Action Radiotherapy/R4L/#CatchUpWithCancer

Prostate Cancer May 2021

Background

Prostate cancer is the most common cancer in men in the UK, accounting for around 1 in 4 cases of cancer in men. Prostate cancer statistics | Cancer Research UK

Nearly 50,000 cases are diagnosed each year, with the incidence highest in men aged 75-79. Nearly 12,000 men die of prostate cancer each year. If diagnosed early nearly 78% of men can survive more than ten years.

Localized prostate cancer is treated according to risk low risk usually offered active surveillance, while intermediate risk offered surgery or radiotherapy. Metastatic disease is offered hormone therapy and increasingly chemotherapy and localized radiotherapy.

Situation before Covid

Jan 2020: The National Prostate Cancer audit[1] was published and assessed the service against NICE quality standards. While many of the standards were met, the situation with respect to radiotherapy was suboptimal and worsening with 32% of men with high risk/locally advanced diseased not having access to radiotherapy, and of those with access to radiotherapy only 59% had access to more modern hypo-fractionated radiotherapy (reduced number of treatments needed) with much across UK variation.

This was in line with the poor access to radiotherapy generally and to modern radiotherapy specifically across the UK due to the historical underfunding of radiotherapy and constraints put on by central NHSE central commissioning highlighted in the APPG-RT manifesto September 2018[2], AR analysis of access in the UK April 2019[3], and results of the APPG-RT radiotherapy inquiry August 2019[4]. This was on a background of minimal progress being made on the CRUK/NHSE 2014 strategy for modernizing radiotherapy[5] by 2020 and the WHO benchmarking report in November 2019[6] showing UK at the bottom of the league of cancer survivals in seven high income countries.

Situation during Covid

Delivery of prostate cancer services were disproportionately affected during Covid. There is usually less urgency to treat prostate cancer than some cancers and so this was usually at the lower end of the priority list recommended in the Covid pandemic. The British association of urological surgeons [7] in line with international guidelines recommend a pragmatic approach with patients in low/intermediate risk categories delaying treatment for at least 6months and those with high -risk diseases or unfavorable intermediate risk offered hormone therapy to delay radical surgery or

[1] Reports - National Prostate Cancer Audit (npca.org.uk)
[2] Publications | All Party Parliamentary Group for Radiotherapy (appgrt.co.uk)
[3] Analysis | Action Radiotherapy
[4] Publications | All Party Parliamentary Group for Radiotherapy (appgrt.co.uk)
[5] policy_feb2014_radiotherapy_vision2014-2024_final.pdf (cancerresearchuk.org)
[6] Arnold M, Rutherford MJ, Bardot A, et al. Progress in cancer survival, mortality, and incidence in seven high-income countries 1995-2014 (ICBP SURVMARK-2): a population-based study. Lancet Oncol 2019; 20(11): 1493-505.
[7] BRITISH ASSOCIATION OF UROLOGICAL SURGEONS (wmcanceralliance.nhs.uk)

radiotherapy. This was in line with radiotherapy guidelines[8] recommending delaying and avoiding radiotherapy where possible.

This coupled with a reduced number of men coming forward with symptoms of prostate cancer and those on follow up often not having their usual access to PSA blood tests meant that over the year of Covid the largest backlog in cancer treatment has been in prostate cancer; partly due to patients not presenting and partly due to patients when diagnosed having their treatment being actively delayed in response to Covid.

Current status March 2021

The current status a year after the Covid pandemic has been recently updated. Prostate Cancer UK[9] in March 2020 has found that:

- Urgent referrals by GPs in England have dropped by over 52,000 and more than 8,600 fewer men in England started treatment for prostate cancer in 2020 compared to the previous year, a reduction by about a third.
- Regional variations – North East, Midlands and London seeing a greater drop in referrals compared to other parts of the country.

The true figures are likely requiring surgery or radiotherapy for prostate cancer is likely to be higher as starting hormone therapy with delaying definitive surgery or radiotherapy is often counted as "starting treatment" and patients presenting with relapsed prostate cancer not counted in these figures.

The charity warned that the delays in diagnosis could mean men have their cancer diagnosed too late for treatment.

Concerns re backlog of cancer treatment

The APPG-RT has been warning since April 2020 that not enough is being done to maintain cancer services during the pandemic or to plan for the inevitable backlog created in lockdown as patients do not access medical services. They called for the formation of a cancer recovery task force and once formed were concerned it had no real authority and ambitions appeared to be only to hope all cancer services were near normal by March 2020. Since the failure of the cancer recovery plan during the second and third wave they are calling yet again for the same urgency and focus as has been given to covid and the vaccine role out. Practical proposals have been put forward but there appears to be a denial of the scale of the problem and now the recovery plan delegated to Trust with no additional funding.

