Prostate Cancer Update 2022

Mr N Vasdev
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Associate Medical Director for Cancer Services
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ENHT NHS Trust

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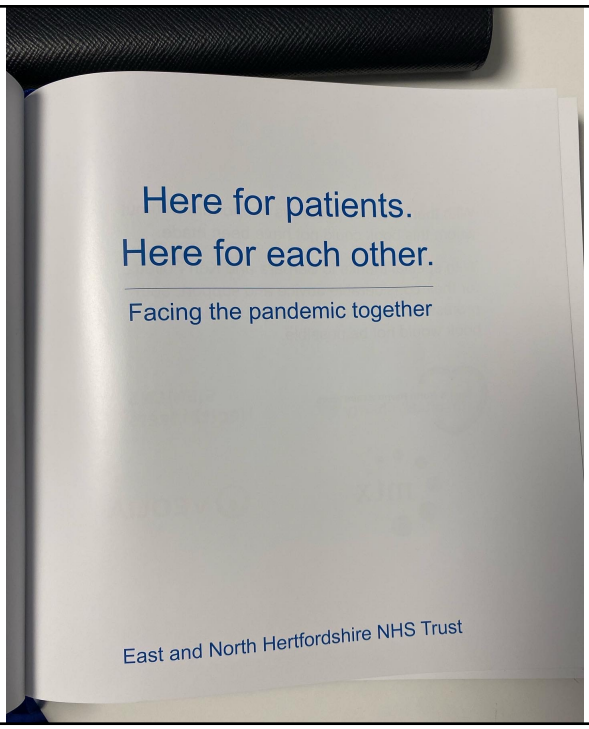

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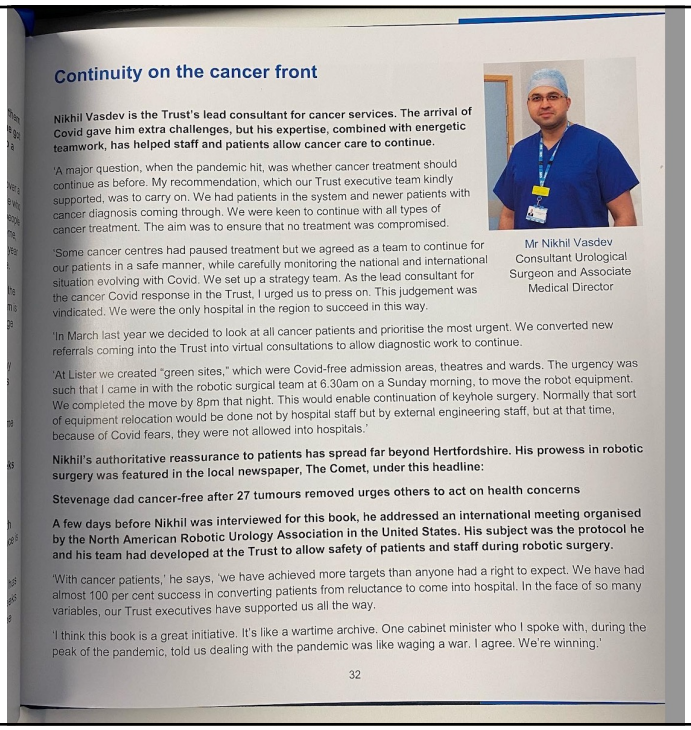


Continuity on the cancer front

Nikhil Vasdev is the Trust's lead consultant for cancer services. The arrival of Covid gave him extra challenges, but his expertise, combined with energetic teamwork, has helped staff and patients allow cancer care to continue.

'A major question, when the pandemic hit, was whether cancer treatment should continue as before. My recommendation, which our Trust executive team kindly supported, was to carry on. We had patients in the system and newer patients with cancer diagnosis coming through. We were keen to continue with all types of cancer treatment. The aim was to ensure that no treatment was compromised.

'Some cancer centres had paused treatment but we agreed as a team to continue for our patients in a safe manner, while carefully monitoring the national and international situation evolving with Covid. We set up a strategy team. As the lead consultant for the cancer Covid response in the Trust, I urged us to press on. This judgement was vindicated. We were the only hospital in the region to succeed in this way.

Mr Nikhil Vasdev
Consultant Urological Surgeon and Associate Medical Director

'In March last year we decided to look at all cancer patients and prioritise the most urgent. We converted new referrals coming into the Trust into virtual consultations to allow diagnostic work to continue.

'At Lister we created "green sites," which were Covid-free admission areas, theatres and wards. The urgency was such that I came in with the robotic surgical team at 6.30am on a Sunday morning, to move the robot equipment. We completed the move by 8pm that night. This would enable continuation of keyhole surgery. Normally that sort of equipment relocation would be done not by hospital staff but by external engineering staff, but at that time, because of Covid fears, they were not allowed into hospitals.'

Nikhil's authoritative reassurance to patients has spread far beyond Hertfordshire. His prowess in robotic surgery was featured in the local newspaper, The Comet, under this headline:

Stevenage dad cancer-free after 27 tumours removed urges others to act on health concerns

A few days before Nikhil was interviewed for this book, he addressed an international meeting organised by the North American Robotic Urology Association in the United States. His subject was the protocol he and his team had developed at the Trust to allow safety of patients and staff during robotic surgery.

'With cancer patients,' he says, 'we have achieved more targets than anyone had a right to expect. We have had almost 100 per cent success in converting patients from reluctance to come into hospital. In the face of so many variables, our Trust executives have supported us all the way.

'I think this book is a great initiative. It's like a wartime archive. One cabinet minister who I spoke with, during the peak of the pandemic, told us dealing with the pandemic was like waging a war. I agree. We're winning.'

32

3

3

Current Concerns expressed by cancer patients awaiting treatment

- Current planned treatment for cancer being deferred
- Risk of being exposed to COVID-19 when attending cancer treatment in hospital
- Risk of cancer progression if treatment delayed
- Increase risk of cancer related mortality if treatment significantly delayed


Coronavirus outbreak

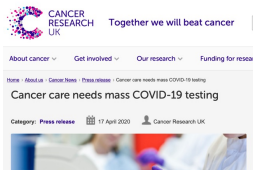
Coronavirus crisis is 'stopping vital cancer care' in England


BBC NEWS

Coronavirus: Cancer patient's chemotherapy put on hold


BBC NEWS

Coronavirus: Cancer patients 'could die due to surgery delays'


CANCER RESEARCH UK
Together we will beat cancer

Cancer care needs mass COVID-19 testing

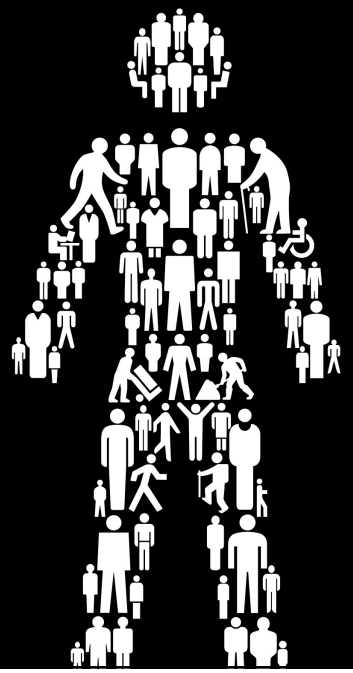
Category: Press release | 17 April 2020 | Cancer Research UK

4

Impact of Covid 19

Mr N Vasdev
Prostate Cancer UK (Clinical Champion Leadership Programme)
Associate Medical Director for Cancer Services
Consultant Urological and Robotic Urological Surgeon
ENHT

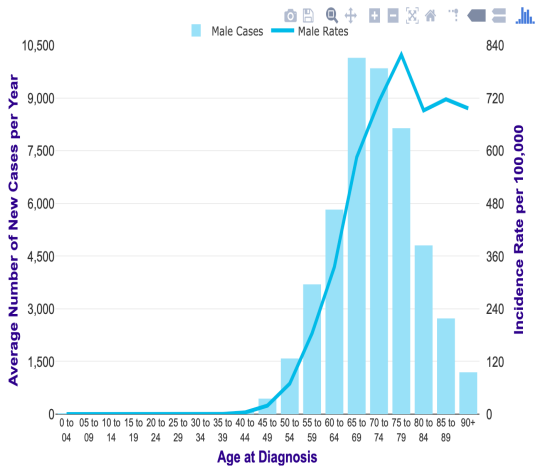
PROSTATE CANCER UK



5

Introduction

- Prostate Cancer is now the commonest cancer in the UK
- Around 47,000 men are diagnosed with prostate cancer each year and approximately 11,000 will die each year as a result of the disease
- Prostate cancer accounts for 26% of all new cancer cases in males in the UK
- Peak age increase in diagnosis between 74-79 years



