRI

CONCLUSION. The results of this meta-analysis suggest that bpMRI has high diagnostic accuracy in the detection of PCa and maintains a high detection rate for clinically relevant PCa. However, owing to high heterogeneity among the included studies, caution is needed in applying the results of the meta-analysis.

AJR:211, August 2018

What Are We Missing? False-Negative Cancers at Multiparametric MR Imaging of the Prostate[1]

Figure 6

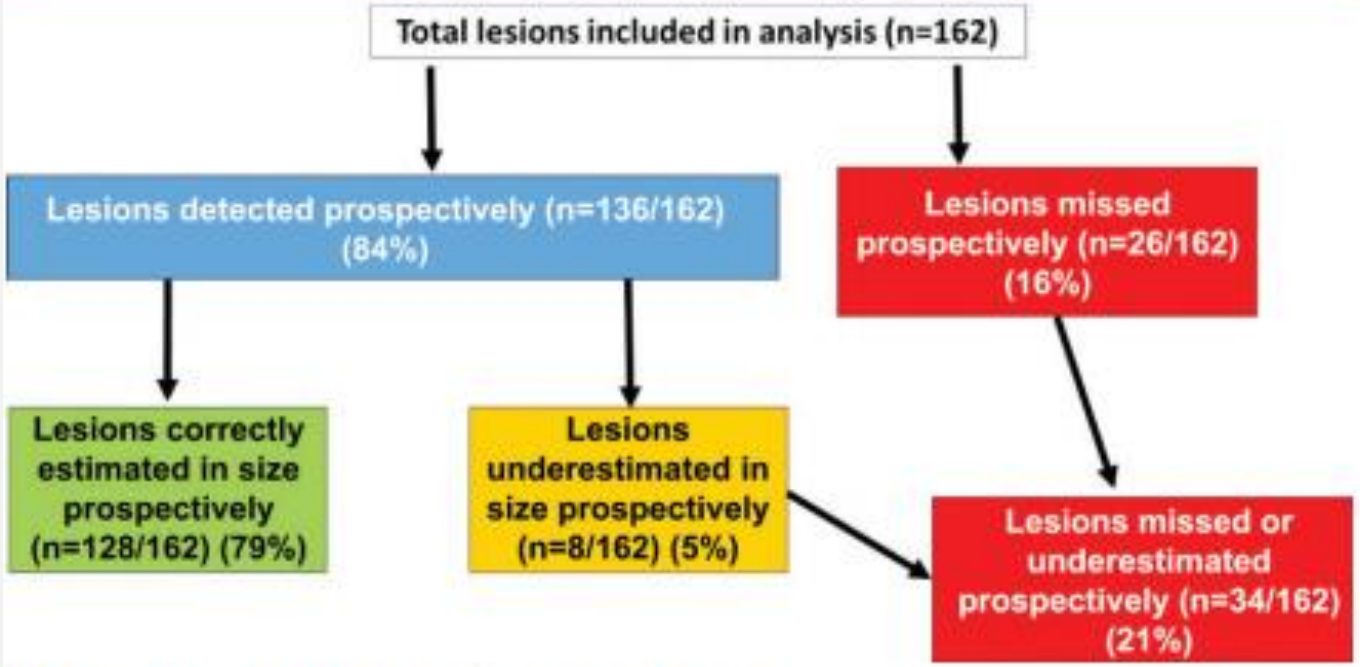


Figure 6: Flowchart shows results of lesion-based analysis.

What Are We Missing? GS 3+4

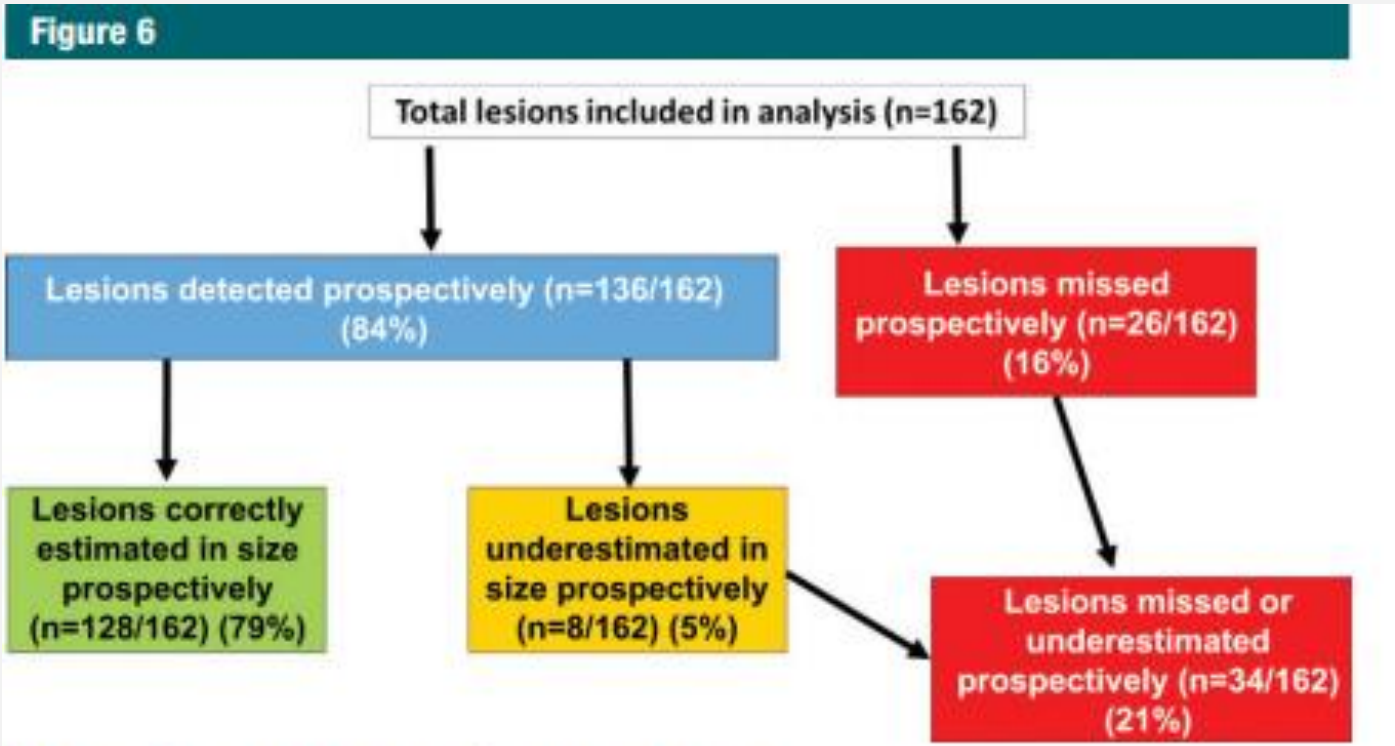
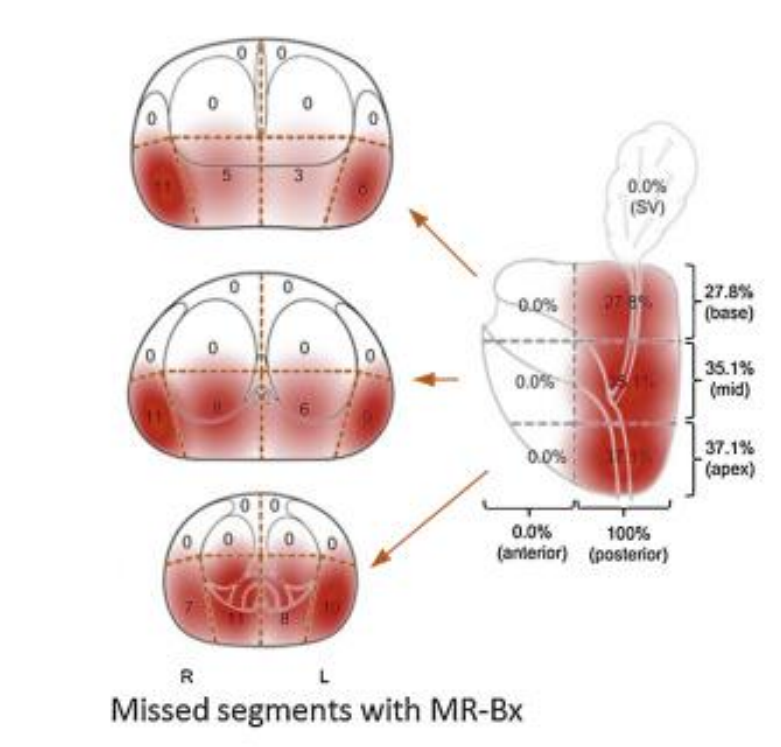


Figure 6: Flowchart shows results of lesion-based analysis.

Platinum Priority – Prostate Cancer

Editorial by Gianluca Giannarini, Alessandro Crestani, Marta Rossanese and Vincenzo Ficarra on pp. 904–906 of this issue

Why and Where do We Miss Significant Prostate Cancer with Multi-parametric Magnetic Resonance Imaging followed by Magnetic Resonance-guided and Transrectal Ultrasound-guided Biopsy in Biopsy-naïve Men?



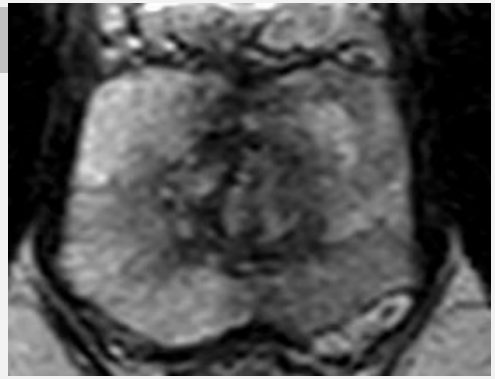
Missed segments with MR-Bx

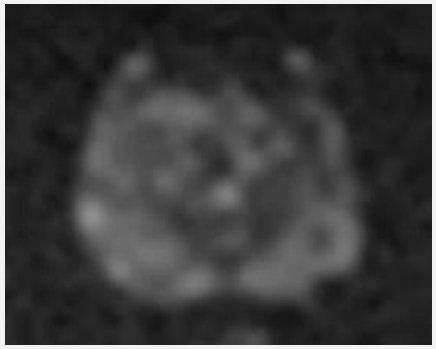
TZ et CZ
SUBCAPSULAR

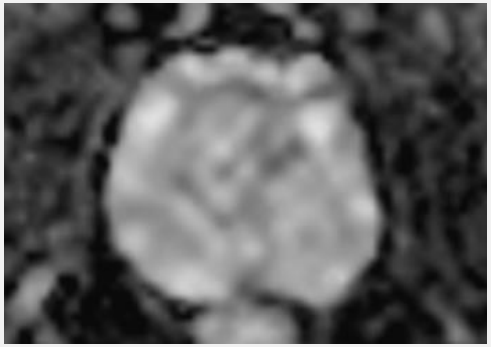
EUROPEAN UROLOGY 71 (2017) 896–903

PATTERN CRIBIFORM

MICROFOCAL
% PATTERN 4



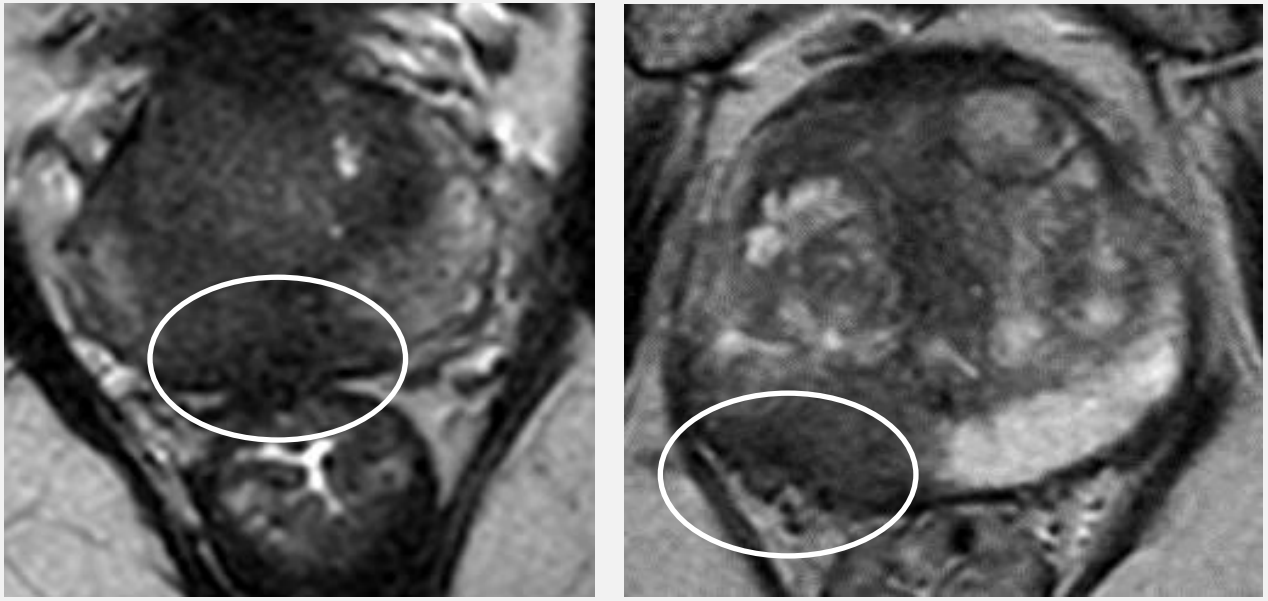




53 ans, PSA 11ng/ml, Pi-RADS 2.
Gleason 4+4 (58% of 15mm)

