

AXA Health Robotic Surgery Review
Robotic Cystectomy
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Background

1. NICE and NHS England are claimed to be commissioning robotic radical cystectomy in the NHS.
2. Robotic radical cystectomy is claimed to be the standard of care in the majority of large cancer centres across the UK and less than 5% of procedures are currently performed laparoscopically.
3. There is claimed to be evidence in support of the benefits of robotic radical cystectomy.

Point 1: NICE / NHS England on Robotic Bladder Surgery commissioning

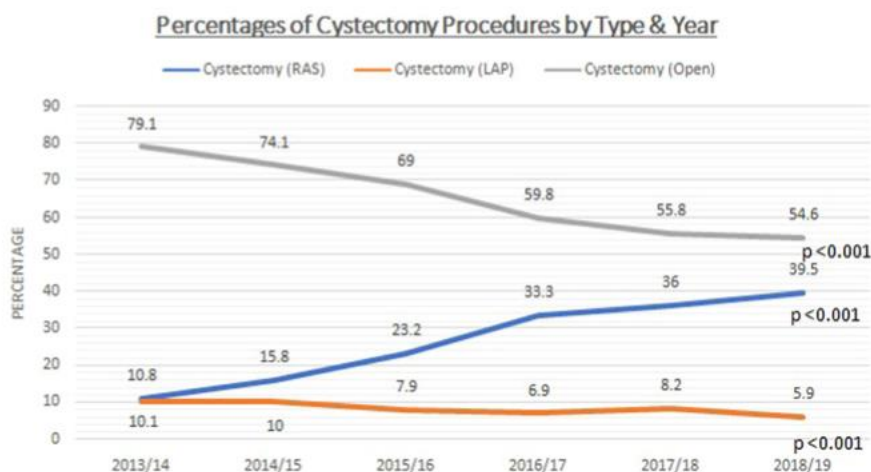
The last guidance issued by NICE was 2016, based on 2014 evidence, saying that robotic bladder surgery should not be routinely commissioned.

https://www.england.nhs.uk/commissioning/wp-content/uploads/sites/12/2016/07/16033_FINAL.pdf

Of note, even though it is not up to date, the guidance accepted lots of the points about decreased blood loss, shorter hospital stay etc., but pointed out outcomes were the same.

We cannot find any more recent NICE guidance on robotic cystectomy or evidence that the guidance has been updated.

However, the high proportion of cases being performed robotically in the NHS suggests that, somehow, this is being funded by trusts.



This figure from 'Radical Cystectomy in England from 2013 to 2019 on 12,644 patients: An analysis of national trends and comparison of surgical approaches using Hospital Episode

Statistics data First published: 12 March 2021, <https://doi.org/10.1002/bco2.79> demonstrates that robotic cases are increasing year on year with a decrease in laparoscopic cases. The authors of this paper acknowledge that the procedure is not commissioned by the NHS and suggest the increased adoption was due to International Guidelines including:

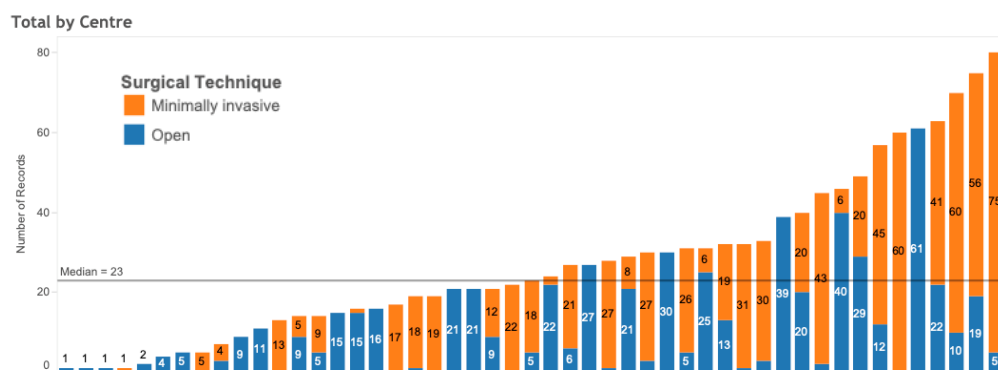
- Witjes JA, Bruins M, Cathomas R, Compérat E, Cowan NC, Gakis G, et al. EAU guidelines on muscle-invasive and metastatic bladder cancer. [cited 2019 Dec 28]. Available from: <https://uroweb.org/guideline/bladder-cancer-muscle-invasive-and-metastatic>
- Chang SS, Bochner BH, Chou R, Dreicer R, Kamat AM, Lerner SP, et al. Treatment of non-metastatic muscle-invasive bladder cancer: AUA/ASCO/ASTRO/SUO guideline. J Urol. 2017; 198(3):552–9.