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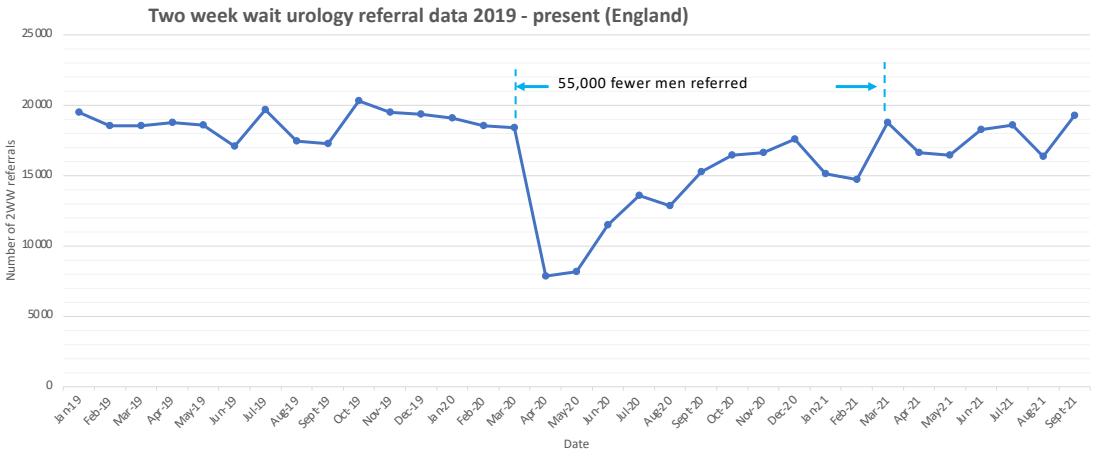
Impact on men presenting in primary care



https://www.england.nhs.uk/statistics/statistical-work-areas/cancer-waiting-times/

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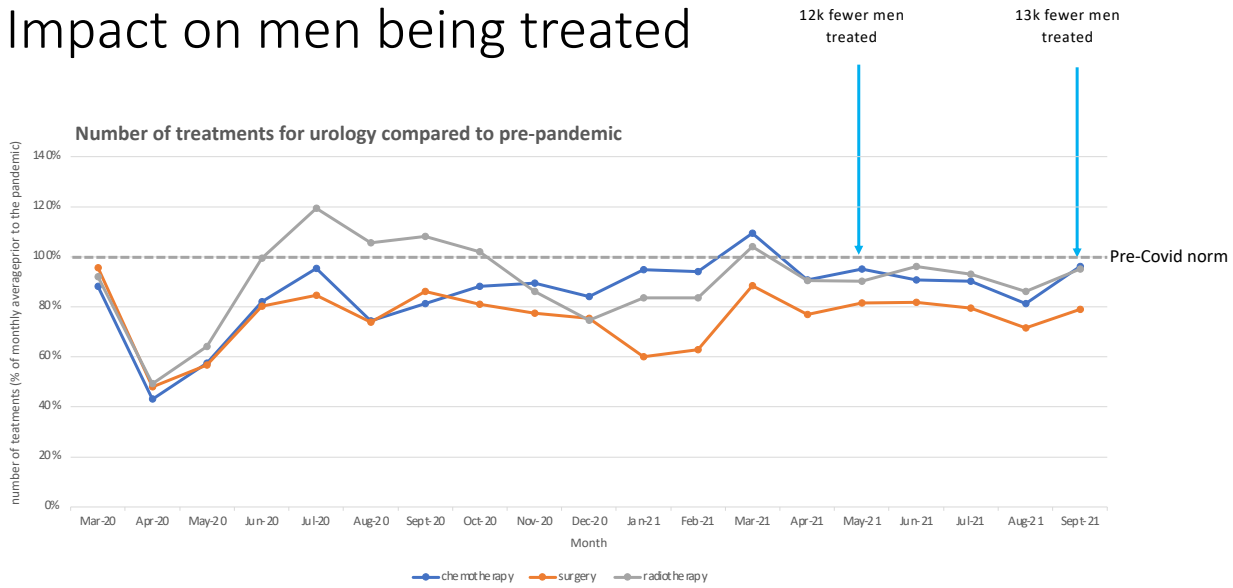
Impact on men being treated



https://www.england.nhs.uk/statistics/statistical-work-areas/cancer-waiting-times/

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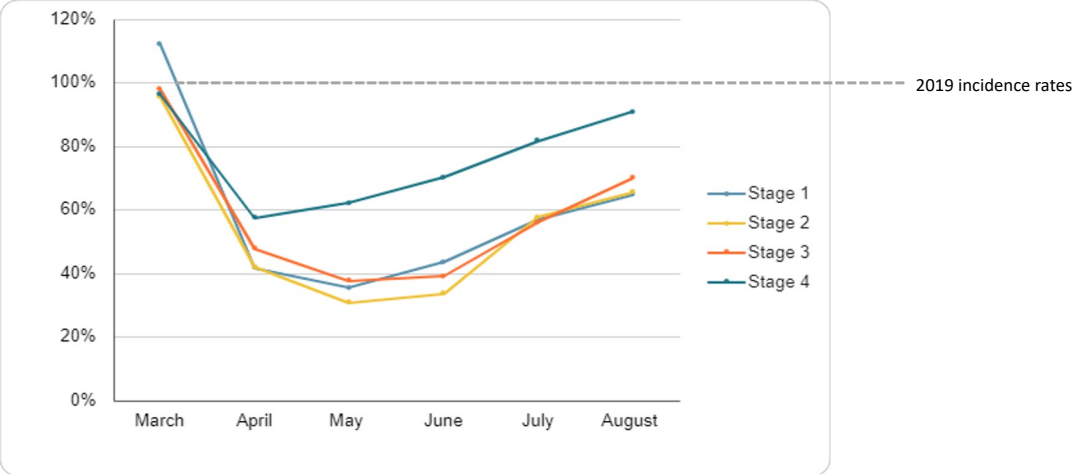
Impact on stage of diagnosis

Difference in prostate cancer incidence rates by stage between March-Aug 2020 and March-Aug 2019.



Data source: https://www.cancerdata.nhs.uk/covid-19/rcrd. Prostate data by stage at diagnosis

9

Awareness raising

Prostate Cancer UK empower higher risk men with knowledge and information to come to their own decision (informed choice) about whether or not to have a PSA test.

Who: men 50+, black men 45+, men with a close family history 45+

How:

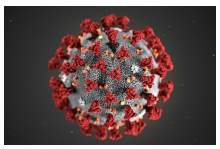
- We reach men at higher risk and raise awareness of their risk
- We use our risk checker to inform and engage men with their risk and the pros and cons of the PSA
- We recommend men at higher risk talk to their GP about the pros and cons of the PSA test.
- We don't tell men to have a PSA test - we tell them it's their choice – and it's fine to choose NOT to.

10

My Current roles during the ongoing covid-19 pandemic

- Lead Consultant for Cancer COVID-19 Response
  East and North Herts NHS Trust
- Expert Advisor, COVID-19 East of England Cancer Clinical Cell, NHS England and NHS Improvement

Public Health England



NHS England and NHS Improvement

NEWS

'If you think you might have cancer, please don't suffer in silence'

Nikhil Vasdev, associate medical director for cancer services and a consultant urologist surgeon at East and North Hertfordshire NHS Trust, talks about treating cancer patients during COVID-19 in our second Hertfordshire health column.

NIKHIL VASDEV

The word cancer means different things to different people – but what is clear is that for anyone who has been diagnosed with cancer or thinks they might have it, it is a worrying time.

My job as a surgeon at Lister Hospital in Stevenage is the removal of cancers, so it means I am used to addressing the fears patients have.

For many, these concerns have heightened during the coronavirus pandemic. We know that people were worried about going to see their doctor or visiting hospital when the infection rate was high, and we saw a significant decline in suspected cancer referrals when there was a local peak of COVID-19 cases in April.

It's encouraging to see that more people are now seeking help for symptoms which may be cancer, and it is vital this continues – early diagnosis saves lives.

If you are worried, please book an appointment with your GP by visiting your doctor's surgery website or phoning your surgery.

