

# Clinical and Pathologic Relevance of a Prostate MRI Diagnosis of "Prostatitis"

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# Introduction/Objective/Methods

- Non-malignant abnormalities in the peripheral zone are common in multi-parametric prostate MRI
- Mild decreases in T2-weighted signal, mild decrease in diffusion-weighted imaging signal, or enhancement in a diffuse or linear pattern without surrounding mass effect
- Reported as “prostatitis” or “inflammation”
- Lead to patient anxiety, treatment, or referral to a urologist.
  
- *Investigate relationship between incidental MRI findings of “inflammation” or “prostatitis” and clinical symptoms*
  
- Retrospective review of patients undergoing MRI over a one year period for the indications of active surveillance for low risk prostate cancer or elevated PSA
- Patients divided into two cohorts: *prostatitis* or *inflammation* on radiology report vs patients without *prostatitis* or *inflammation* on radiology report
- Compared PSA, age, history of biopsy/intervention, report of LUTS or pelvic pain, use of urologic medications for LUTS, presence of UA abnormality, prostate volume and PIRADS scores

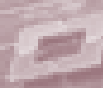
# Results

| Variable   | Inflammation/<br>Prostatitis (IP) | No Inflammation/<br>Prostatitis | P-value      |
|--|-----------------------------------|---------------------------------|--------------|
| LUTS   | 57%                               | 60%                             | 0.69         |
| Use of Urologic Medications  | 66%                               | 55%                             | 0.074        |
| Biopsy finding of acute<br>chronic or remote/current<br>inflammation | 57%                               | 35%                             | <b>0.002</b> |
| Moderate to severe LUTS per<br>IPSS (8-19, 20+)                      | 8%                                | 17%                             | 0.038        |
| Pelvic / perineal pain<br>Chronic dysuria<br>Pyuria on urinalysis    | <5%                               | <5%                             |              |

- 104 patients in the *IP* group vs 119 in the *without IP*
- Similar baseline characteristics between the two cohorts (data not shown)
- Acute or chronic inflammation more commonly noted on biopsy samples from patients with MRI findings of “inflammation or prostatitis”
- Presence of any LUTS was similar between the two groups, while the *NO IP* cohort actually had a higher frequency of moderate/severe LUTS. Pelvic or perineal pain had similar prevalence in the two groups.
- Use of any urologic medications was more common in the “inflammation or prostatitis” cohort, though not significantly so.

# Conclusion

- Among men undergoing MRI, an incidental finding of prostatitis or inflammation was not associated with an increase in the report of LUTS or pelvic pain
- Use of urologic medications to address LUTS was not significantly more common in the “inflammation/prostatitis” on MRI cohort
- Biopsy findings of inflammation (chronic or acute) were more common in patients with “inflammation/prostatitis” on MRI
- Reports of pelvic or perineal pain were uncommon in men with or without findings of “inflammation/prostatitis” on MRI
- **We suspect that MRI findings of prostatitis or inflammation are rarely representative of clinical prostatitis (NIH Type I-III) but may represent Type IV (Asymptomatic Inflammatory) prostatitis for which work-up/treatment is not recommended.**

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**Thank you!**