Proposals which have been so far ignored and now need to be urgently considered

Even before the current lockdown, last October Jeremy Hunt estimated that cancer services would need to run at 120% for two years to catch up[10]. 2 years is too long to wait in cancer as a 4 week delay

[8] NICE NG162 guidelines on radiotherapy. Overview | COVID-19 rapid guideline: delivery of radiotherapy | Guidance | NICE

[9] Prostate cancer UK Help us find the missing men: prostate cancer referrals fall by 52,000 due to COVID-19 | Prostate Cancer UK

[10] BBC Breakfast Oct 2020

in treatment can cause a 10% reduction in survival[11]. It has been estimated that even the first wave disruption will have set cancer survival back to rates not seen for 10-15 years[12].

The barriers to tacking the backlog are (i) chronic workforce shortage -and current exhaustion of staff- and (ii) surgical operating and radiotherapy capacity.

The APPGRT put forward their 6 point plan for RT recovery in the UK (£850M over three years) along with a request for over £350M of diagnostic imaging capacity but the funding for this was not forthcoming at the 2020 spending revie of 2021 Spring budget, and with the delays in RT machine replacement since 2019 in any case, radiotherapy is in a worse place than it was going into Covid, and yet it is recognized as one of the main cancer treatments which could continue safely during Covid and which can be used to catch up with the cancer backlog.

Specific solutions for prostate cancer

For the prostate cancer treatment there are at least three obvious solutions:

1. Increased the MR parametric imaging diagnostic capacity to cope with increased number of suspected cancer patients when they do present.
2. Offer radiotherapy as a substitute for surgery in areas where surgical waiting lists are too long (both treatments as effective and patients given a choice in any case).
3. Use ultra- hypo-fractionated radiotherapy (much fewer daily treatments) to reduce capacity problems on radiotherapy machines, reduce side effects and reduce numbers of visits and so reduce Covid infection rates.

NHSE has been advertising the increased use of hypofractionation in cancer treatment during Covid, but in reality this has so far had not had the impact it could have done, particularly in prostate cancer, partly because of the poor track record in referrals for radiotherapy before Covid (UK Audit above) and the lack of funding to introduce the necessary MR imaging for ultra-hypofractionation radiotherapy planning and the lack of funding in the NHSE tariff for such MR planning. Ultra hypo-fractionated (SABR) for prostate cancer requires the precision of MR planning.

Investment in improved imaging and ultra-hypo-fractionated RT would help with the Covid backlog by reducing the amount of radiotherapy machine time treating patients with prostate cancer, therefore allowing more patients to be treated for a given number of staff and reducing the backlog and saving lives. This would also reduce costs by curing more patients and reducing long term side effects.

How does MRI improve radiotherapy?

MR planning imaging for radiotherapy is used in a number of sites; prostate, brain, head and neck, rectum etc.

- Improved tumour visualization
    - Reduced margins (treating less normal tissue) – reduced side effects
    - Improved cancer cure
- Reduce radiotherapy toxicity rate for both standard fractionation and hypofractionated treatments

[11] Counting the invisible costs of covid-19: the cancer pandemic - The BMJ

[12] Science Talk - Cancer and COVID-19: how coronavirus has delayed vital cancer treatments - The Institute of Cancer Research, London (icr.ac.uk)

UK MRI Access and Use

It was recommended by an independent report by CRUK in 2015 that for every 2-4 million population served by a Centre, 0.7 of an MR machine is required, i.e. approximately 15-20 MR machines across England[13] This was sadly not funding and so is outstanding now in 2021.

Costs: (Approx)

£1M per scanner and £1.5M staff and building costs (approx. £2.5M for 1.00 facility). Total for 15-20 scanners= £50M

MR planning addition to tariff: up to £500 per patient

Survey results – current use of MRI for radiotherapy in UK compared to other countries[14]

A survey of UK radiotherapy centres was conducted about the use of MRI for radiotherapy and the results compared to 10 other countries. The survey found that:

- Only 69% of UK departments have some form of access to MR imaging for radiotherapy
- In 2018 only 6% of radiotherapy patients received MRI planning, compared to the US where 24% of all RT courses are planned with MRI
- In the UK <5% of responding centres confirmed that they had a dedicated MR scanner for radiotherapy, compared to Denmark and Sweden where >80% of the centres have dedicated MR scanners
- UK had the lowest use of MRI for Prostate cancer compared with New Zealand, Belgium, Italy, Finland, Netherlands, Australia, France, Sweden and Denmark

Barriers to using MRI for radiotherapy

87% of centres reported lack of access to MRI scanning while 29% said the lack of funding within the RT planning tariff prevented then using MRI.

Solutions

£50 million flexible fund needed to RT centres and increase tariff by £500 per patient.

In association with IPEM, Head of Departments propose

Option A: MR Planner provision for every Radiotherapy Centre

Option B: MR Planner provision for 15-20 centres, based on the recommendations of the 5-year plan between 2015-2020 as discussed

Option C: MR planner provision for each Radiotherapy Network Partnership, 11 Networks.

He agreed that funding for associated staffing is essential, as there is a limited level of MRI expertise in many departments

---

[13] achieving world-class cancer outcomes for England 2015-2020

[14] Richard S, Marcus T, Maria AS, et al. IPEM Topical Report: An international IPEM survey of MRI use for external beam radiotherapy treatment planning. *Physics in Medicine & Biology* 2021