If you are not sure what to do, please visit 111.nhs.uk or call NHS 111 for free from a landline or mobile phone – advisors are there to ensure you are directed to the right place so you get the help you need.

And if you do need to come into hospital for an appointment or surgery, please be assured that it is safe to do so. We have a series of measures in place – including one-way systems and limiting the numbers of patients in waiting rooms.

As a team we are proud that in June (the latest published data available) we met all our cancer performance standards. This means more of our patients are being diagnosed and treated more quickly – with 90.2 per cent of patients attending their first hospital appointment within 14 days of being referred to us by their GP.

There are real news, but we do know there are people at home with symptoms who aren't contacting their GP in the first place.

My message to anyone who has concerns is that the NHS is open for business. We are here to help, so please don't suffer in silence.

Surgeon Nikhil Vasdev, who works at Lister Hospital in Stevenage, is urging patients with cancer symptoms to seek treatment. Picture: EAST AND NORTH HERTFORDSHIRE NHS TRUST

11

Case 1

45 year / male

Engineer

Brother diagnosed with prostate cancer at 66 in the Barbados

New onset lower urinary tract symptoms

Patient concerns – "Do I have prostate cancer ?"

"What is PSA ?"

12

12

Important patients to recommend PSA test

Lower urinary tract symptoms (PSA can predict progressive BPH when PSA is above 1.4)

Patients between 45 - 75

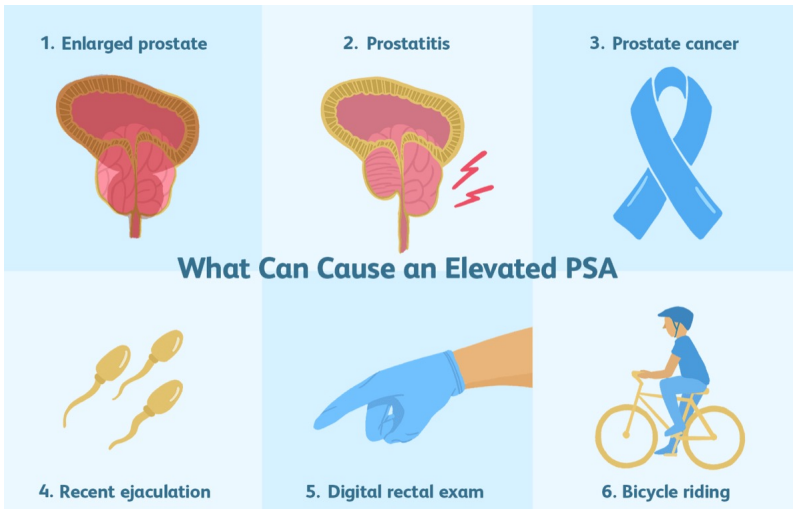
Family history positive 40 onwards

Afro- Caribbean 3X more likely

If PSA >1 at 45 or > 2 at 60 - 15% lifetime risk of significant prostate cancer

13

PSA Blood Test



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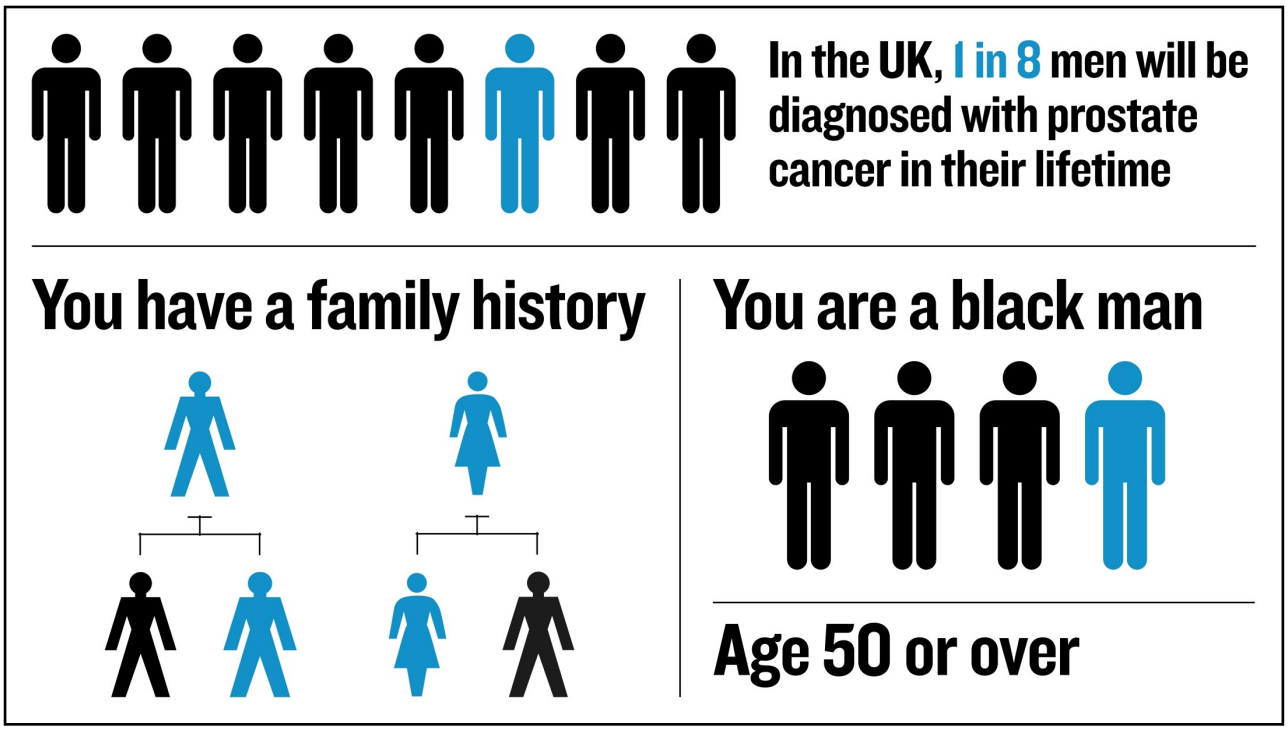


15

Symptoms of Prostate Cancer

- Water work symptoms
  - Needing to wee more often than usual, day or night
  - Difficulty starting a wee
  - Straining or taking a long time to finish weeing
  - A weak flow
  - Feeling that you haven't emptied your bladder properly
  - Needing to rush to wee – sometimes leaking before you reach the toilet
  - Dribbling urine after you finish weeing
- Blood in urine / semen
- Lower back bone pain
- Lethargy
- Erectile dysfunction
- Anorexia/weight loss

NICE National Institute for Health and Care Excellence

16

Black Men and Prostate Cancer

- 1 in 4 black men will get prostate cancer in their lifetime. Black men are more likely to get prostate cancer than other men, who have a 1 in 8 chance of getting prostate cancer
- You may also be more likely to get prostate cancer as a black man if:-
  - you are aged 45 or over – and your risk increases as you get older
  - your father or brother has had it

17

I'm a black man over 45. What should I do next?

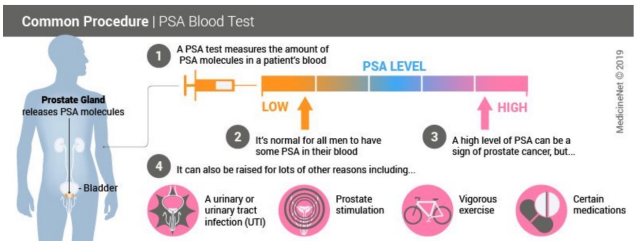
- See you GP even if you have no symptoms
- If you have a family history of prostate cancer or you're black, you are at higher risk
- Call your GP to talk about the pros and cons of a PSA blood test

PROSTATE CANCER UK

18

Advantages of PSA Blood Test

- It can help pick up prostate cancer before you have any symptoms.
- It may help to pick up a fast-growing cancer at an early stage when treatment may stop the cancer spreading and causing problems.
- Having regular PSA tests could be helpful for men who are more at risk of prostate cancer.
- This can help spot any changes in your PSA level, which might be a sign of prostate cancer.