Bilan d’extension-T3a

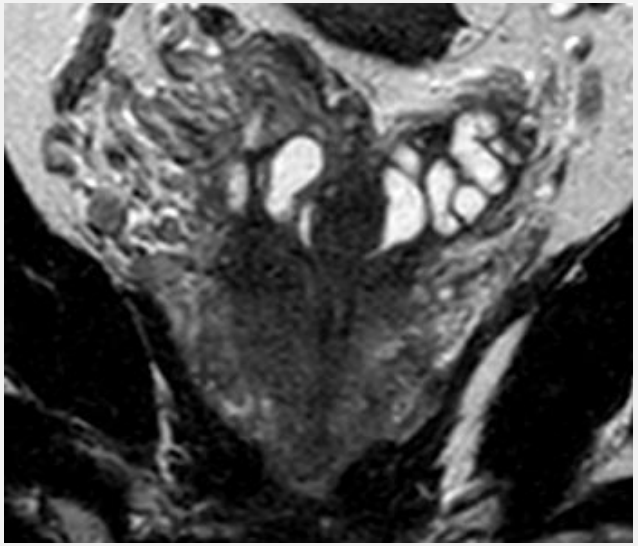
Se 49-64%
Sp 88-93%

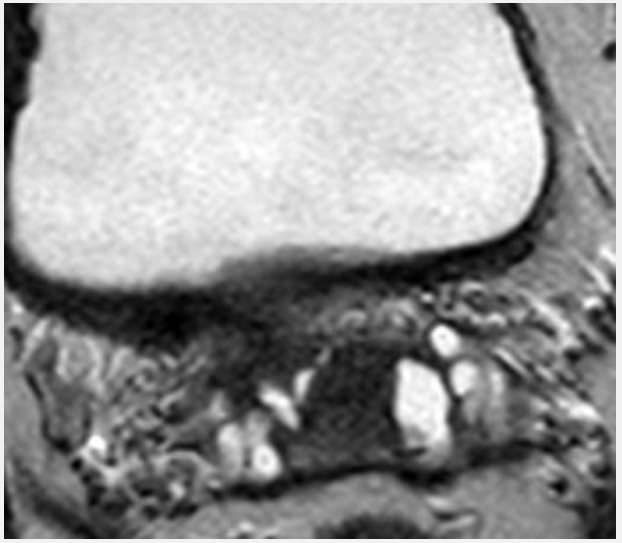


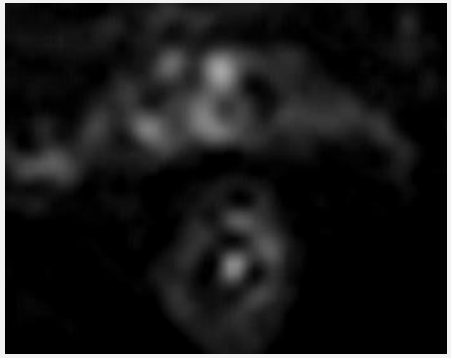
De Rooij M et al. 2016

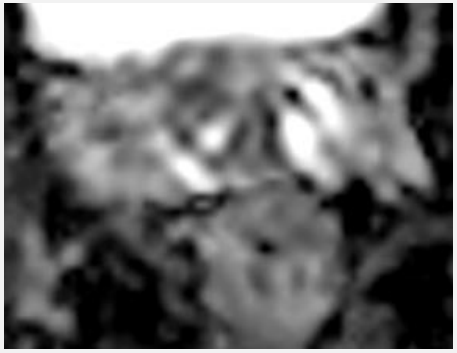
Bilan d’extension-T3b

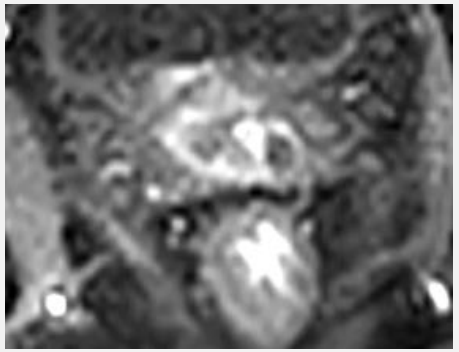
Se 47-68%
Sp 95-97%





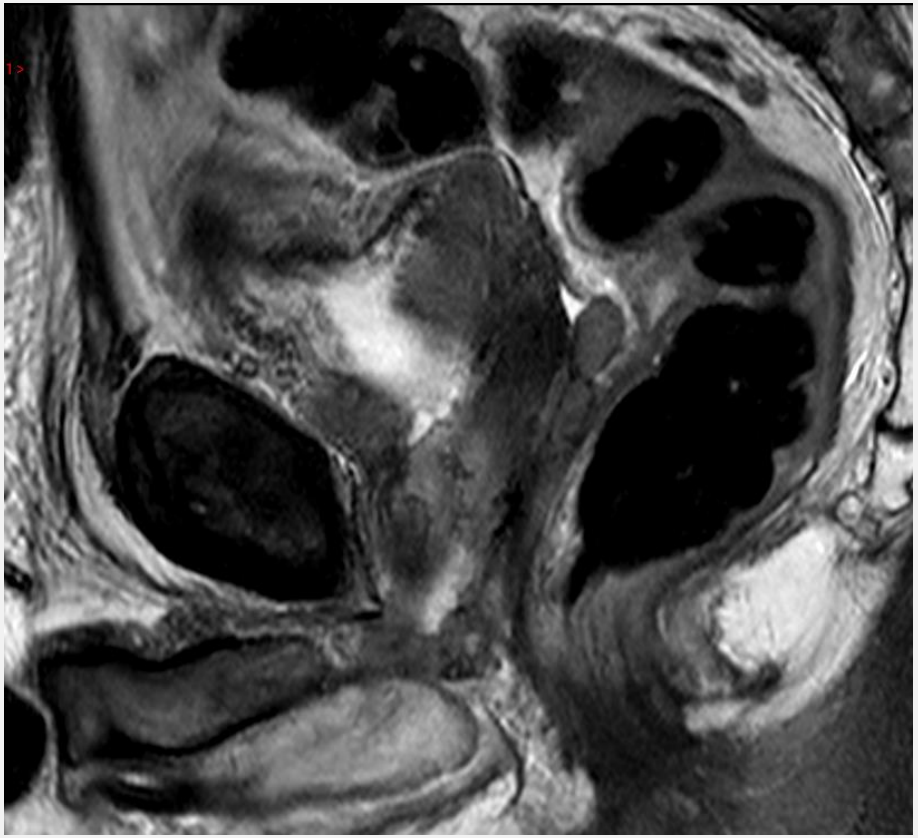


