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LETTERS

ROBOT ASSISTED RADICAL PROSTATECTOMY

Robotic prostatectomy could save the NHS millions

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The discussion of cost effectiveness of robot assisted radical prostatectomy compared with laparoscopic radical prostatectomy is ongoing.[1] The cost per quality adjusted life year (QALY) metric calculated in a 2011 health technology assessment to determine incremental cost effectiveness of robotic compared with laparoscopic radical prostatectomy is questionable.[2] The report found that 150 robotic prostatectomies a year would justify the expense of robotic technology. The National Institute of Health and Care Excellence now endorses this volume to commissioners.[3] But the paucity and unreliability of functional outcome data were not appropriate for meta-analysis and so did not have a substantial influence on the QALYs calculated.[2] This affected the economic evaluation of robotic surgery, which has misrepresented its true benefit.

Two randomised controlled trials provide insight into functional outcomes, specifically erectile function.[4 5] At 12 months, Asimakopoulos et al found that the rate of capability for intercourse was 77% for robotic and 32% for laparoscopic prostatectomy (P<0.0001),[4] and Porpiglia et al found that the rate of erection recovery was 80% for robotic and 54.2% for laparoscopic (P=0.020).[5] A meta-analysis in 2013 showed no improved sexual function for robotic compared with laparoscopic radical prostatectomy, but there was high heterogeneity among studies, which questions the reliability of this finding.[6]

In 2012, the NHS spent over £80 million on treatment for erectile dysfunction.[7] About 40% of patients with normal sexual function will experience impaired erectile function after surgery.[2]

Conclusively, the randomised controlled trials show a 26-45% improvement of erectile function with robotic surgery, which may save the NHS between £21m and £36m. The cost per QALY should be modified to give a lower threshold than 150 robotic surgeries a year to justify the expense of robotic technology.

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Full response at: https://www.bmj.com/content/347/bmj.f7470/rr.

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