19

Disadvantages of PSA Testing

- You might have a raised PSA level, even if you don't have prostate cancer
- The PSA test can miss prostate cancer.
  - 1 in 7 men (15 per cent) with a normal PSA level may have prostate cancer
  - 1 in 50 men (two per cent) with a normal PSA may have a fast-growing prostate cancer.
- If your PSA level is raised you may need more tests, including a biopsy.
- You might be diagnosed with a slow-growing prostate cancer which would never have caused you any problems or shortened your life

20

Perform first PSA level in proactive men at 40-45 or at 60 depending on your practice

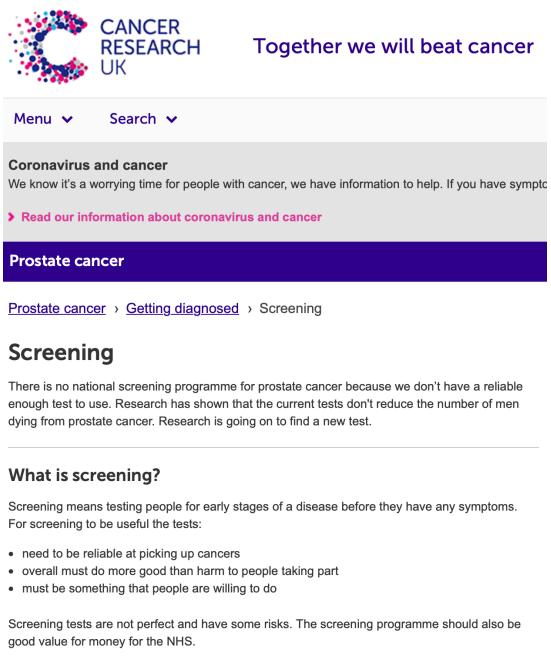
(Useful in the UK)

PSA > 1.0 (Age 45) and PSA > 2.0 (Age 60) there is a higher chance of developing advanced prostate cancer or dying of prostate cancer over the next 25 years

PSA < 1.0 (Age 60) rules out chance of developing high risk prostate cancer

PSA > 2.0 (Aged 60) - 26 X increase in dying of prostate cancer on 85th birthday

21



22

PSA Screening in the UK – Current Status (10/2021)

- Screening programmes aim to find the early signs of cancer in people who don't have any symptoms yet
- In the UK there are screening programmes for breast, cervical and bowel cancer
- Some studies have found that screening with the PSA test could mean fewer men die from prostate cancer. But it would also mean that:
  - Many men would have a biopsy, which could cause side effects
  - A large number of men would be diagnosed with a slow-growing cancer that wouldn't have caused any symptoms or shortened their life
  - A large number of these men would have treatment they didn't need, which could cause side effects.

23

BJUI
BJU International

Volume 114, Issue 3
September 2014
Pages 323–325

Guideline of guidelines: prostate cancer screening

Stacy Loeb

Key Points

- Randomised trials have shown that PSA screening reduces metastatic prostate cancer and disease-related death.
- The USPSTF recommends against PSA screening, while most other professional organisations recommend shared decision-making about PSA screening.
- PSA screening should be discontinued for men with <10-year life expectancy.
- Several guidelines now recommend baseline PSA testing for men in their 40 s for risk stratification.
- Some guidelines also suggest a risk-adapted approach to screening considering multiple risk factors along with PSA for clinical decisions.

24

24

What's new in 2022

Times have changed !

1. We are able to avoid over diagnosis:

- Better use of PSA: age-related PSA, PSA Density
- Risk Calculators (PCPT and ERSPC)
- mp(bp)MRI before biopsy — Mannaerts et al., Eur. Urol. Oncol. 2018
  - ....decrease of number of biopsies
  - .....detect more significant and less insignificant cancers

Amin et al., J. Urol. 2020

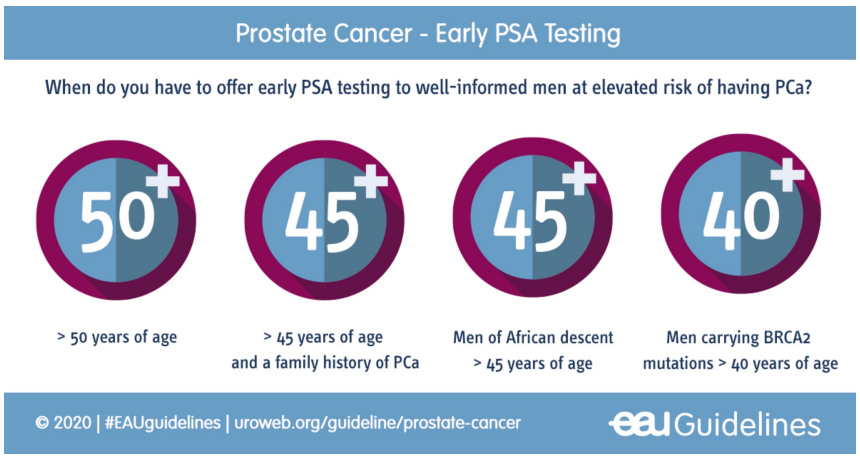
2. We can reduce overtreatment:

- Application of Active Surveillance in 65% of low & intermediate risk

Nomogram to predict disease progression for men on AS — Van Hemelrijck, EAU20

25

What's new in 2022



26

How often should the PSA level be checked ?

Age	PSA	Frequency of checking PSA
40 - 45 years	< 1.0	Every 8 years
40 - 45 years	> 1.0 - 2.5	Every 4 years
60 - 74 years	< 2.0	? Need to repeat at all NNT to save 1 live if is to screen 24,646 and treat 724 patient

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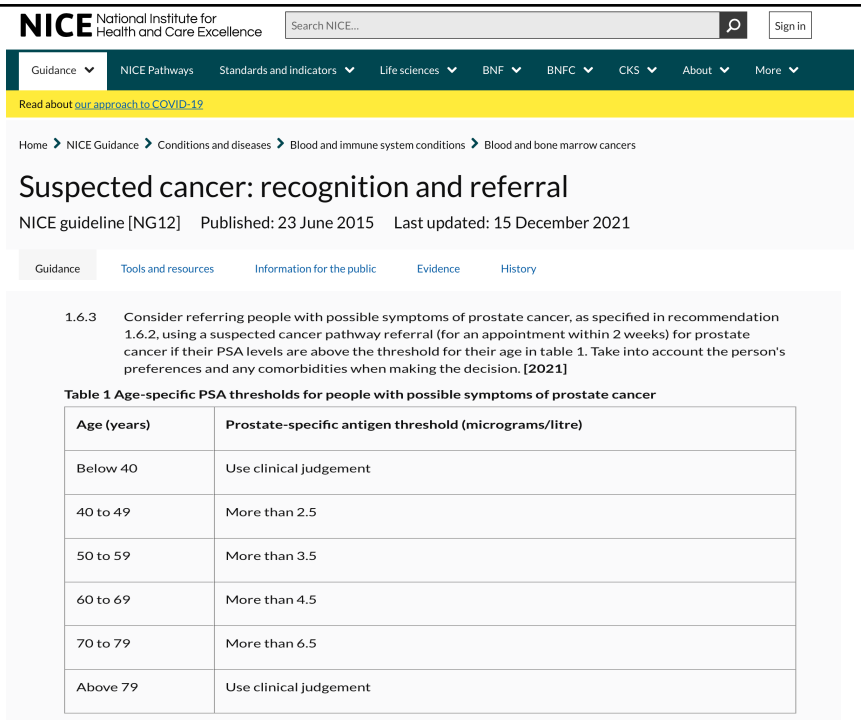