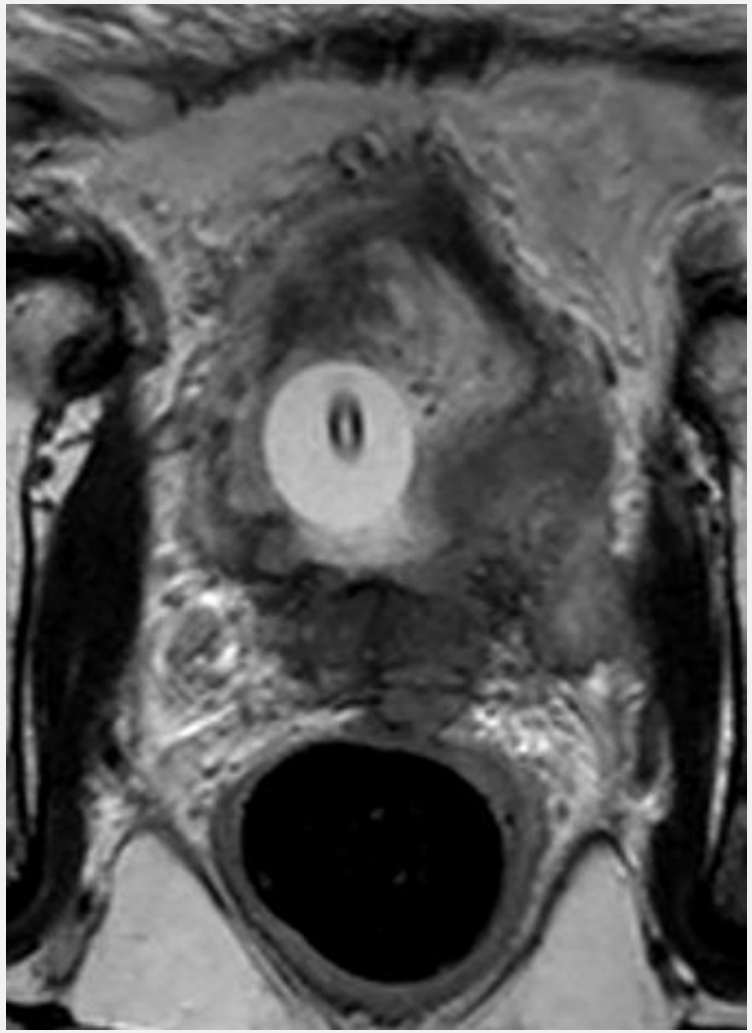




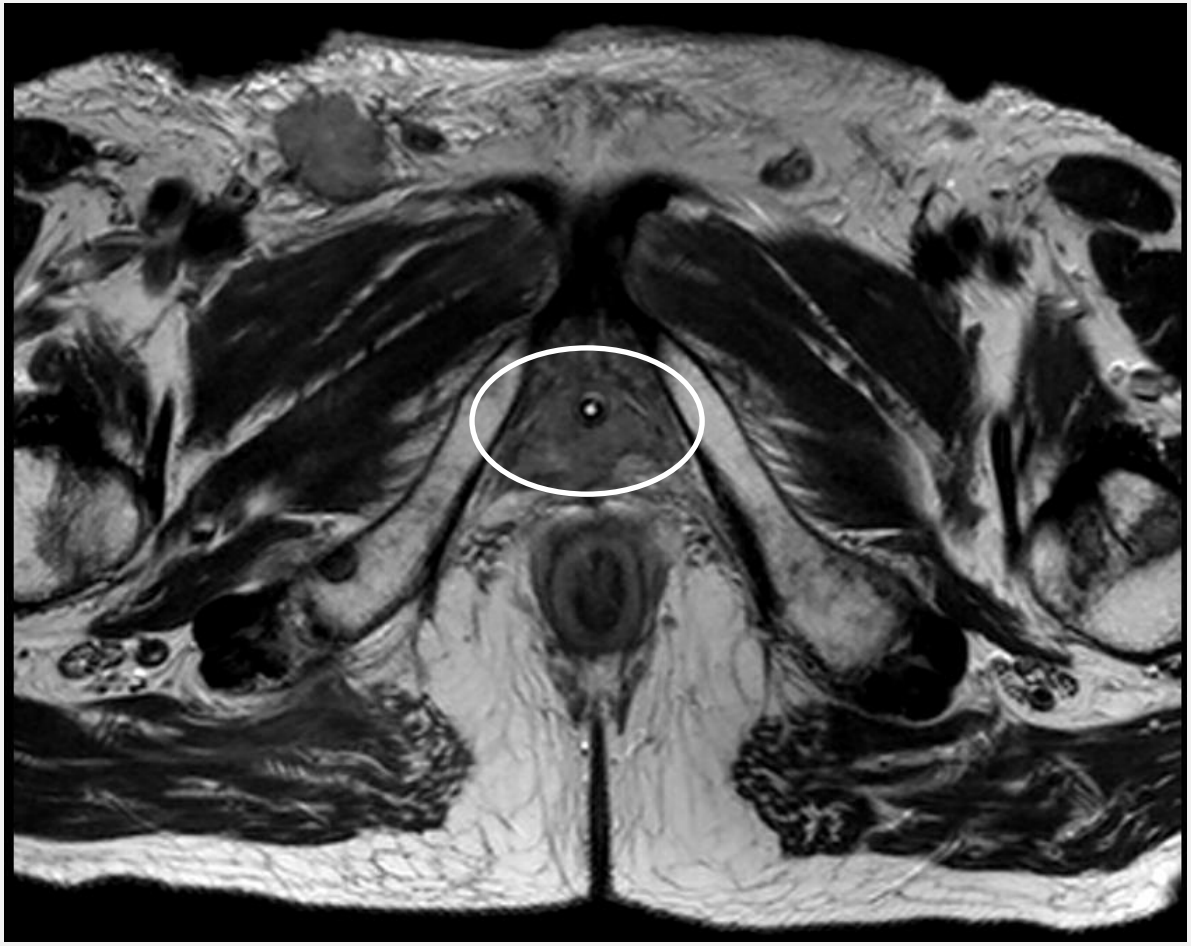
De Rooij M et al. 2016

Bilan d’extension-T4



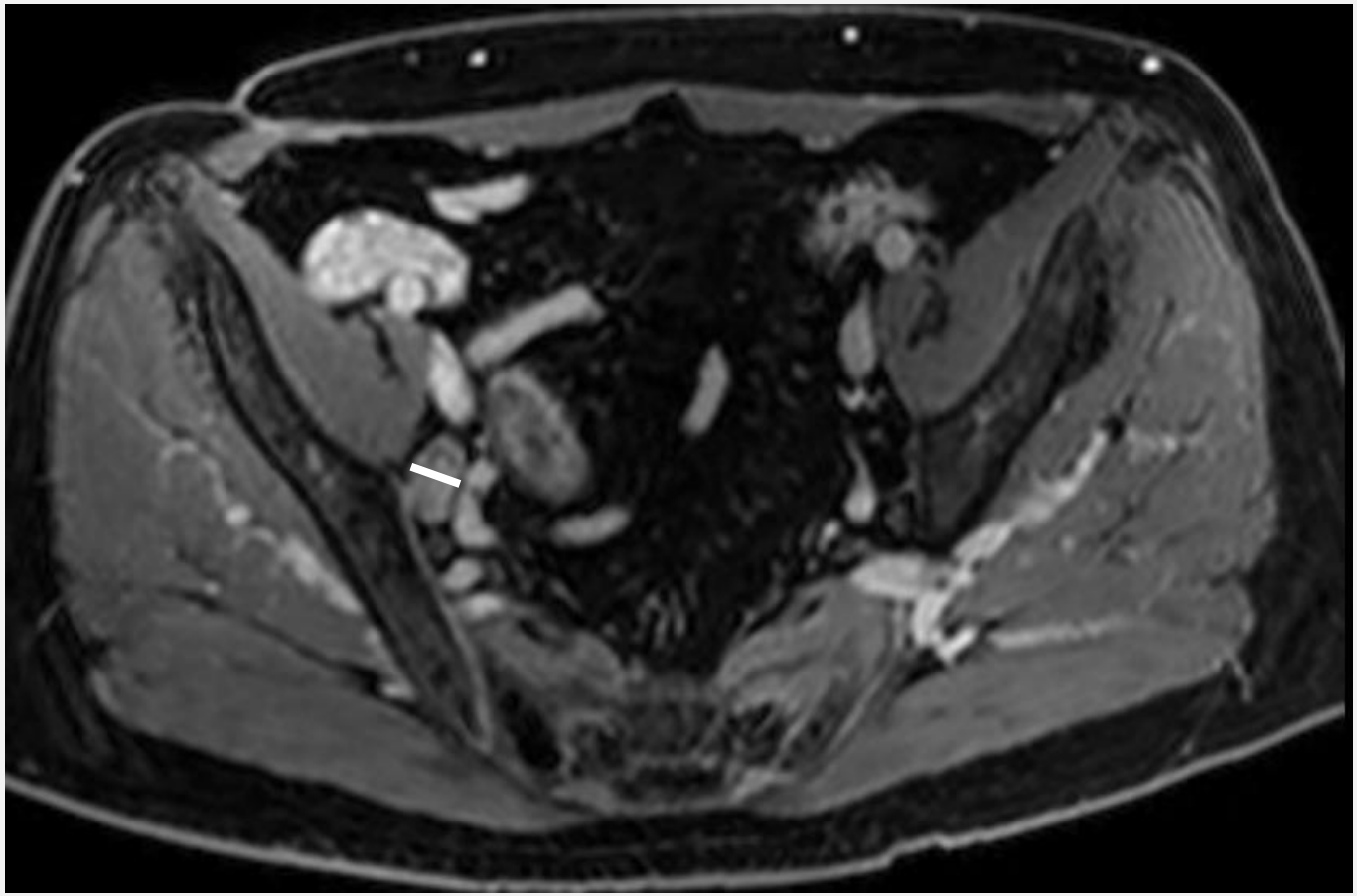


Bilan d’extension- T4

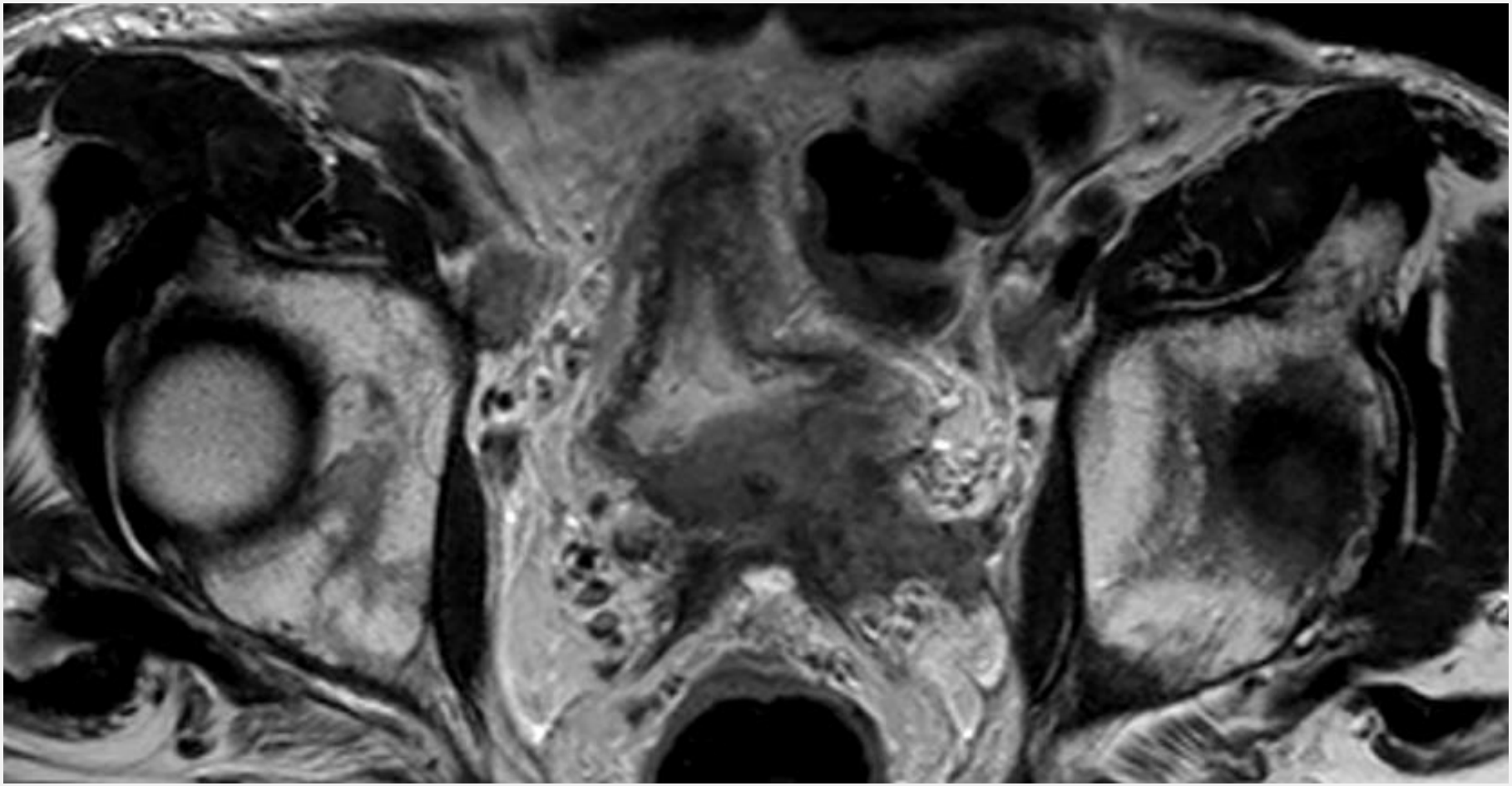


Bilan d’extension-N

- Ganglion >8 mm



Bilan d’extension-M



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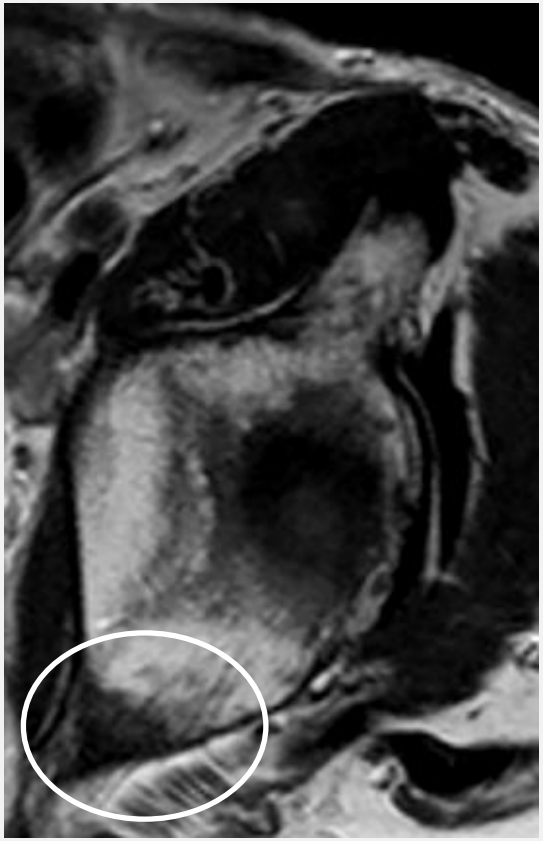

