UPDATE – 2022 Canadian Urological Association recommendations on prostate cancer screening and early diagnosis

Endorsement of the 2021 Cancer Care Ontario guidelines on prostate multiparametric magnetic resonance imaging – Summary of changes

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Cite as: Mason RJ, Marzoik K, Finelli A, et al. UPDATE – 2022 Canadian Urological Association recommendations on prostate cancer screening and early diagnosis: Endorsement of the 2021 Cancer Care Ontario guidelines on prostate multiparametric magnetic resonance imaging – Summary of changes. *Can Urol Assoc J* 2022;16(4):86-7. http://dx.doi.org/10.5489/cuaj.7832

Full-text of updated guideline available at *cua.org* and *cuaj.ca*

Introduction

In 2017, the Canadian Urological Association published recommendations on prostate cancer screening and early diagnosis.[1] At that time, we endorsed the 2017 Cancer Care Ontario (CCO) recommendations on the role of multiparametric magnetic resonance imaging (mpMRI) in the diagnosis of clinically significant prostate cancer (csPCa). Recently, based on the publication of several landmark studies, Cancer Care Ontario published updated recommendations, a summary of which were published in the February 2022 issue of *CUAJ* (along with an accompanying commentary by CUA Guidelines Committee Chair, Dr. Bobby Shayegan).[2] The 2021 CCO recommendations represent a significant change from the previous iteration, with mpMRI being recommended in many biopsy-naive men at risk of prostate cancer. The CUA has once again endorsed these recommendations, with some added practical considerations. Herein, the updates are summarized.

Multiparametric MRI (2021 update)

Recommendation 1 (Recommendation to use the diagnostic tool): For biopsy-naive patients at elevated risk of csPCa, mpMRI is recommended prior to biopsy in patients who are candidates for curative management with suspected clinically localized prostate cancer.

- If the mpMRI is positive, mpMRI-targeted biopsy (TB) and transrectal ultrasound-guided systematic biopsy (TRUS-SB) should be performed together to maximize detection of csPCa.
- If the mpMRI is negative, consider forgoing any biopsy after discussion of the risks and benefits with the patient as part of shared decision-making and ongoing followup.

Qualifying statements for *Recommendation 1*

- Between 8% and 24% of patients with csPCa may be missed by a negative mpMRI. For this reason, patients should be made aware of the risks and benefits of biopsy avoidance when mpMRI is negative.
- mpMRI should only be performed if there is availability of high-quality mpMRI interpretation and operators with experience performing targeted biopsies.
- Due to the limited availability, mpMRI is recommended only for patients where there is intent of curative management should the biopsy be positive for csPCa.

Recommendation 2 (Recommendation to use the diagnostic tool): In patients who had a prior negative TRUS-SB and demonstrate a high risk of having csPCa in whom curative management is being considered, mpMRI should be performed.

- If the mpMRI is positive, targeted biopsy should be performed. Concomitant TRUS-SB can be considered depending on the patient's risk profile and time since prior TRUS-SB biopsy.
- If the mpMRI is negative, consider forgoing a TRUS-SB only after discussion of the risks and benefits with

the patient as part of shared decision-making and ongoing followup.

Qualifying statements for *Recommendation 2*

- Prior negative TRUS-SB is defined as no cancer of any grade group on prior biopsy.
- mpMRI should only be performed if there is availability of high-quality mpMRI interpretation and operators with experience performing targeted biopsies
- Due to the limited availability, mpMRI is recommended only for patients where there is intent of curative treatment in the case of a positive biopsy.

Discussion

The CCO guideline panel identified that there is increasing evidence, including from randomized trials, that mpMRI with the use targeted and standard biopsies can lead to a significant reduction in unnecessary prostate biopsies while improving the detection of csPCa. This is apparent in both the biopsy-naive setting and in men with a prior negative biopsy. However, the CUA recognizes that there are ongoing practical limitations to this approach, such as timely access to mpMRI and mpMRI-TB, as well as variations in quality and interpretation. As such, we understand that standard prostate biopsies will continue to play a role in the evaluation of Canadian men suspected of having prostate cancer while we advocate for increased mpMRI resources.

Additionally, we feel it is important to stress that the use of mpMRI should be limited to patients for whom the test result is likely to influence their management. Thus, the use of mpMRI should not be considered for men whose clinical signs show no ambiguity regarding the diagnosis of clinically significant prostate cancer. For these patients, systematic prostate biopsy or disease management, depending on the situation, should be commenced. Furthermore, for men with a suspicion of prostate cancer but in whom active management will not be considered regardless of the result, mpMRI is not indicated.

Competing interests: Dr. Mason has participated in advisory boards and has been a speaker for Abbvie, Sanofi, TerSera, and Verity. Dr. Saad has received honoraria from Astellas, AstraZeneca, Bayer, Janssen, Knight, Myovant, Novartis, Sanofi, and Pfizer. Dr. So has participated in advisory boards for Abbvie, Amgen, Bayer, Ferring, Janssen, Merck, and TerSera. Dr. Rendon has participated in advisory boards for Abbvie, Amgen, Astellas, AstraZeneca, Bayer, Ferring, Janssen, Pfizer, Roche, Sanofi, and Tolmar; has been a speaker for Abbvie, Amgen, Astellas, AstraZeneca, Bayer, Ferring, Janssen, Pfizer, Roche, and Sanofi; has received grants and/or honoraria from Abbvie, Astellas, Bayer, Ferring, Janssen, Sanofi, Tolmar, and TerSera; holds investments in Myovant; and has participated in clinical trials supported by Abbvie, Astellas, Bavarian Nordic, Bayer, Ferring, Janssen, Myovant, and Sanofi. The remaining authors do not report any competing personal or financial interests related to this work.

References

1. Rendon RA, Mason RJ, Marzouk K, et al. Canadian Urological Association recommendations on prostate cancer screening and early diagnosis. *Can Urol Assoc J* 2017;11:298-309. http://dx.doi.org/10.5489/cuaj.4888
2. Haider MA, Brown J, Chin JLK, et al. Evidence-based guideline recommendations on multiparametric magnetic resonance imaging in the diagnosis of clinically significant prostate cancer: A Cancer Care Ontario updated clinical practice guideline. *Can Urol Assoc J* 2022;16:16-23. http://dx.doi.org/10.5489/cuaj.7425

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