

Are capsular bulging and contact's extension predicting the risk of extraprostatic extension at final pathology?

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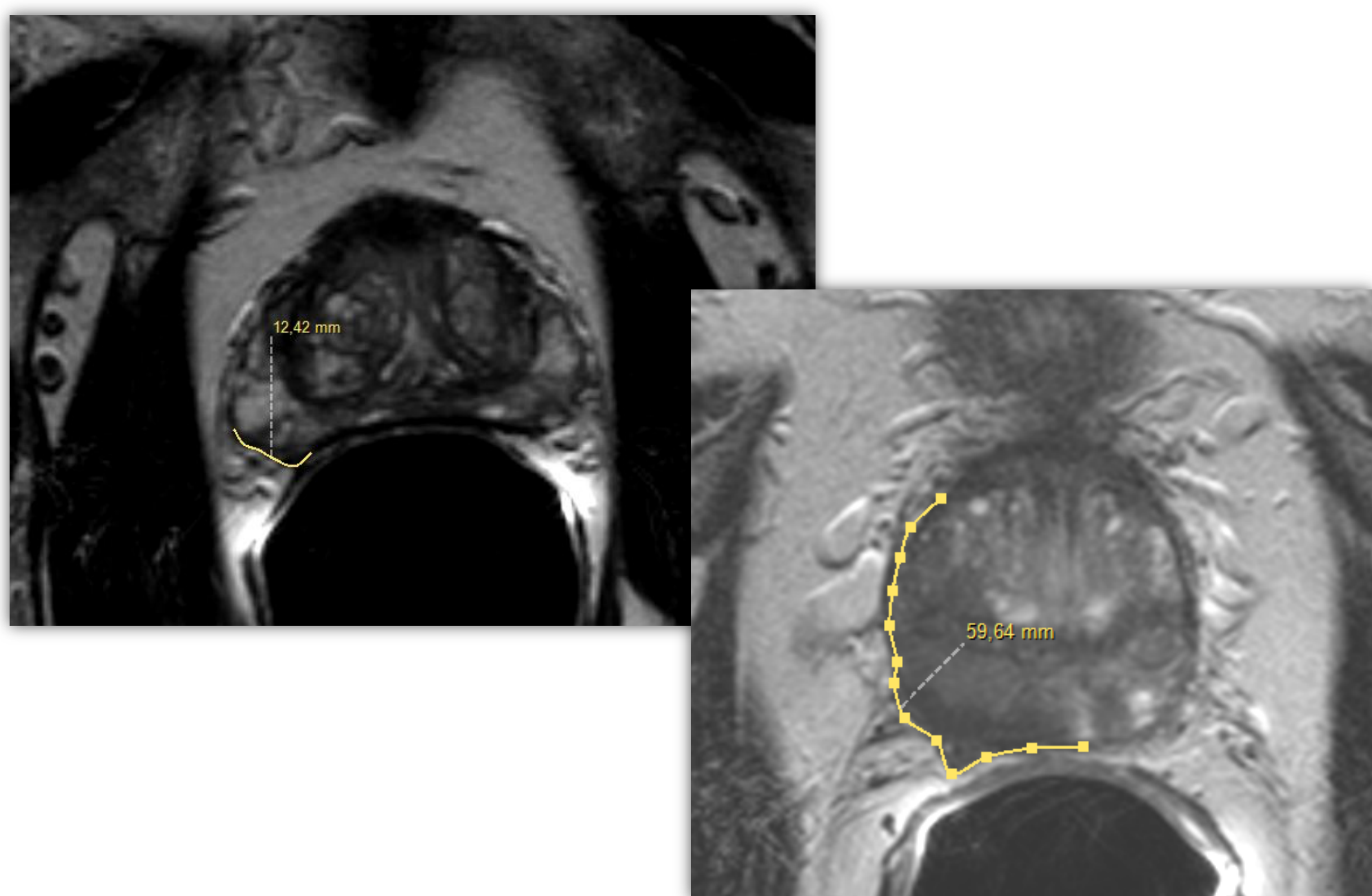


AIM OF THE STUDY

- In recent years, **multiparametric Magnetic Resonance (mp-MRI)** had a widespread diffusion in the preoperative management of prostate cancer (PCa) in order to guide target biopsy and for local staging.
- The **presence of capsular bulging and maximum length of capsular contact (LCC_{max})** at mp-MRI has shown to be related to ECE at final pathological findings
- Aim of this study is to evaluate the role of capsular bulging and LCC_{max} as predictors of ECE.