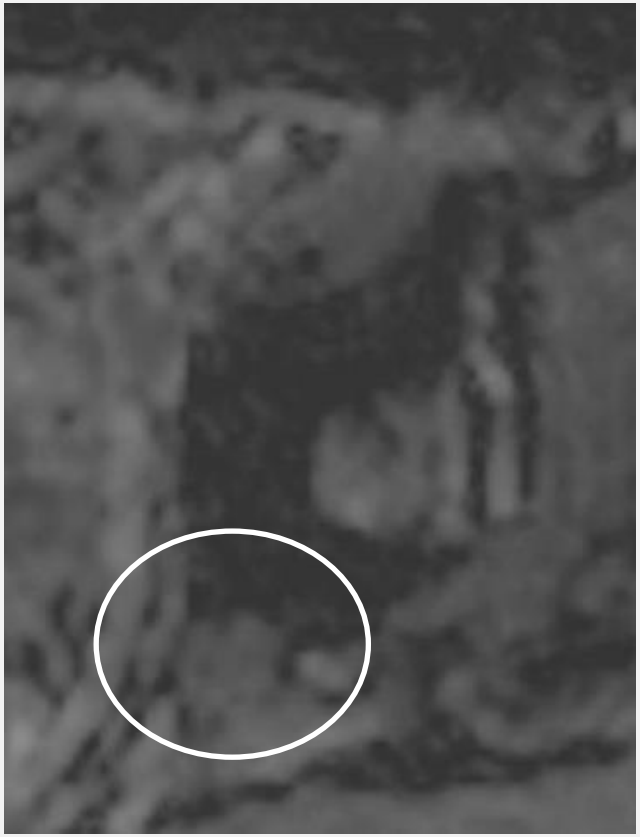

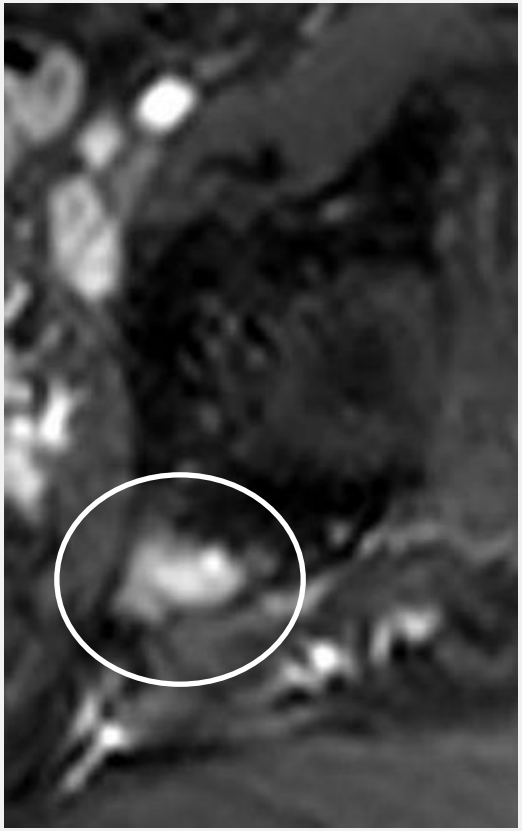

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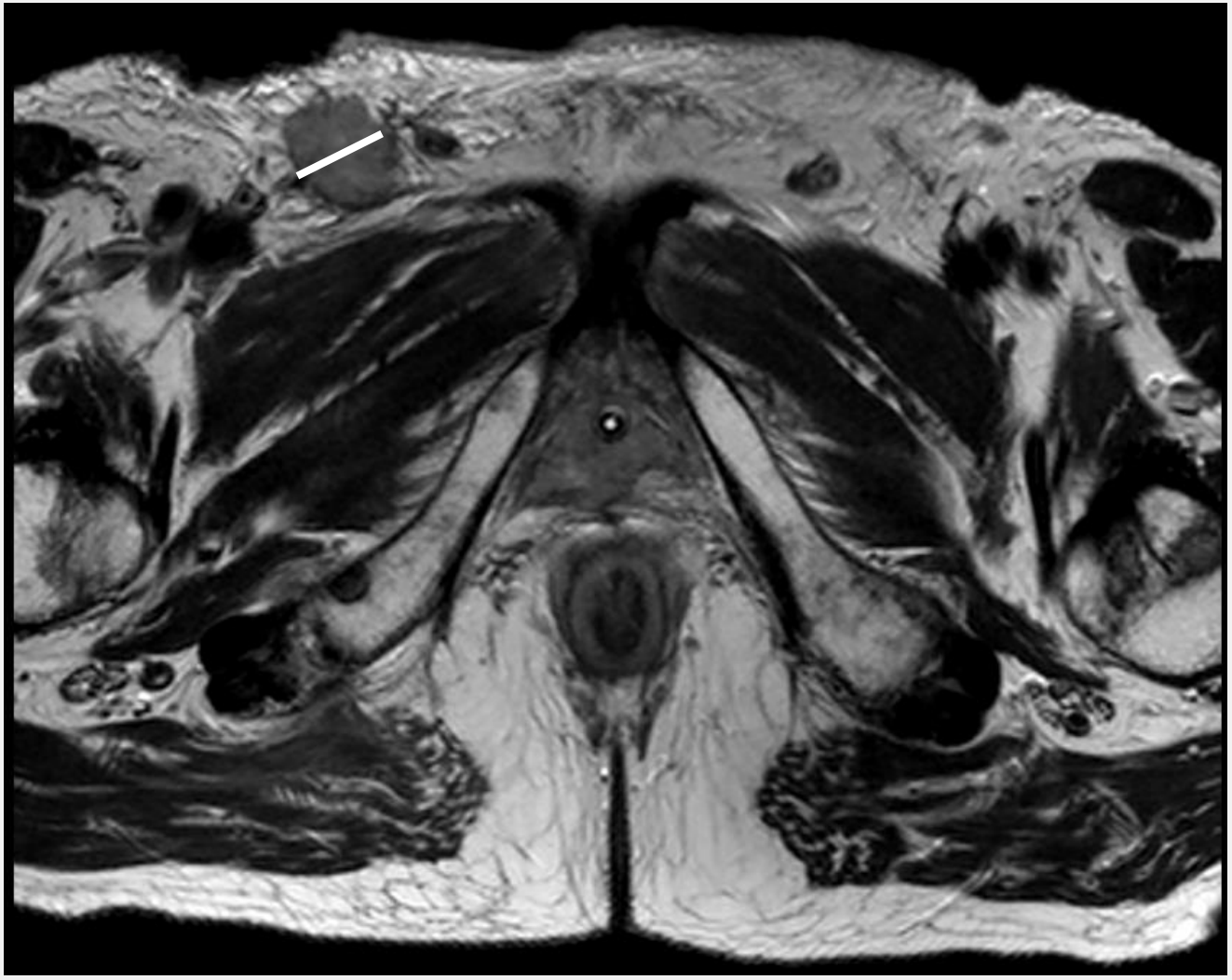
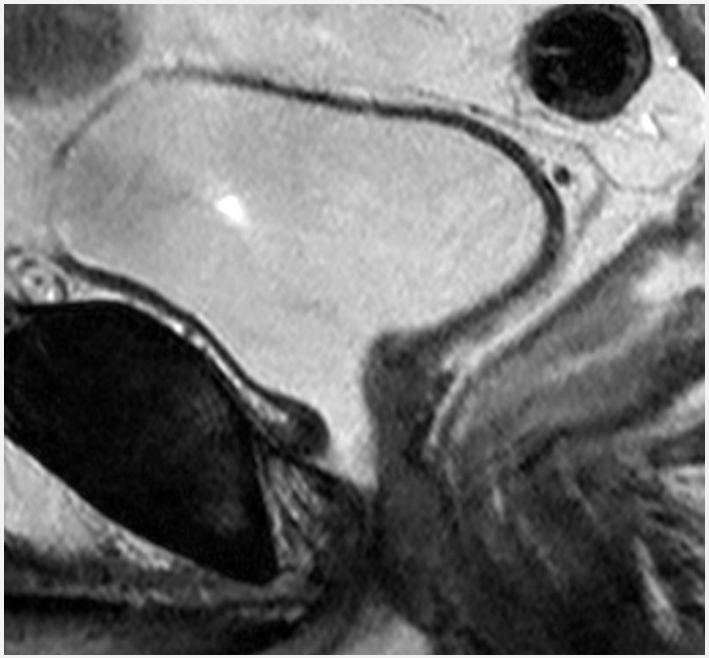
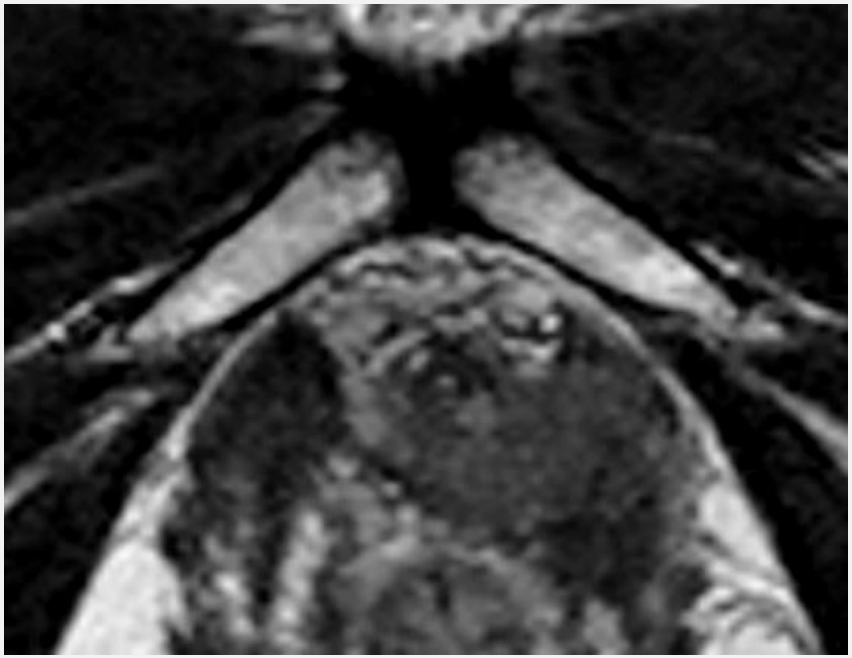


Récidive

- PRT

Prostate-specific antigen (PSA) recurrence after radical prostatectomy	LE	Strength rating
Perform imaging only if the outcome will influence subsequent treatment decisions.		Strong
If the PSA level is ≥ 1 ng/mL, perform a prostate-specific membrane antigen positron emission tomography computed tomography (PSMA PET/CT), if available, or a choline PET/CT imaging otherwise.	2b	Weak



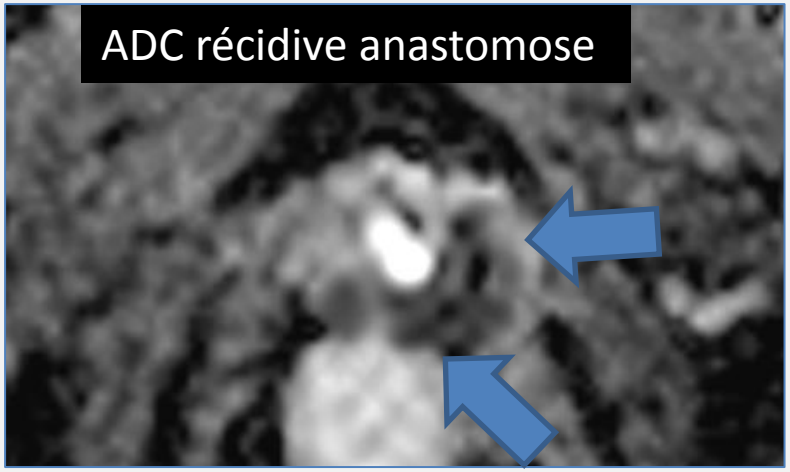


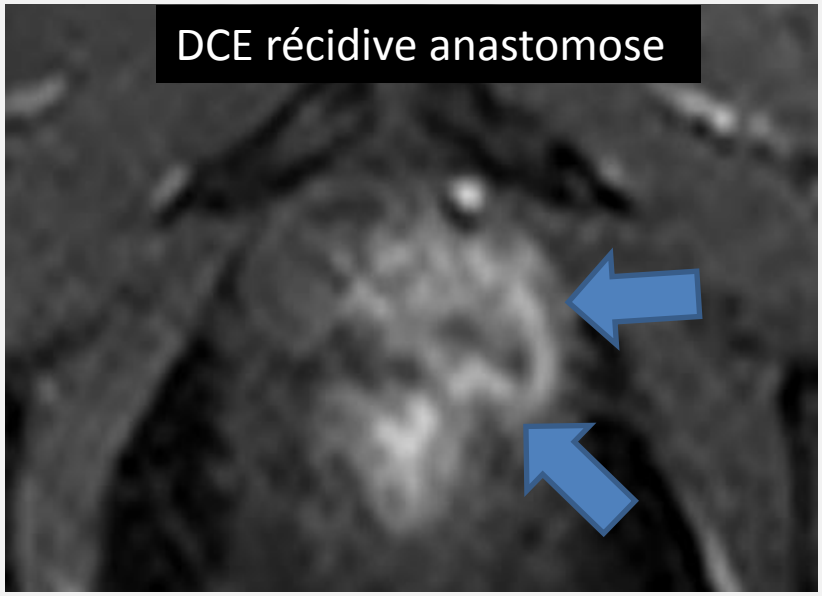
EAU-ESUR-ESTRO-SIOG-Guidelines-on-Prostate-Cancer

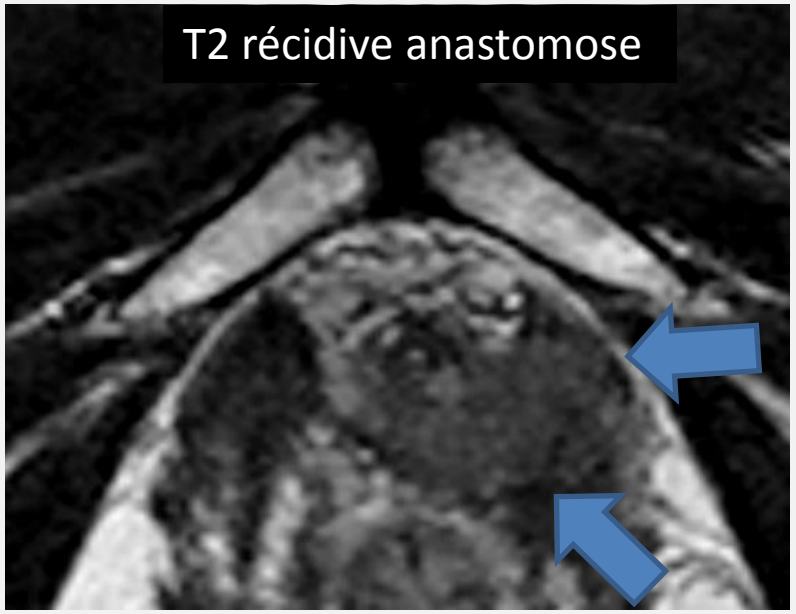
Récidive

- Post PRT

Se 84-100%
Sp 89-97%





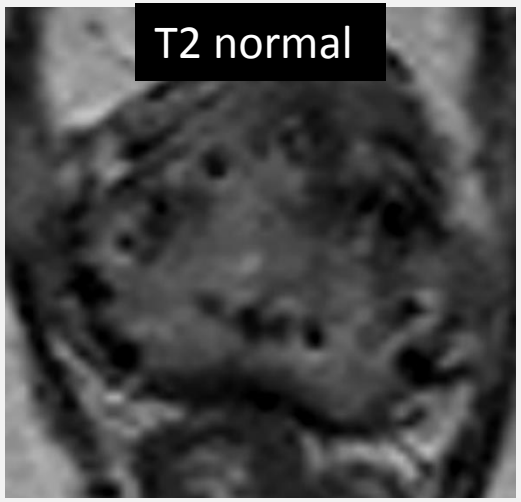


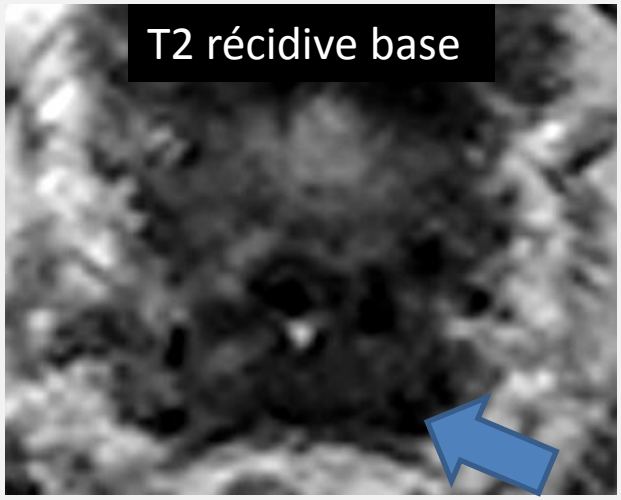
Récidive

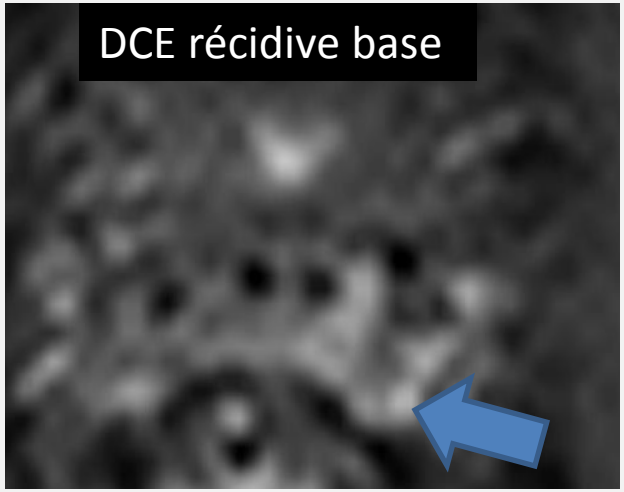
Se 90%
Sp 81%

- Brachythérapie / radiothérapie

PSA recurrence after radiotherapy		
Perform prostate multiparametric magnetic resonance imaging to localise abnormal areas and guide biopsies in patients who are considered candidates for local salvage therapy.	3	Strong
Perform PSMA PET/CT (if available) or choline PET/CT imaging to rule out positive lymph nodes or distant metastases in patients fit for curative salvage treatment.	2b	Strong



