Letter to the Editor

Re: The"PROMIS"of Magnetic Resonance Imaging Cost Effectiveness in Prostate Cancer Diagnosis? Jochen Walz Eur Urol. 2017 Sep 28. pii: S0302-2838(17)30779-0.

We would like to thank Dr. Walz for his editorial remarks on our paper on the health economic impact of introducing MRI in the prostate cancer pathway (1,2) and respond to the specific issues raised.

1. We agree that there is uncertainty in the results, but, on balance, the mpMRI first strategy is the most likely to be cost-effective, as the benefits of early diagnosis of more CS cancers outweigh the added costs of using mpMRI first.

2. The accuracy of targeted biopsies is informed by a systematic review and meta-analysis published in this journal (3), that suggests that targeted biopsies are 20% more sensitive than the standard “PROMIS”-type biopsy. Moreover, the sensitivity analysis explored the impact of changes to the sensitivity of MRI-targeted biopsy. If the increase in sensitivity of MRI-targeted biopsy compared to the standard “PROMIS” biopsy is below 15%, biopsy first strategies are cost-effective.

3. The cost-effectiveness analysis did not test the impact of reductions in the accuracy of MRI but it did explore changes in its cost (see Online Material p57-62). The mpMRI strategy is cost-effective for increases in the cost of mpMRI up to 30%. Furthermore, the adoption of MRI as the foundation of the pathway will naturally lead to standardisation and QA procedures so that quality issues will become progressively less relevant.

4. We agree that inappropriate use of mpMRI is an issue, but we believe that concerns about how mpMRI might be misused should not preclude its appropriate use to the benefit of patients.

5. We believe that, although the CEA is in the UK setting, the relative ranking of the strategies is likely to be applicable to any developed health care system as long as the relative differences between the parameter inputs are similar (e.g. similar differences between the cost of mpMRI vs cost of biopsy, similar accuracy, etc.).

The ‘cautious’ position being taken is not neutral in terms of its potential harm to patients. With the introduction of any piece of research to an existing canon there is always the opportunity to point to inevitable residual uncertainties and make the plea for ‘one more trial’. Whilst the position of skepticism remains an important cornerstone of the scientific method, its continued and repeated adoption – in the face of mounting evidence that an intervention confers distinct benefits to patients in a cost-effective manner - can be a source of harm. In the case of mpMRI and prostate cancer diagnosis the harms that might be conferred to patients and populations by delayed implementation include: over-diagnosis; missed diagnosis; unnecessary biopsy; poor risk-stratification; inappropriate treatment allocation and sub-optimal use of resource (4,5). In this particular case, each year of delay means that many men in Europe will have to contemplate a prostate biopsy that will be performed in a sub-optimal manner and incur costs that do not result in the most desirable outcomes.

References

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4. Ahmed, H.U., El-Shater Bosaily, A., Brown, L.C. et al. Diagnostic accuracy of multi-parametric MRI and TRUS biopsy in prostate cancer (PROMIS): a paired validating confirmatory study. Lancet. 2017; 389: 815–822

5. Emberton M. Are men who are biopsied without prior prostate magnetic resonance imaging getting substandard care? BJU Int. 2015 Dec;116(6):837-9.