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Case 2

PSA – 6 ng / ml

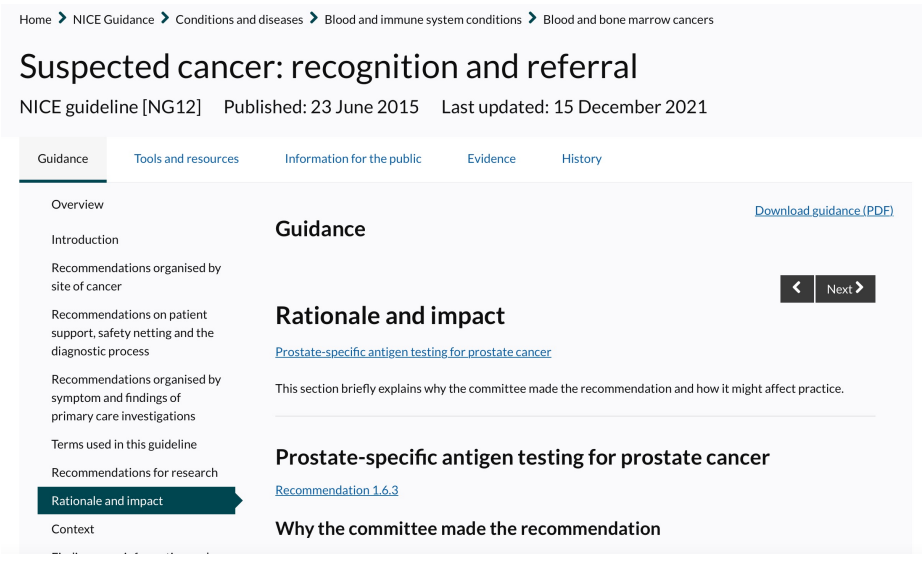
DRE – Firm nodule

ASA – 1

Performance Statu

Suspected cancer: **Prostate** ☐ PSA value _____ng/ml	**Symptoms:** Hard irregular prostate on DRE ☐ Significant symptoms (inc. symptoms of metastases) and raised PSA ☐ Raised age-related PSA ☐
Age related cut-off measurements : 50-59 > 3.0 ng/ml ; 60-69 > 4.0 ng/ml; 70-80 > 5.0ng/ml *Elderly patients (over 80yrs) or those with significant co-morbidity do not require urgent referral for mildly elevated PSA in the absence of symptoms. PSA measurements are NOT valid in the presence of urinary tract infection and need to be repeated once the infection has resolved.*	
Bladder or Renal ☐	**Symptoms:** PAINLESS macroscopic haematuria (any age) ☐ Haematuria associated with PERSISTENT UTI (over 40) ☐ Unexplained microscopic haematuria (over 50) ☐ Palpable renal mass or solid renal mass on U/S scan ☐
Testicular ☐	**Symptoms:** Swelling / mass in BODY of testicle ☐
Penile ☐	**Symptoms:** Ulceration / mass in the glans or the prepuce ☐

29



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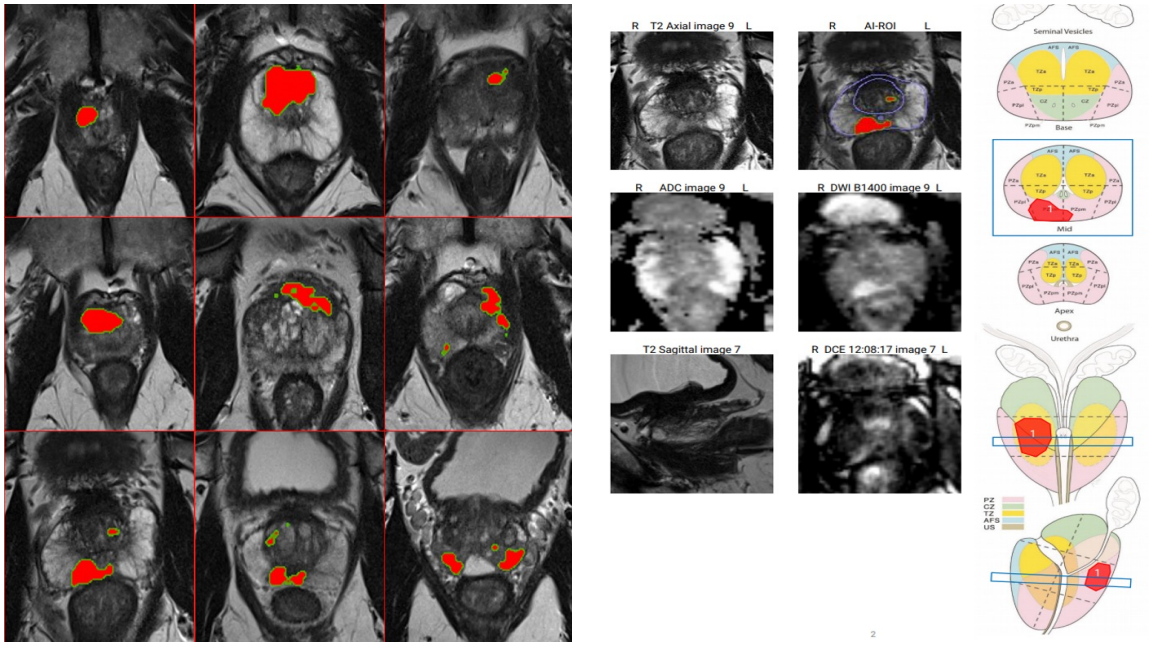
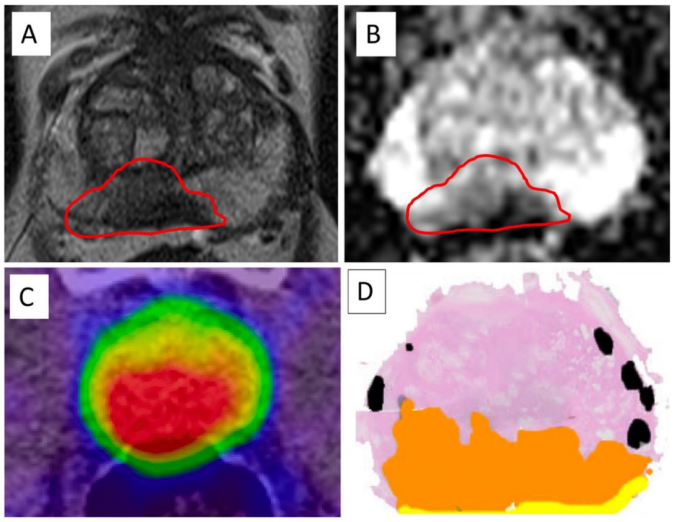


31

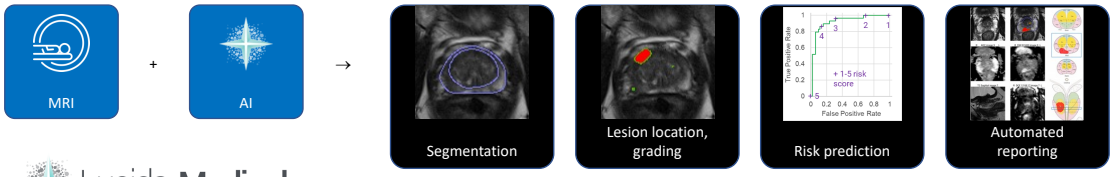
PMSA MRI

Fig 1 A 63-year-old male, PSA 6.1; cT2b, ISUP grade group 3 prostate cancer. **a**, **b** mpMRI demonstrates PIRADS 5 lesion right posterior zone; **c** PSMA PET/CT demonstrates corresponding avidity; **d** final pathology—pT3a grade group 3 negative margins



32

AI for prostate cancer diagnosis, treatment and management



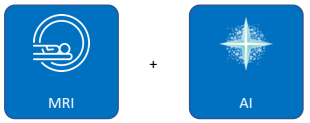
Lucida Medical

- Improve accuracy & consistency
- Fusion biopsy where necessary
- Reporting & staging
- Surgical planning

33

33

Collaboration on AI for prostate surgical planning



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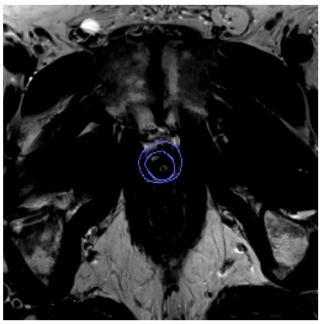
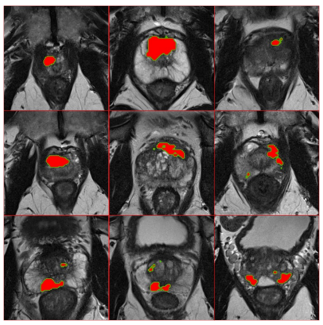




Surgical applications:

- Margins, extracapsular, NVB & SV involvement
- 3D visualisations for planning & procedure

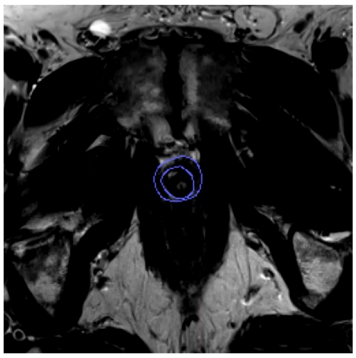
16 Nov 2020 34

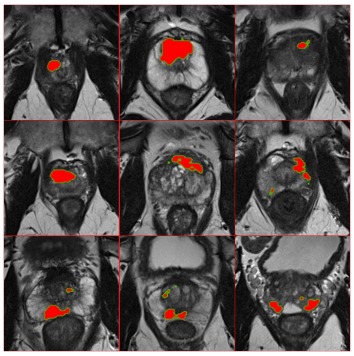
34

Collaboration on AI for prostate surgical planning (CI – N Vasdev)

Can MRI help us plan more effectively and improve outcomes in robotic prostatectomy?