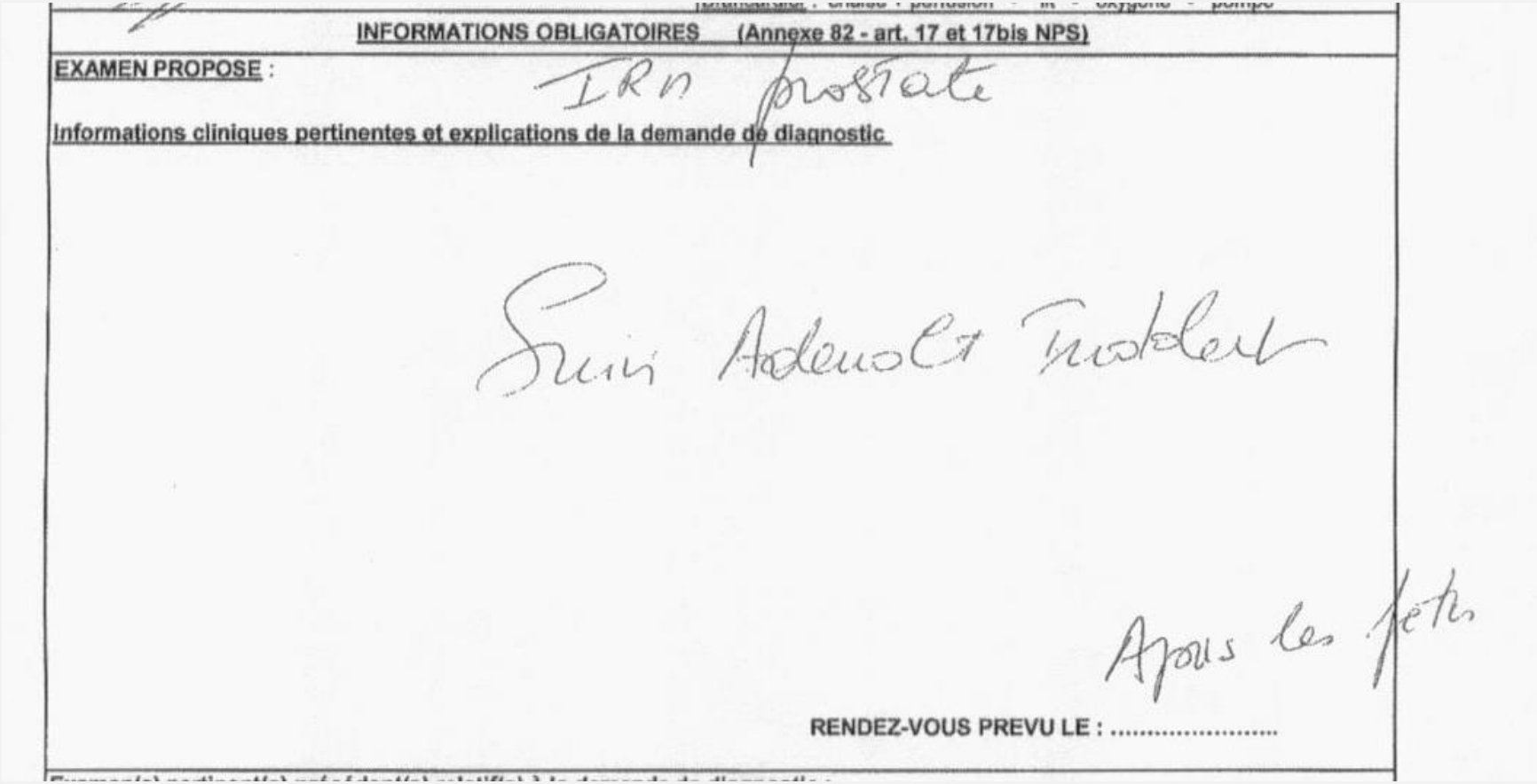




EAU-ESUR-ESTRO-SIOG-Guidelines-on-Prostate-Cancer

CAS CLINIQUES

Cas 1



INFORMATIONS OBLIGATOIRES (Annexe 82 - art. 17 et 17bis NPS)

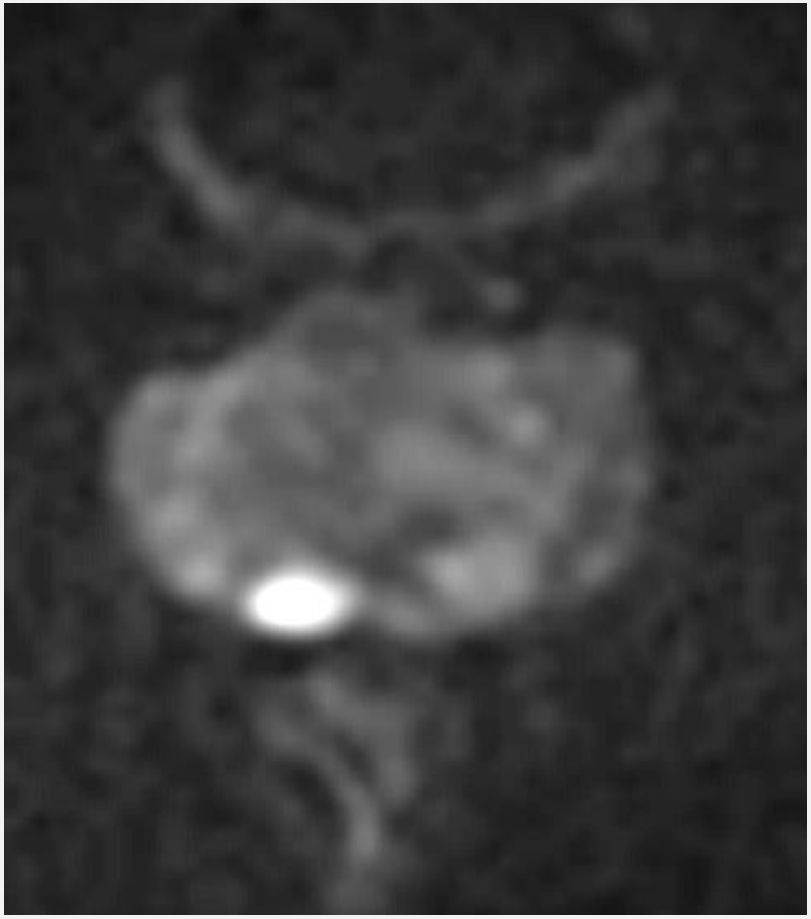
EXAMEN PROPOSE : IRM prostate

Informations cliniques pertinentes et explications de la demande de diagnostic

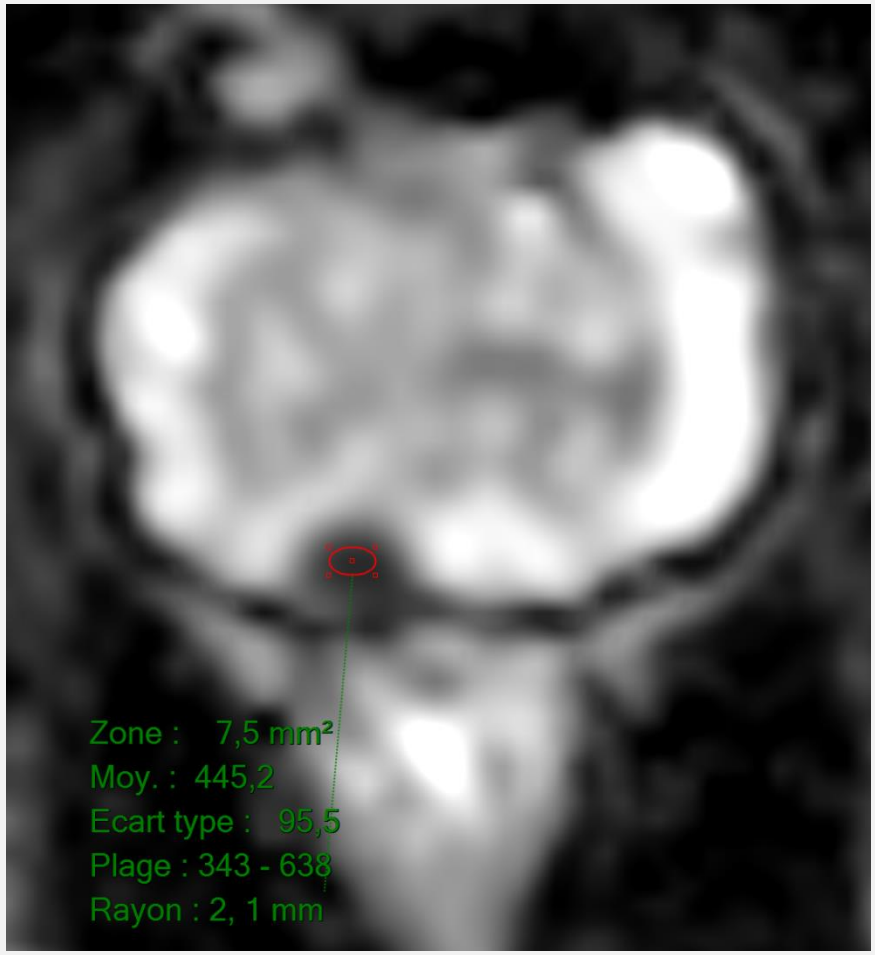
Suivi Adénocarcinome

Après les fêtes

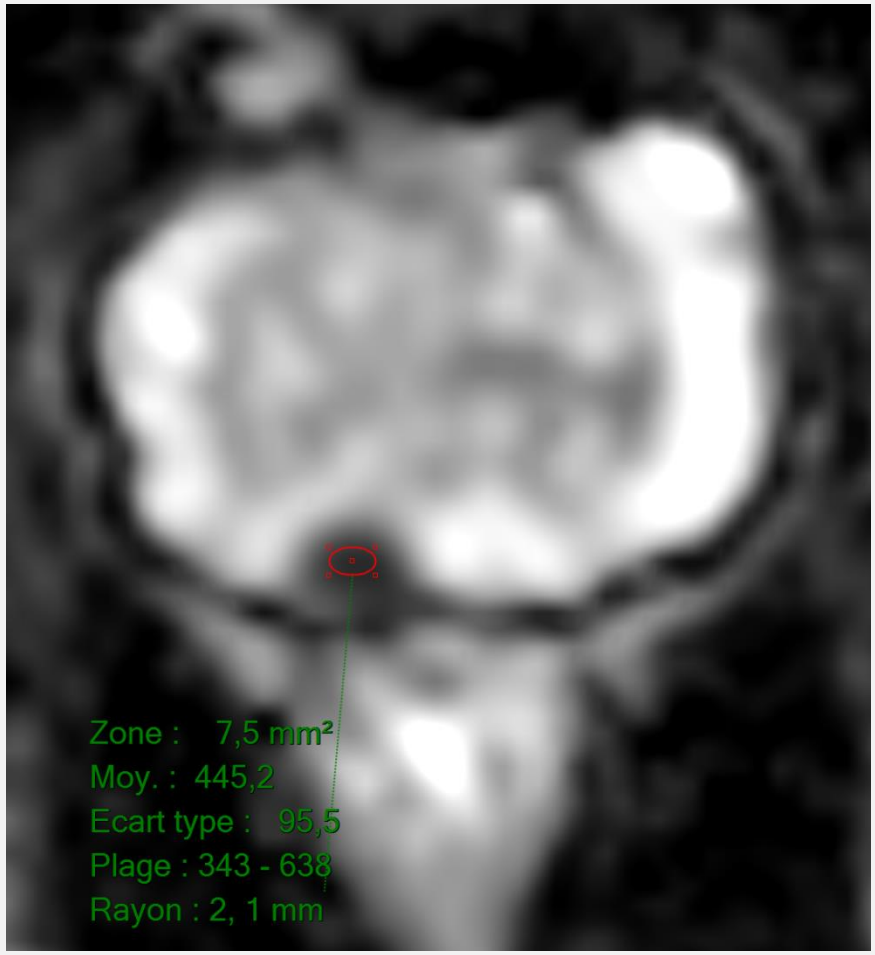
RENDEZ-VOUS PREVU LE : .....



