The translation of clinical trial research in metastatic hormone sensitive prostate cancer (mHSPC) treatment into utilisation of treatments for patients in clinical practice

NPCA National Prostate Cancer Audit

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Introduction

The landscape of treatments available for mHSPC has changed drastically over the last decade but there is evidence that these treatments are not being utilised within real-world settings.

International guidelines now recommend **'treatment intensification'** of ADT in combination with either docetaxel and/or novel hormonal therapy (NHT).

The **utilisation** of these treatments and the **determinants of variation** are yet to be explored.

Objectives

1. To identify the proportion of patients with mHSPC who receive treatment intensification and the change in utilisation over time.
2. To identify whether variation in utilisation can be attributed to inequalities affecting particular patient groups.

Methods

MEDLINE and EMBASE were systematically searched for studies exploring **mHSPC** and utilisation of **docetaxel or NHT** (enzalutamide, abiraterone or apalutamide) in clinical practice. Studies were included if they were conducted using **regional or national** datasets and if they explored the **determinants** of variation (e.g. age/performance status/ethnicity/treating speciality).

The review was limited to observational studies published between January 2005 and June 2022 to ensure it reflected contemporary prostate cancer management. The utilisation rates of each treatment type as well as any determinants of variation were summarised using a narrative synthesis approach. Change in utilisation rates over time was also captured.

Results

- 13 papers were included, 6 full text and 7 abstracts, conducted in five different countries.
- The utilisation rate ranged from **9.3 to 38.1% across the studies.**
- NHT utilisation has increased over time but docetaxel rates peaked in 2016.

Figure 1: Examples of variation in utilisation of NHT over time

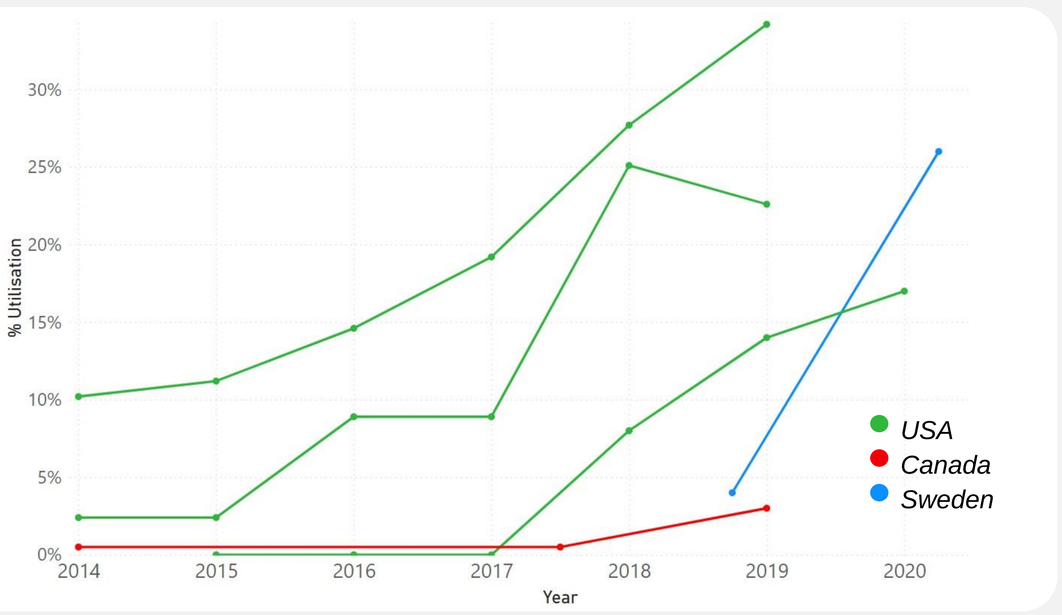

Table 1: Determinants of variation for utilisation of treatment intensification

Paper	Determinants							
	Age	Ethnicity	PS status	Deprivation	Region	Institution	Speciality	Met burden
1	↑ young		↑ better PS		5% - 17%			↑ bone
2	↑ young			↔	↑ urban	↑ private		↑ visceral
3	↑ young		↑ better PS		0 - 39%			↑ bone
4	↑ young		↑ better PS	↔	↑ urban			
5	↑ young	↑ white	↑ better PS					↑ vis/bone
6	↑ young		↑ better PS					
7							↑ onco	
8		↔						
9						↑ academic	↑ onco	
10		↑ white						
11	↑ young							↑ vis/bone
12	↑ young							↑ visceral
13	↑ young	↑ white						↑ bone

Patients were more likely to receive treatment intensification if they:

- were **younger** or
- were **White** or
- had **fewer co-morbidities** or
- were treated by **oncologists rather than urologists**

Conclusions

This study is an international evaluation of evidence of utilisation of treatment intensification for mHSPC in clinical practice.

There is clear evidence of **low utilisation rates of treatment intensification** with docetaxel or NHT, in addition to ADT, for the treatment of mHSPC. This is despite recent practice-changing evidence being published regarding their effectiveness.

With the continued approval of new therapies in this setting, it is necessary to understand the timing and speed of implementation of new evidence on oncological treatment intensification in real-world practice.

Further studies are needed to understand the reasons for underutilisation of intensified treatments in this setting.

european cancer ORGANISATION

european cancer SUMMIT
15 & 16 November 2023

Funding

This study was undertaken as part of the work by the National Prostate Cancer Audit (NPCA), which aims to evaluate the care of prostate cancer patients in England (www.npca.org.uk). The NPCA is commissioned by the Healthcare Quality Improvement Partnership (HQIP) and funded by NHS England.

The authors have nothing to declare.

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