- Capsular abutment, extracapsular extension & surgical margins
- Potential NVB or SV involvement
- 3D visualisations to assist planning & surgical procedure





Lucida Medical

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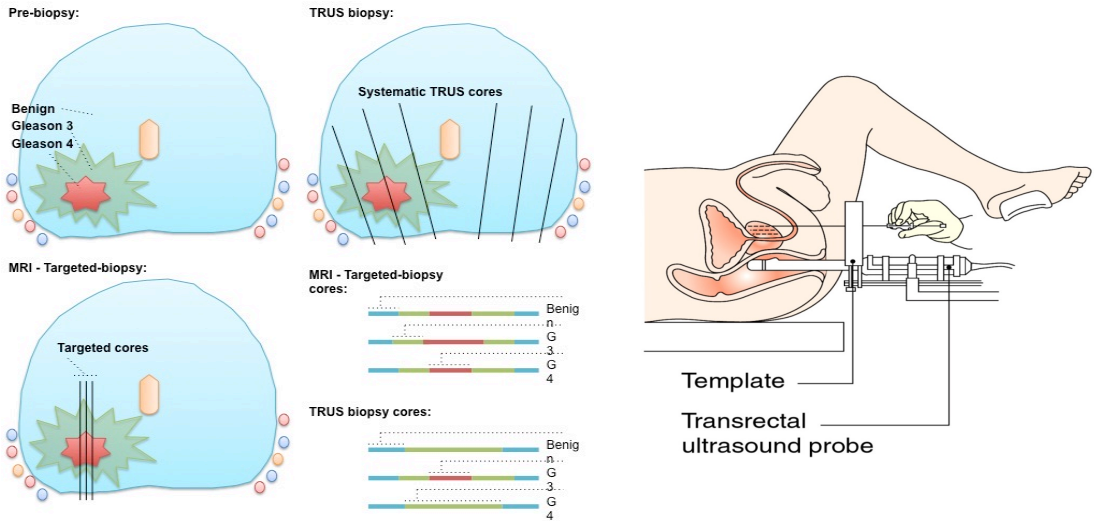
35

PI-RADS 1.0

1	Clinically significant cancer *highly unlikely*
2	Clinically significant cancer *unlikely*
3	Clinically significant cancer is *equivocal*
4	Clinically significant cancer is *likely*
5	Clinically significant cancer is *highly likely*

36



37

DOI: 10.1111/bco2.50

ORIGINAL ARTICLE

The role of URO17™ biomarker to enhance diagnosis of urothelial cancer in new hematuria patients—First European Data

Nikhil Vasdev[1,2] | Alexander Hampson[1] | Samita Agarwal[3] | Rajiv Swamy[3] | Michael Chilvers[4] | Amy Hampson[1] | Sholeh Jahanfard[5] | Nam Kim[5]

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[2]School of Life and Medical Sciences, University of Hertfordshire, Hatfield, UK
[3]Department of Pathology, Lister Hospital, Stevenage, UK
[4]Department of Anaesthetics, Lister Hospital, Stevenage, UK
[5]KDx Diagnostics Inc, Campbell, CA, USA

Abstract

Introduction and objectives: Novel biomarker research is vital for the progression of safe and thorough diagnostic medicine. There is now a need to improve the diagnosis of bladder cancer via a noninvasive urine test while balancing the risks of harm from investigational procedures, such as cystoscopy and radiological tests, against the likelihood of malignancy. We evaluate the diagnostic accuracy and sensitivity of Uro17™ urinary biomarker for the detection of urothelial cancer in hematuria patients in a prospective blinded validation study. Uro17™ is an immunobiomarker which binds

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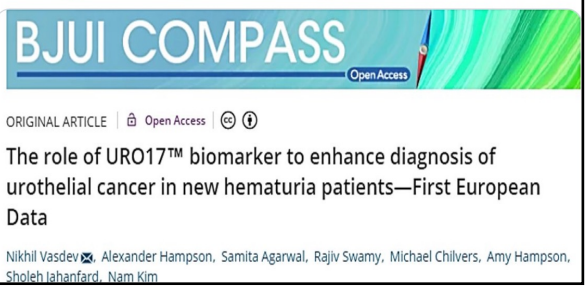
.@nikhilvasdevuro et al show @KdxDiagnostics #URO17 detects #BladderCancer in patients with #hematuria

#Urine-based #LiquidBiopsy of #keratin17 #biomarker may help reduce the risks associated with invasive #diagnostics

doi.org/10.1002/bco2.50
#urology #oncology @BJUICompass



38

Microfluidics Prostate Cancer Biopsy Development

- Development of novel Extracellular Vesicle- (EV-) based biomarkers for early detection of Prostate Cancer
- Prostate Cancer Urinary Biomarker Development

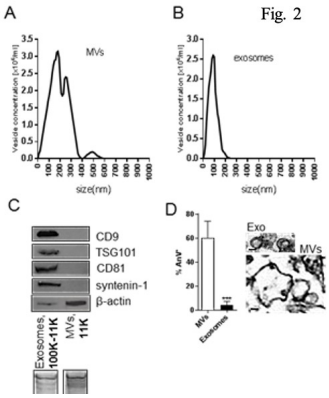


Fig. 2

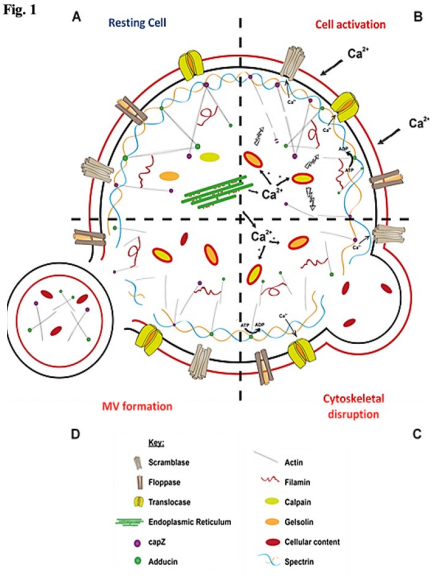


Fig. 1

Section a. State-of-the-art and objectives

Definition of novel Extracellular Vesicle- (EV-) based biomarkers for early detection of Prostate Cancer (PCa)

39

available at www.sciencedirect.com
journal homepage: www.europeanurology.com

European Association of Urology

Platinum Opinion

The Emerging Role of Artificial Intelligence in the Fight Against COVID-19

Aruni Ghose [a], *Sabyasachi Roy* [b], *Nikhil Vasdev* [c], *Jonathon Olsburgh* [d], *Prokar Dasgupta* [e,*]

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40

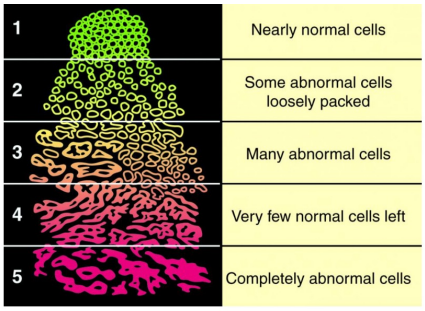
Case 3

Biopsies – Gleason 3+4=7 Ca Prosta

Partner – 40 year old

Main concerns

- Cancer Control
- Continence
- Erectile Dysfunction
- Return to Work
- Long term follow up



Risk Group	Grade Group	Gleason Score
Low	Grade Group 1	Gleason Score ≤ 6
Intermediate Favorable	Grade Group 2	Gleason Score 7 (3 + 4)
Intermediate Unfavorable	Grade Group 3	Gleason Score 7 (4 + 3)
High	Grade Group 4	Gleason Score 8
High	Grade Group 5	Gleason Score 9–10