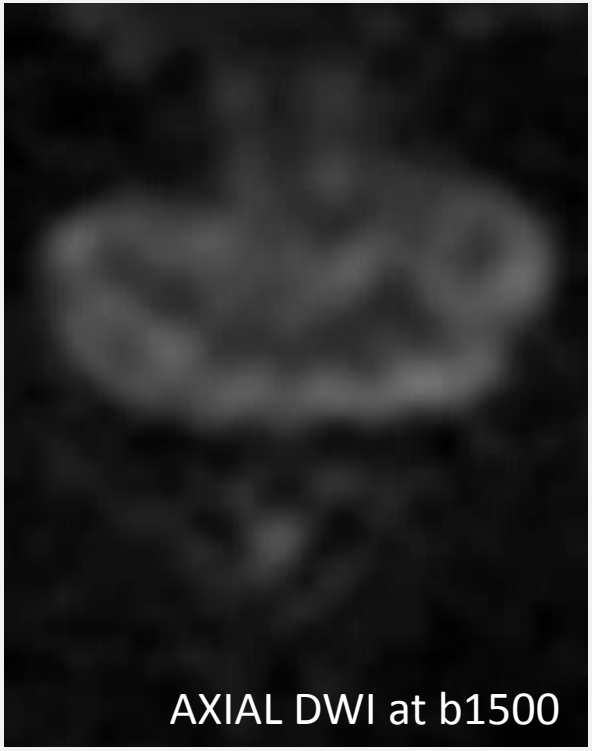
Cancer indolent ?

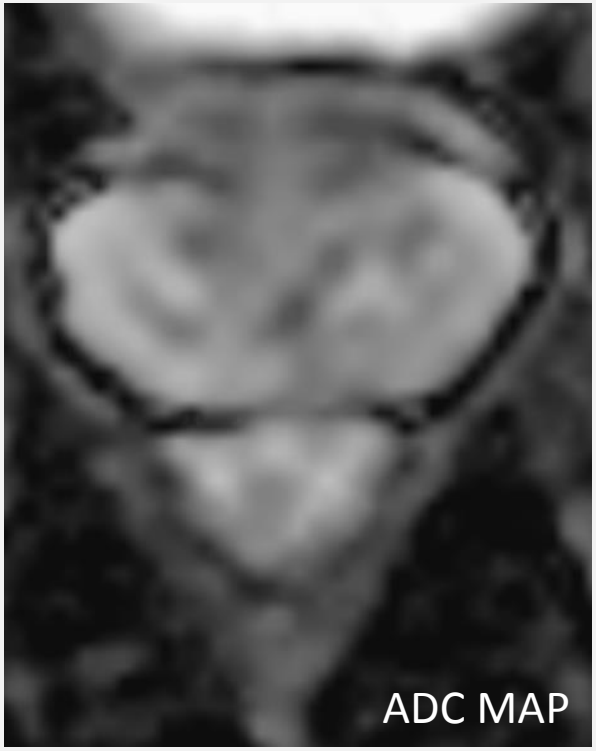


Cancer indolent ? **GS 4+3**



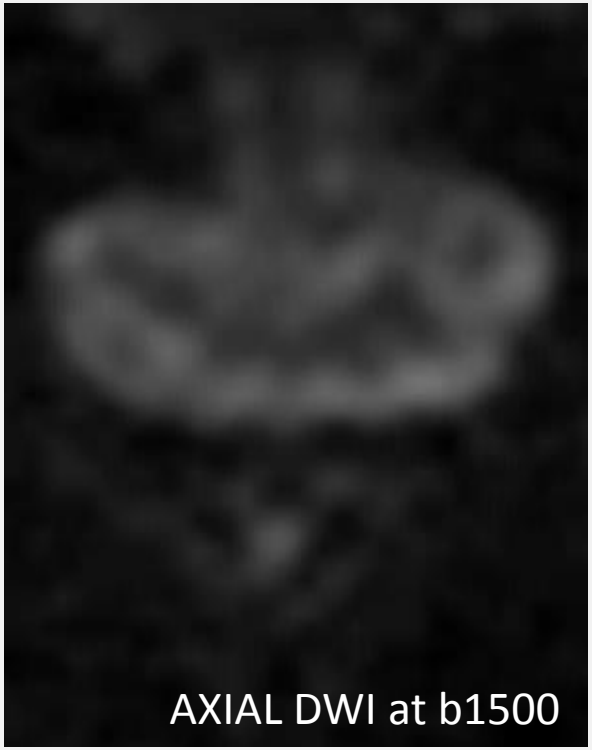
Cas 2

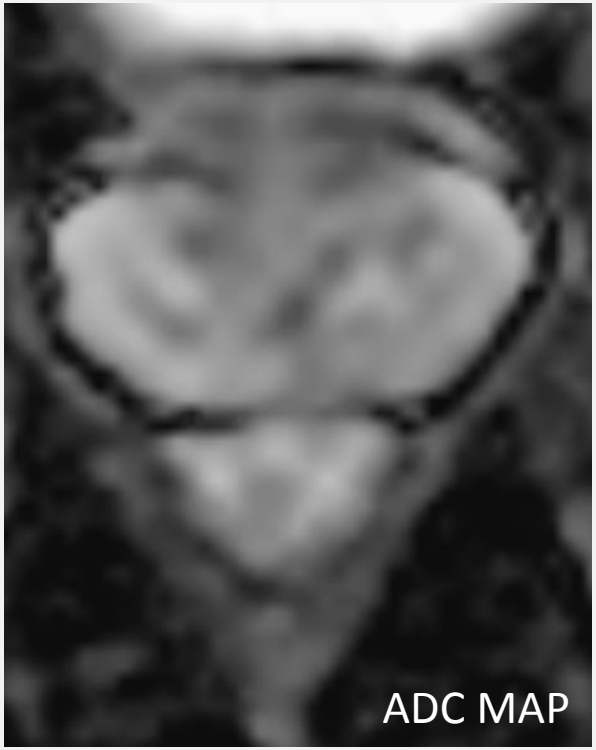




51 ans, PSA 3.21 ng/ml

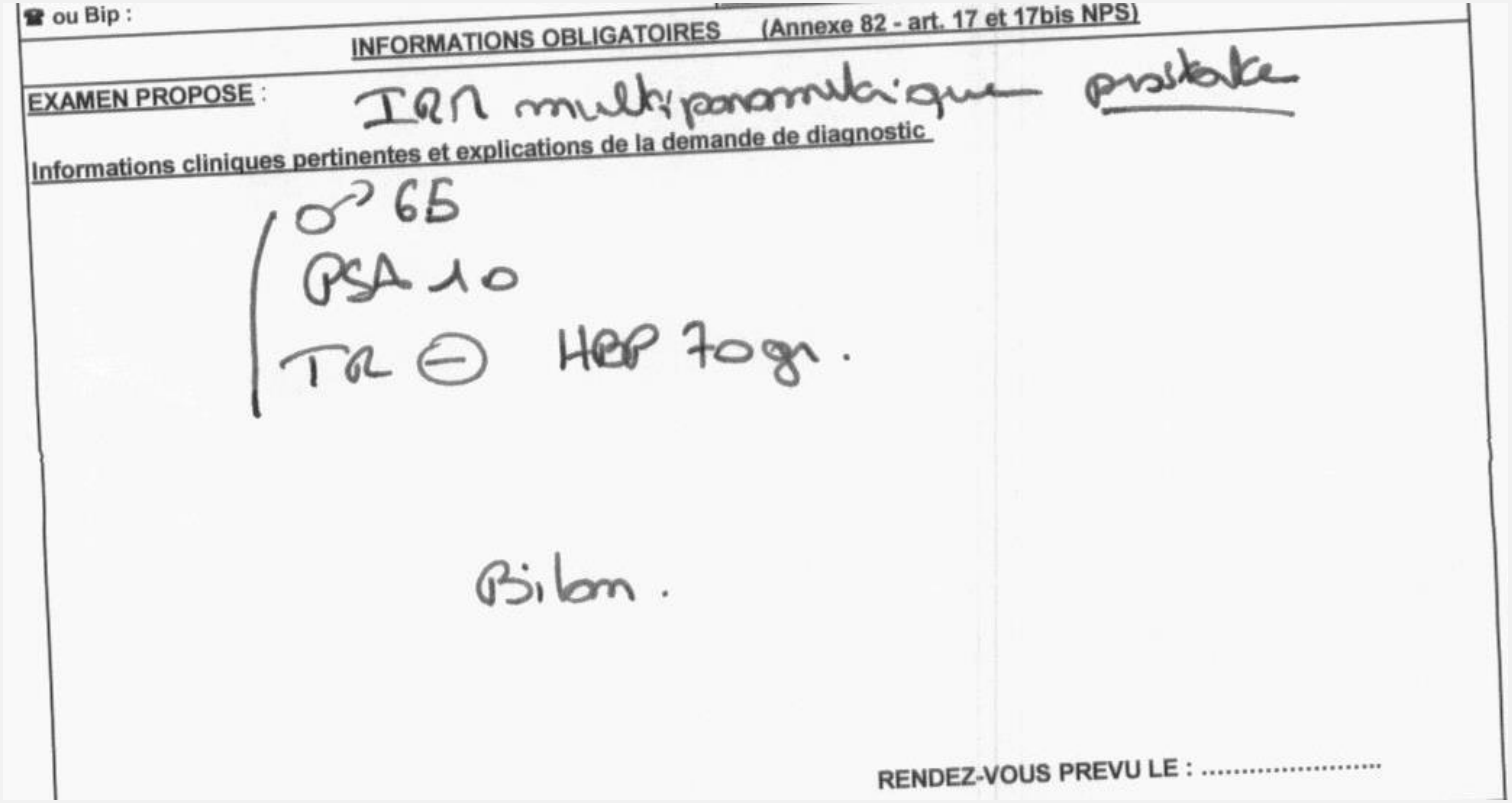
Cancer indolent? OUI





51 ans, PSA 3.21 ng/ml

Cas 3



☎ ou Bip :

INFORMATIONS OBLIGATOIRES (Annexe 82 - art. 17 et 17bis NPS)

EXAMEN PROPOSE : IRM multiparamétrique prostate

Informations cliniques pertinentes et explications de la demande de diagnostic

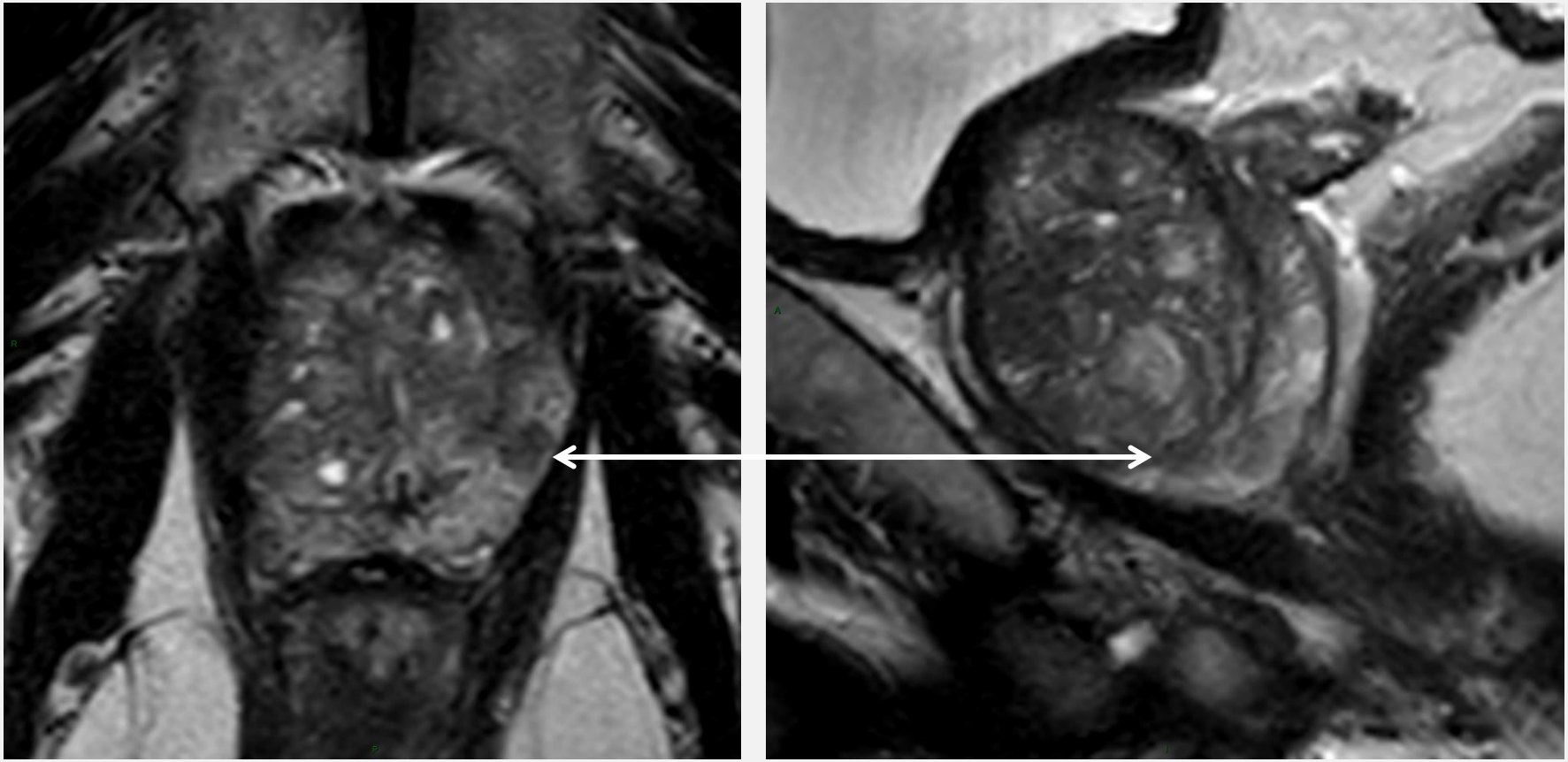
♂ 65
PSA 10
TR ⊖ HBP 70gr.