MATERIAL METHODS :

- We extracted **retrospectively from our prospective maintained radical prostatectomy database** patients who underwent to mp-MRI preoperatively **from January 2016 to December 2017 at our Institution.**
- Firstly, according to the Litterature, a **cut-off of LCC_{max} ≥20mm** was chosen as predictor of ECE. **Then we evaluated if 15 mm of contact length** could be sufficient for our purpose.
- Secondary, **the role of capsular bulging** was analysed
- The presence of ECE at histopathological findings was assessed by an expert dedicated uro-pathologist.
- Positive and negative predictive values (PPV and NPV) of these different variables** were calculated.



CONCLUSIONS:

According to our preliminary evaluation **both LCC_{max} and capsular bulging at preoperative mp-MRI** seems to play a role in **predicting the risk of ECE at final pathological findings.**

RESULTS:

- We included in this study **162 patients.**
- At final pathological analysis, **ECE was observed in 97 pts.**
- 71/97 (73.2%) patients had LCC_{max} ≥ 20 mm (PPV: 0.82; NPV: 0.77).**
- 87/97 (89.7%), patients had LCC_{max} ≥ 15 mm (PPV: 0.77; NPV: 0.79).**
- Mp-MRI showed **capsular bulging** in 84/97 (86.59%) (**PPV: 0.79; NPV: 0.77**)

Number of patients	162
Age, years, mean (SD)	65 (± 7)
Preoperative PSA, ng/dl; mean (SD)	10 (± 14)
Positive DRE, n (%)	49 (31)
D'Amico classification, number (%)	
• Low risk	31 (19.1)
• Intermediate risk	99 (61.1)
• High risk	32 (19.7)
Number of lesion at mp-MRI, mean (SD)	1.7 (±0.5)
Total number of lesion at mp-MRI	278
Right lesion, number (%)	67 (23,31)
Left lesion, number (%)	89 (32,5)
Bilateral lesion, number (%)	122 (44.19)
Level of lesion, number (%)	
• Apical	103 (37.1)
• Equatorial	90 (32.4)
• Base	85 (30,5)
Location of the lesion, number (%)	
• Postero medial	106 (38,3)
• Postero lateral	121 (43,5)
• Anterior	12 (4,2)
• Anterolateral	6 (2.0)
• Transitional zone	33 (12.0)
PIRADS score, number (%)	
• PIRADS < 3	96 (34.04)
• PIRADS >3	182 (65.96)
Prostate volume, mean (mL)	41.84 (±0.5)
Lesions volume, mean (CC)	1.18 (±0.7)
Extracapsular invasion at mp-MRI, number (%)	97 (34.8)
Seminal vesicles invasion mp-MRI, number (%)	23 (8.16)
Biopsy GS, n (%)	
• 6	8 (4.9)
• 7	127 (78.3)
• ≥ 8	27 (16.6)
Operative time, min; mean (SD)	110.8 (24)
Nerve sparing technique, n (%)	
• No nerve sparing	67 (41.4)
• Partial	56 (34.7)
• Full	34 (20.9)
Lymph-nodes dissection, n (%)	108 (66.6)
Pathological stage, number (%)	
• pT2	62 (38.2)
• pT3	68 (41.9)
Positive margins, n (%)	
• Total	49 (30.2)
• Apical	
• pT2	
Pathology GS, n (%)	
• 6	6 (3.7)
• 7	122 (75.3)
• > 8	27 (16.7)
• Non valutabile	7 (4.3)
Hospital stay, days; mean (SD)	6 (2)
Catheterization time, days; mean (SD)	5 (3)
Complications > Clavien-Dindo 3, number (%)	8 (4.9)