41

41

Journal of Robotic Surgery
https://doi.org/10.1007/s11701-021-01324-2

ORIGINAL ARTICLE

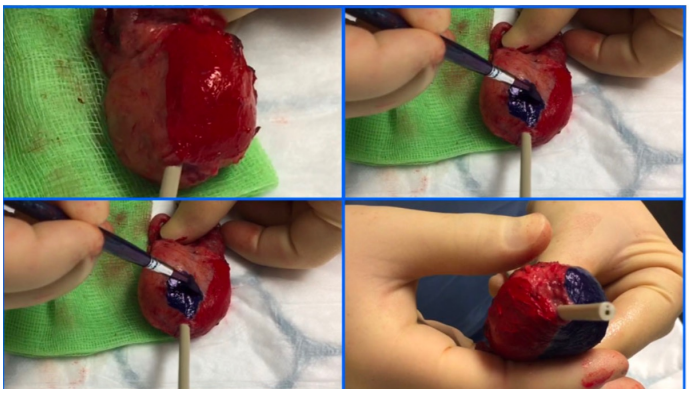
Neurovascular structure-adjacent frozen-section examination robotic-assisted radical prostatectomy: outcomes from 500 consecutive cases in the UK

Jonathan Noël[1] · Neil H. Spencer[2] · Siya Lodia[1] · Seiver Karim[1] · Surina Taneja[1] · Darius Moghanchizadeh[1] · Arvind Nayak[1] · Ashwin Tamhankar[1] · Seema Angra[3] · Rajiv Swamy[3] · Samita Agarwal[3] · Ashish Narula[3] · Tim Lane[1] · Jim Adshead[1] · Nikhil Vasdev[1,4]

Received: 18 August 2021 / Accepted: 16 October 2021

42

N Vasdev – Lister Neurosafe Prostatectomy



43

Table 2 Erectile dysfunction (ED) at 12 months against NeuroSAFE bundles spared/removed

	ED Score 0	ED Score 1	ED Score 2	ED Score 3	Total
NVB spared	41 (13.4%)	88 (28.9%)	94 (30.8%)	82 (26.9%)	305 (100%)
1 NVB taken	10 (9.3%)	26 (24.1%)	31 (28.7%)	41 (38%)	108 (100%)
2 NVBs taken	0 (0%)	1 (5.9%)	4 (23.5%)	12 (70.6%)	17 (100%)

p value = < 0.01

ED Score 0 = spontaneous erections; 1 = erections with PDE-51; 2 = partial erection; 3 = no/minimal erections

Table 3 Urinary continence at 12 months against NeuroSAFE bundles spared/removed

	Continence Score 0	Continence Score 1	Continence Score 1.5	Continence Score 2	Continence Score 3	Total
NVB spared	170 (55%)	100 (32.4%)	10 (3.2%)	18 (5.8%)	11 (3.6%)	309 (100%)
1 NVB taken	65 (58.6%)	36 (32.4%)	3 (2.7%)	5 (4.5%)	2 (1.8%)	111 (100%)
2 NVBs taken	9 (50%)	8 (44.4%)	1 (5.6%)	0 (0%)	0 (0%)	18 (100%)

p value = 0.49

Continence Score 0 = pad free; 1 = safety; 1.5 = 1 pad/day; 2 = 2–3 pads/day; 3 = 4 or more pads/day

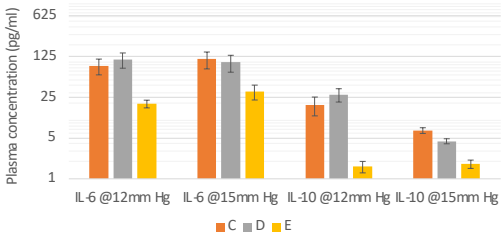
44

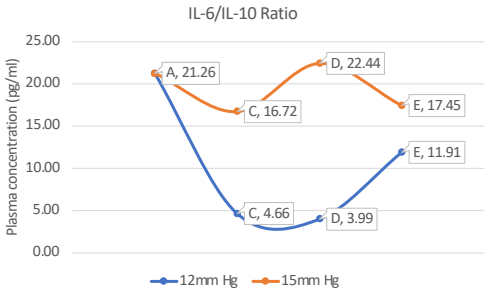
NIHR | National Institute for Health Research

Cytokine guided Robotic prostatectomy
CI – N Vasdev

- 20 patients undergoing Robotic Prostatectomy
- 12 mm Hg (10 patients) and 15 mm Hg (10 patients)
- IFN-gamma,TNF-alpha,IL-1beta and IL-4 are elevated at a pressure of 15 mm Hg and lower at a pressure of 12 mm Hg

	Pressure 12 mm Hg	Pressure 15 mm Hg
Blood loss	92.5 ml	50 ml
Time to passing flatus	1.2 days	1.6 days
Time to open bowels	3.4 days	3.8 days
Ileus Rates	0	20%

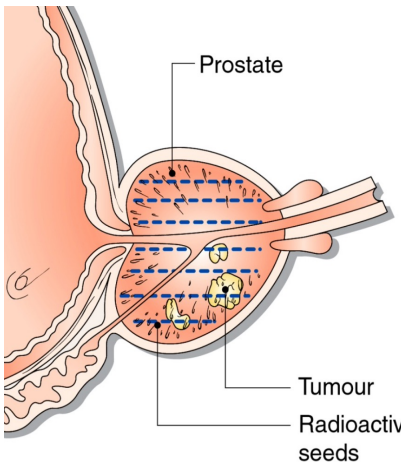




Published – Current Urology (July 2020)

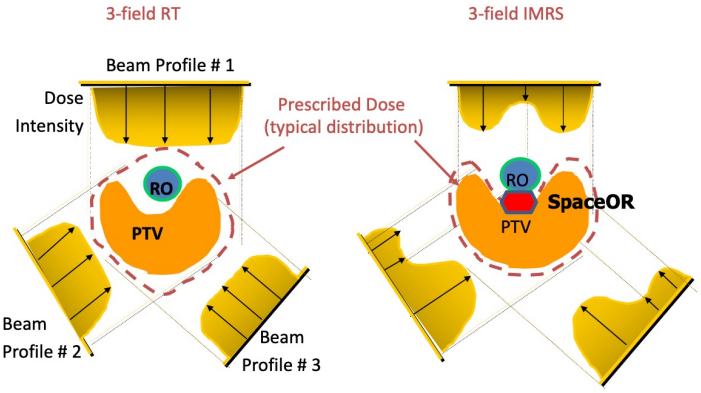
45

Radiation Based Treatment options



Intensity Modulated Radiotherapy

CRT vs. IMRT



With IMRT dose distribution can be shaped to the target to spare Organs at Risk

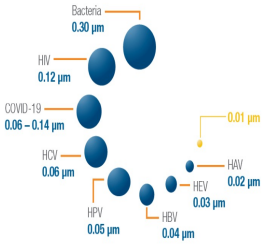
46

Aerosol and viral transmission

- CO2 could theoretically contain COVID-19 particles and that aerosolization could expose healthcare workers to infectious virus if there is unrestricted release of CO2 into the operating room
- Biologic material is a known component of surgical smoke

Virus	Aerodynamic Size
COVID-19	0.06 – 0.14 µm
HIV	0.12 µm
HPV	0.055 µm
Hepatitis C	0.1µm

- Based on this data, capture of sub 0.1 µm is possible
- Case reports of HPV viral infection associated with inhaled viral smoke



1. Cascella M, Rajnik M, Cuomo A, et al. Features, Evaluation and Treatment Coronavirus (COVID-19) [Updated 2020 Mar 8]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2020 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK554776/ <https://www.ncbi.nlm.nih.gov/books/NBK554776/
2. Fisher, Bruce; Harvey, Richard P.; Champe, Pamela C. (2007). Lippincott's Illustrated Reviews: Microbiology. Lippincott's Illustrated Reviews. Hagerstown, MD: Lippincott Williams & Wilkins. p. 3. ISBN 978-0-7817-8215-9.
3. IARC Working Group on the Evaluation of Carcinogenic Risk to Humans. Human Papillomaviruses. Lyon (FR): International Agency for Research on Cancer; 2007. (IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, No. 90.) 1, Human Papillomavirus (HPV) Infection. Available from: https://www.ncbi.nlm.nih.gov/books/NBK321770/
4. Hepatitis C virus--proteins, diagnosis, treatment and new approaches for vaccine development. Hossein Keyvani, Mehdi Fazlalipour, Seyed Hamid Reza Monavari, Hamid Reza Mollaie. Asian Pac J Cancer Prev. 2012; 13(12): 5931–5949.