Bilan.

RENDEZ-VOUS PREVU LE : .....

Homme 68 ans

Pi-RADS 2(ZP)/Pi-RADS1 (ZT)



Extension de l’adénome au sein de la ZP

Cas 4

INFORMATIONS OBLIGATOIRES (Annexe 62 - art. 17 et 17bis NPS)

EXAMEN PROPOSE : IRM multiparamétrique prostate

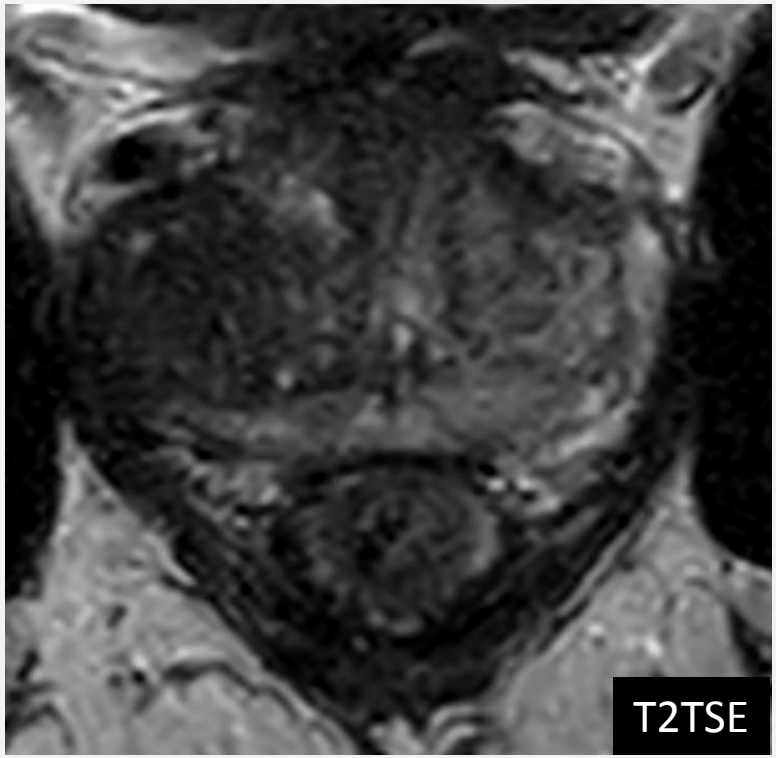
Informations cliniques pertinentes et explications de la demande de diagnostic

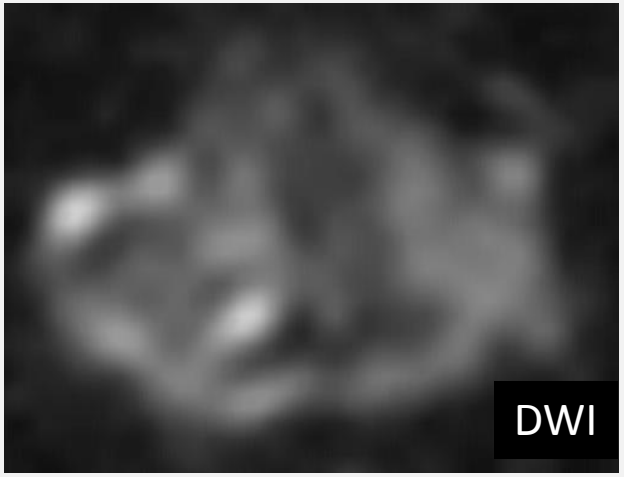
PSA pas récent car infection.

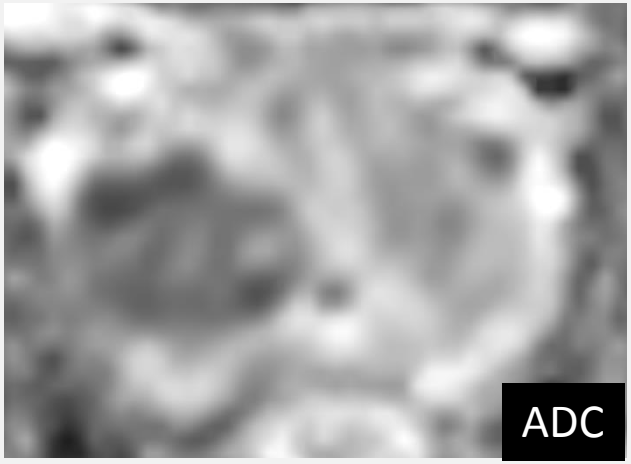
TR asymétrique D > G.

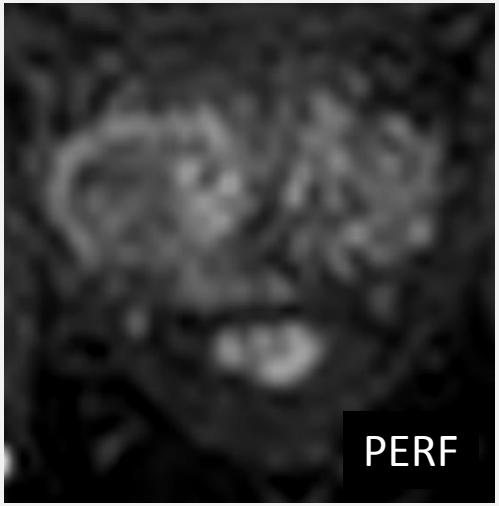
TRUS // lobe moyen droit hypodense.

Cas 4 – Pi-RADS 2/3 (ZT)





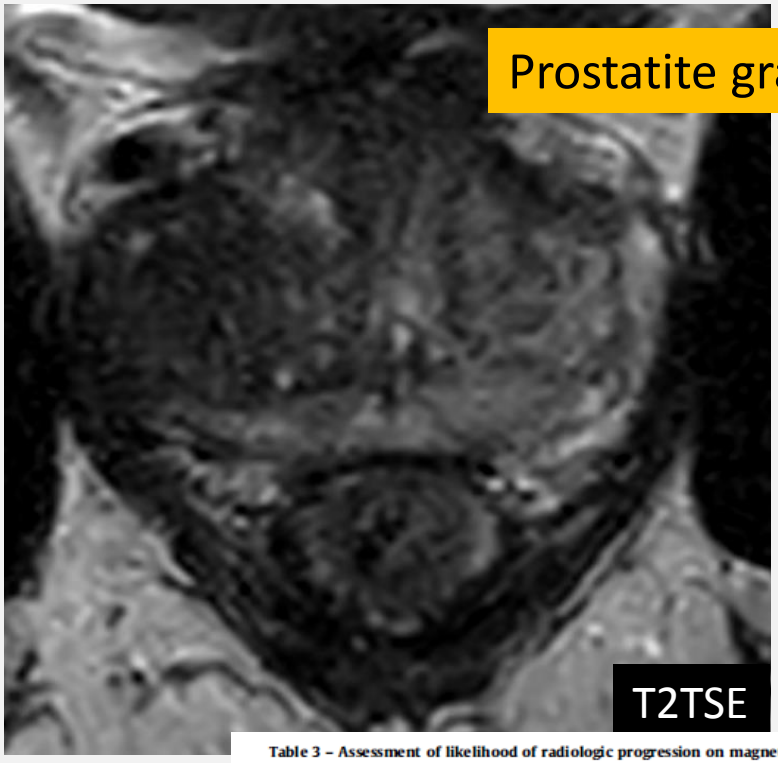


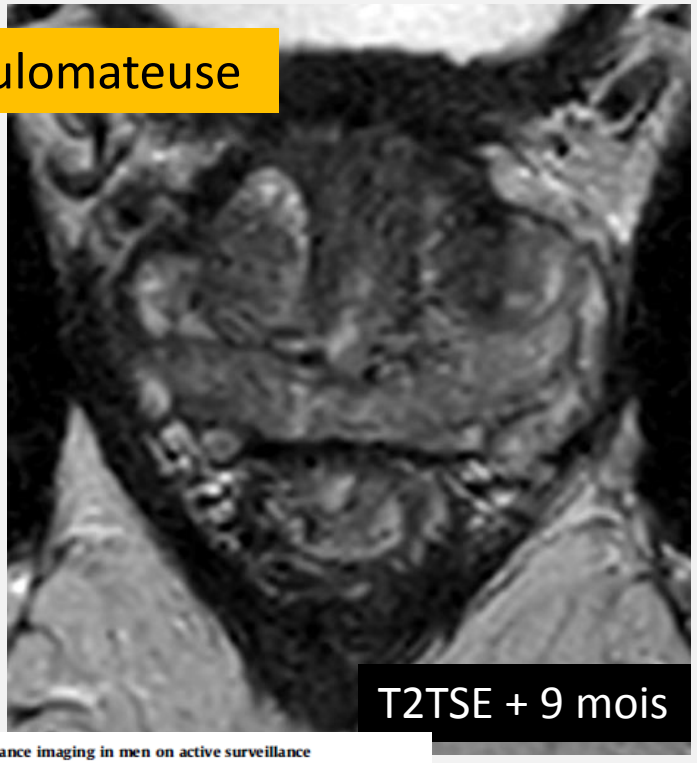


Prostatite granulomateuse

Cas 4 – Pi-RADS 2/3 (ZT)

Prostatite granulomateuse





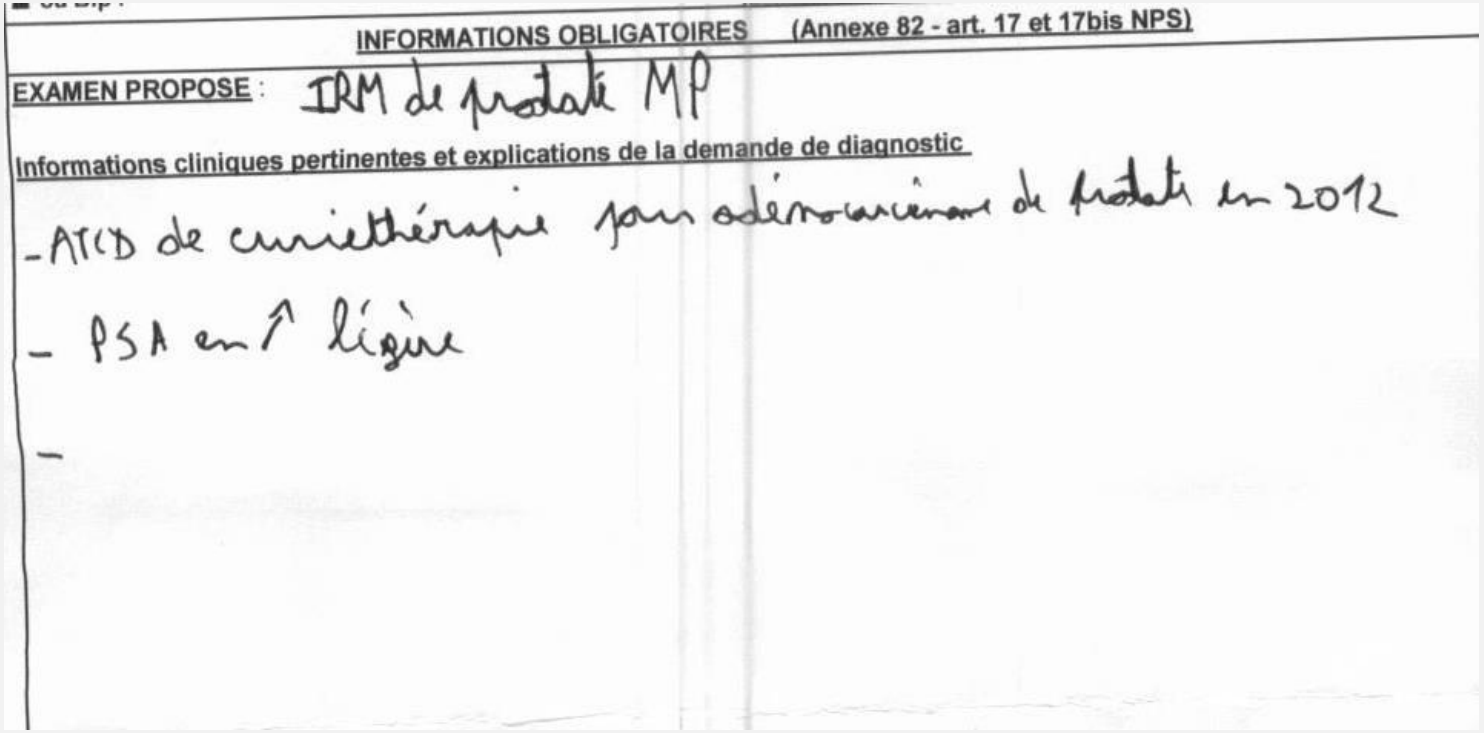
Guidelines PRECISE

Table 3 – Assessment of likelihood of radiologic progression on magnetic resonance imaging in men on active surveillance

Likert	Assessment of likelihood of radiologic progression	Example
1	Resolution of previous features suspicious on MRI	Previously enhancing area no longer enhances
2	Reduction in volume and/or conspicuity of previous features suspicious on MRI	Reduction in size of previously seen lesion that remains suspicious for clinically significant disease
3	Stable MRI appearance: no new focal/diffuse lesions	Either no suspicious features or all lesions stable in size and appearance
4	Significant increase in size and/or conspicuity of features suspicious for prostate cancer	Lesion becomes visible on diffusion-weighted imaging; significant increase in size of previously seen lesion
5	Definitive radiologic stage progression	Appearance of extracapsular extension, seminal vesicle involvement, lymph node involvement, or bone metastasis

MRI = magnetic resonance imaging.