We have made enquiries as to how NHS procedures are being funded. We have been informed that trusts are paid the standard NHS Tariff for an open procedure and consider this acceptable remuneration based on the benefits of the procedure to patients and the shorter hospital stay.

Point 1: Partially proved. We cannot find evidence of formal NICE approval or NHS Commissioning but clearly it is happening in the NHS with the tariff for open surgery being paid.

Point 2: Robotic radical cystectomy is the standard of care in the majority of large cancer centres across the UK

This appears to be true, with the following figure from the last published BAUS audit showing the larger centres tend to do predominantly robotic cases. It also confirms that laparoscopic approaches (funded by AXA Health) make up only 4.2% of cases, meaning we can assume the minimally invasive cases in the following figure are robotic (https://www.baus.org.uk/patients/surgical_outcomes/cystectomy/timescales.aspx).



Point 2: Proved.

Point 3: Robotic Cystectomy improves outcomes

This depends on definitions. The NICE review from 2016 accepts there is some evidence for reduced blood loss, fewer transfusions, and shorter hospital stays, but says there is no evidence for improved cancer outcomes.

The Lancet paper referenced confirms this and is a high quality RCT: Robot-assisted radical cystectomy versus open radical cystectomy in patients with bladder cancer (RAZOR): an open-label, randomised, phase 3, non-inferiority trial. Lancet. 2018 Jun 23; 391(10139):2525-2536. doi: 10.1016/S0140-6736(18)30996-6. PMID: 29976469.

	Robotic cystectomy (n=150)	Open cystectomy (n=152)	Difference (95% CI)	p value
Patients with blood loss data	148 (99%)	149 (98%)
Blood loss, mL	300 (200-500)	700 (500-1000)	..	<0.0001
Perioperative transfusion	35/143 (24%)	65/143 (45%)	-21.0 (-31.8 to -10.2)	0.0002
Units of blood transfused	3 (2-5)	4 (2-5)	..	0.46
Intraoperative transfusion	18/139 (13%)	46/136 (34%)	-20.8 (-30.6 to -11.2)	<0.0001
Postoperative transfusion	33/132 (25%)	54/135 (40%)	-15.0 (-26.1 to -3.9)	0.0089
Hospital stay ≤5 days	40/139 (29%)	27/146 (18%)	10.3 (0.5 to 20.1)	0.0407
Length of stay, days	6 (5-10)	7 (6-10)	..	0.0216

Point 3: Partially proved. Good evidence for improved perioperative outcomes but no evidence for improved cancer outcomes.

Summary / Proposal

From the review it is clear that robotic cystectomy is safe, widely performed in the NHS, and increasingly the standard of care especially in big centres. There is some evidence for improved perioperative outcomes but not improved cancer outcomes. However, it has not officially been approved by NICE or commissioned BUT it does appear in International Guidelines and NHS trusts are choosing to fund it.

AXA Health's opinion is that the field is moving in the direction of it being considered the standard of care quicker than NICE are reacting, therefore AXA Health considers that it would be reasonable to consider it a procedure that should be funded.

Where eligible under the policy, AXA Health proposes funding, subject to limiting to surgeons that have undergone formal training in the procedure, are submitting their data to BAUS, and are performing the procedure in the NHS (if also an NHS surgeon). AXA Health may also require data on outcomes, including length of stay.