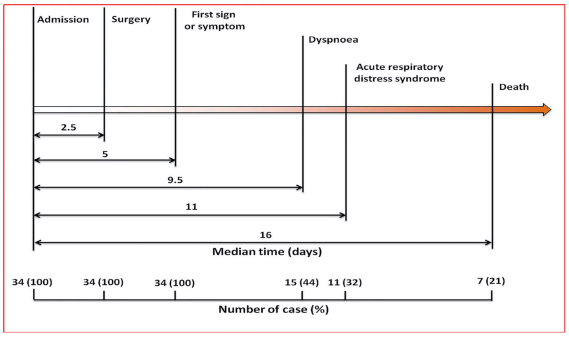
47

First account of peri-operative covid-19 complications – April 2020

Research Paper

Clinical characteristics and outcomes of patients undergoing surgeries during the incubation period of COVID-19 infection

Shaoqing Lei[a], Fang Jiang[b,c], Wating Su[a], Chang Chen[d], Jingli Chen[e], Wei Mei[f], Li-Ying Zhan[a], Yifan Jia[a], Liangqing Zhang[g], Danyong Liu[g], Zhong-Yuan Xia[a,*], Zhengyuan Xia[b,c,g,*]



- Perioperative COVID-19 in 34 patients (Wuhan)
- Post operative mortality – 20%
- Obvious limitations
- All other subsequent reports support the findings similar to this paper

48

Intra-operative considerations (initial and during surgery)

- Use smoke evacuation pencil
- Skin incisions should be as small as possible to minimize the potential for gas leakage around the trocar
- Ensure Trocar stopcocks or luer connectors are closed prior to insertion to prevent unnecessary gas leakage
- Use a low-pressure pneumoperitoneum and gradual Insufflation
- Use continuous circulation of Insufflation system (AirSeal system™ by CONMED USA) to decrease the accumulation of surgical smoke in the abdomen
- Use a concomitant ULPA (Ultra-low particulate air) filter for surgical smoke settings
- Avoid low temperature ultrasonic scalpels/scissors
- Avoid transfer of specimen bag strings through ports

49

AIRSEAL TRAINING VIDEOS

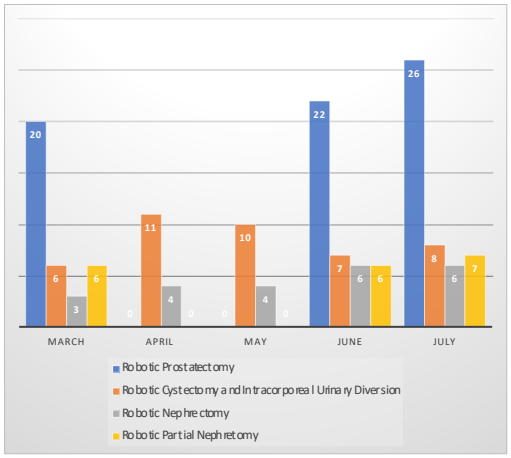
MR NIKHIL VASDEV – CLINICAL USE OF AIRSEAL

50

50

Robotic urology at ENHT during COVID-19

- Anaesthetic staff allocation (Working Beyond One's Regular Scope of Practice as Part of a Team)
- Documented consent covering the risk of COVID-19 exposure and the potential consequences
- All cases With Airseal and cystectomies were all Intracorporeal Urinary Diversion (All cases approved by tumour board to proceed)



0 % COVID-19 post Robotic Surgery at 30 days

51

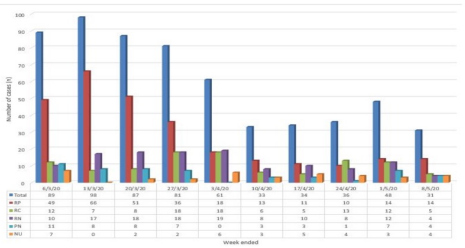
BJUI
BJU International

Major urological cancer surgery for patients is safe and surgical training should be encouraged during the COVID‡19 pandemic: A multi-centre analysis of 30-day outcomes.

- Data from 13 UK major cancer referral centres between 1st March- 6th May 2020 (Real-life data)
- 598 patients in analysis amongst whom A minimal invasive approach was utilised in 499 cases (83.4%)

Table 1: Patient characteristics stratified by type of surgery.

	All patients (n=598)	Radical prostatectomy (n=282)	Radical cystectomy (n=104)	Radical nephrectomy (n=124)	Partial nephrectomy (n=52)	Nephroureterectomy (n=36)
Age (years), median (IQR)	65.1 (58.5-71.3)	64.1 (59.0-68.6)	70.4 (60.4-75.4)	65.9 (58.5-73.4)	59.4 (52.1-68.5)	61.8 (62.5-75.4)
ASA:						
I	83 (13.9)	47 (16.7)	11 (10.5)	13 (10.5)	8 (15.3)	4 (11.2)
II	393 (65.7)	212 (75.1)	58 (55.8)	74 (59.7)	33 (63.5)	16 (44.4)
≥III	122 (20.4)	23 (8.2)	35 (33.7)	37 (29.8)	11 (21.2)	16 (44.4)
Surgical technique, n (%):						
Open	99 (16.6)	1 (0.4)	39 (39.4)	46 (37.1)	7 (13.5)	6 (16.7)
Robotic	418 (69.9)	280 (99.3)	65 (62.5)	12 (9.7)	43 (82.7)	18 (50.0)
Laparoscopic	81 (13.5)	1 (0.4)	0 (0)	66 (53.2)	2 (3.8)	12 (33.3)
Training case, n (%):						
No	370 (61.9)	173 (61.3)	69 (66.3)	68 (54.8)	34 (65.4)	26 (72.2)
Yes	228 (38.1)	109 (38.7)	35 (33.7)	56 (45.2)	18 (34.6)	10 (27.8)
Hospital LOS (days), median (IQR)	3.0 (1.0-5.0)	1.0 (1.0-2.0)	7.5 (6.0-11.8)	4.0 (3.0-6.0)	3.0 (2.0-4.0)	4.0 (3.0-5.0)
Patients who developed COVID-19, n (%)	4 (0.7)	0 (0)	3 (2.9)	1 (0.8)	0 (0)	0 (0)



No 30 day COVID-19 Related Mortality
Risk of contracting COVID-19 post operatively – 0.7%
Risk of contracting COVID-19 not associated with longer hospital LOS (p=0.146), training case (p=0.588), Higher ASA (p=0.295)

*Submitted

52

ELSEVIER

Urologic Oncology: Seminars and Original Investigations 39 (2021) 455–470

UROLOGIC ONCOLOGY

Prostate cancer and microfluids

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Received 12 December 2020; received in revised form 14 March 2021; accepted 16 March 2021

Advances in Metastatic Prostate Cancer

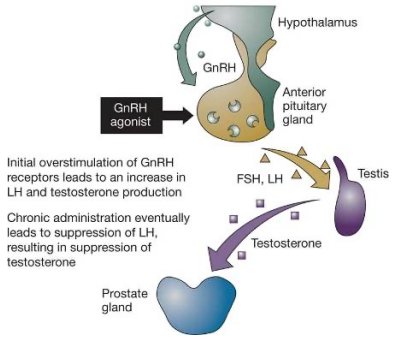
Abiraterone

- CYP17 inhibitor
- Inhibits testosterone formation
- STAMPEDE TRIAL
- Hormone and chemo unresponsive patients

LetsMeds

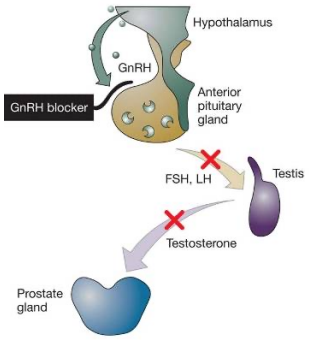
Mechanism of action of GnRH antagonists differs significantly from that of agonists

LHRH agonists



- Surge in FSH, LH and testosterone before suppression
- Microsurges in LH and testosterone on repeat injection
- FSH suppression, but not maintained long term

GnRH antagonists



- Immediate suppression of FSH, LH and testosterone
- No microsurges
- Prolonged suppression of FSH, LH and testosterone

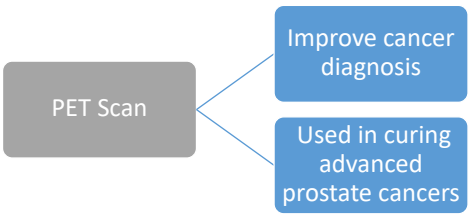
FSH, follicle-stimulating hormone; LH, luteinising hormone

55

PSMA PET SCAN

A PET-CT scan can show how well certain parts of your body are working, rather than simply showing what they look like.

PET-CT scanning not only for cancer diagnosis but also for cancer treatment (177Lutetium-PSMA as a therapy for advanced prostate cancer)



56