Cas 5



INFORMATIONS OBLIGATOIRES (Annexe 82 - art. 17 et 17bis NPS)

EXAMEN PROPOSE : IRM de prostate MP

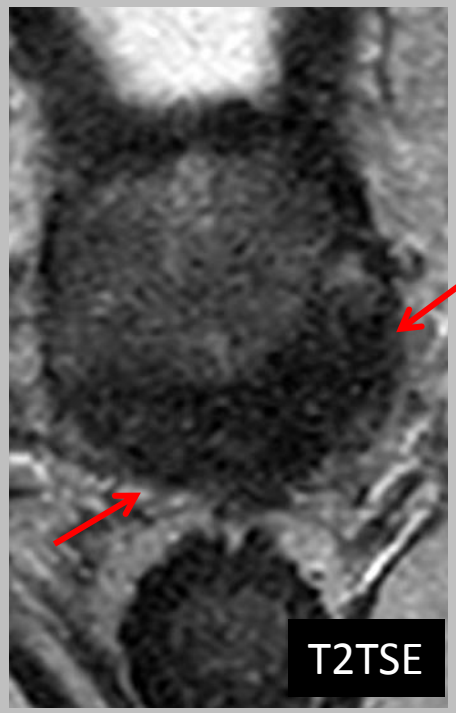
Informations cliniques pertinentes et explications de la demande de diagnostic

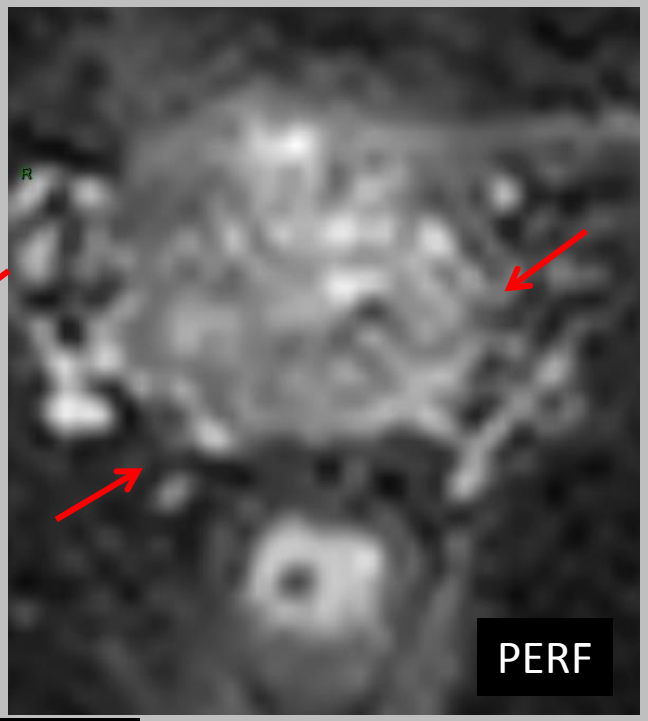
- ATCD de curiethérapie pour adénocarcinome de prostate en 2012
- PSA en ↗ légère
-

Homme 62 ans

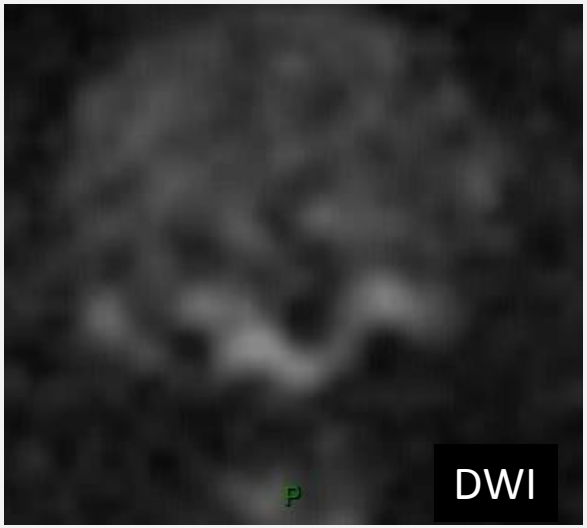
Cas 5 – récidive post brachy

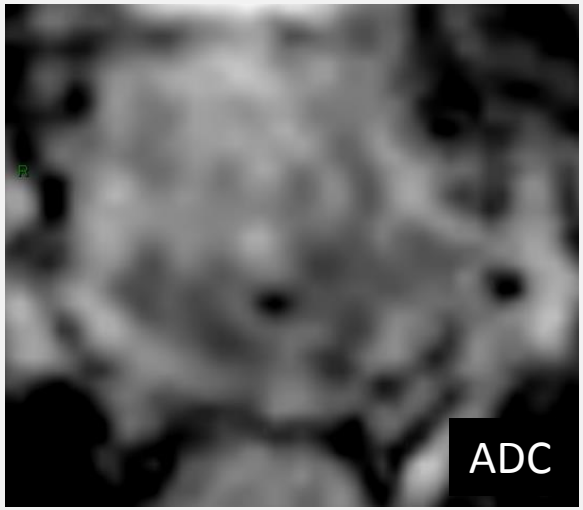
Séquences clés : perfusion et T2





Gleason 4+4





Cas 6

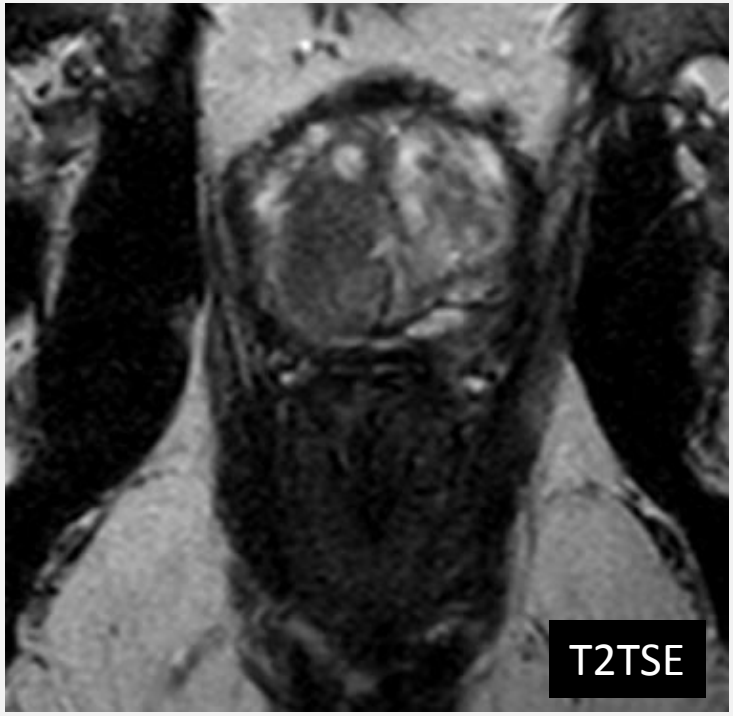
EXAMEN PROPOSE : IRM / mastoïde.

Informations cliniques pertinentes et explications de la demande de diagnostic

Bilan ? BSA.

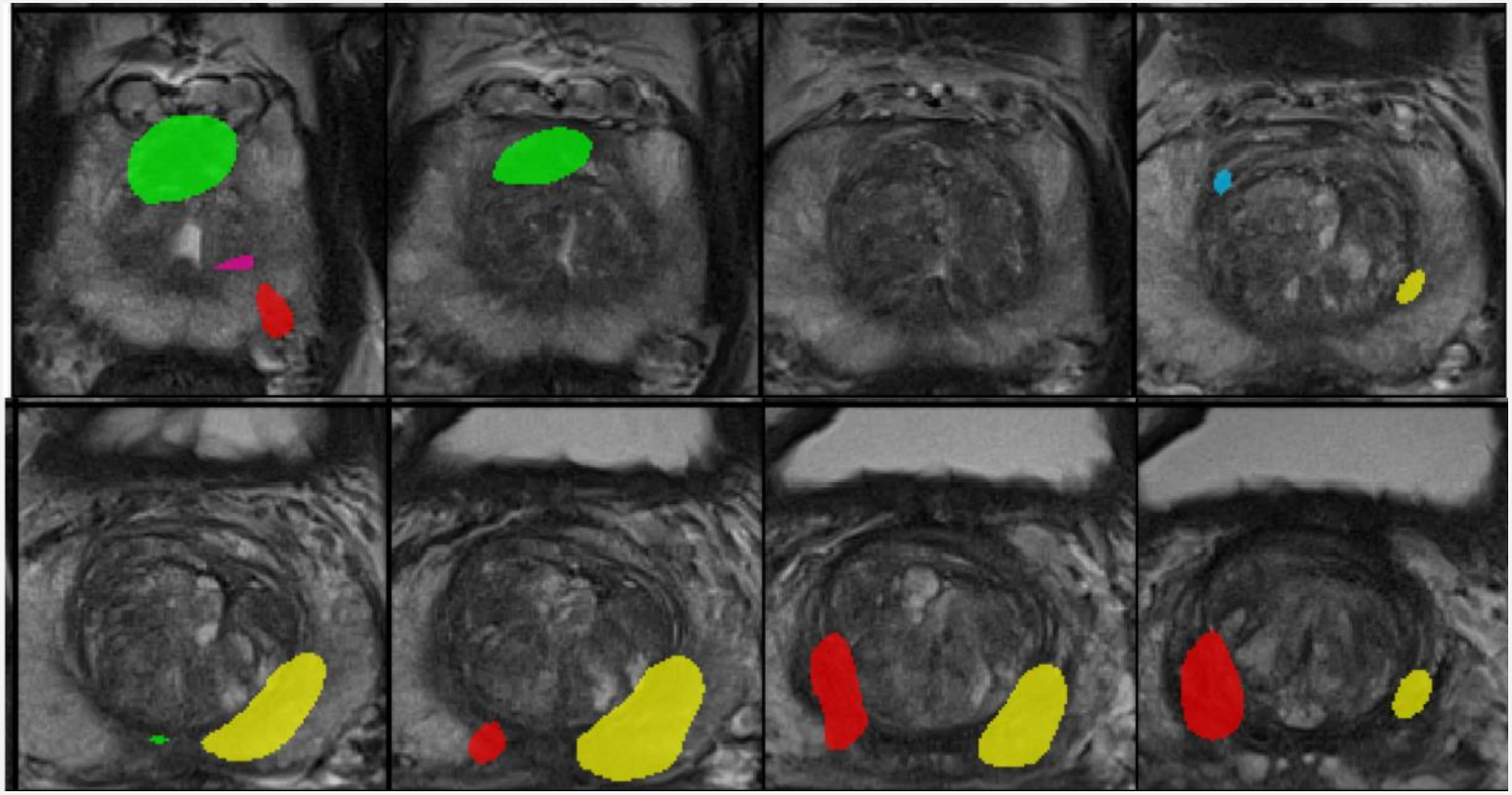
RENDEZ-VOUS PREVU LE : .....

Cas 6 – Pi-RADS 5 (TZ)



! Infiltration du sphincter -> classé cT4

Futures directions



« Ezra's Novel Prostate Artificial Intelligence is 93% Accurate »

Fututes directions

4.3. *mp-MRI during AS*

4.3.1. *Statement*

At present, there are ~~no~~ robust published data to support the use of, or timing of, mp-MRI instead of repeat standard biopsy to detect progression over time. Therefore, at present mp-MRI ~~should not solely~~ *may* replace repeat biopsy during AS. Moreover, use of mp-MRI prior to any follow-up biopsy is not supported by any strong evidence. However, it might be of interest to better target mp-MRI-detected lesions. In case of negative mp-MRI during follow-up, men should undergo systematic biopsies. In case of low-risk PCa detected at targeted and/or systematic biopsy despite a positive mp-MRI, patients should continue AS provided fulfillment of all previously listed inclusion criteria.

The Lonely Palette – René Magritte 1966