European Journal of Cancer 84 (2017) 18–26

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.ejcancer.com

Original Research

Diagnostic characteristics of lethal prostate cancer

John Thomas Helgstrand [a,*], Martin Andreas Røder [a], Nina Klemann [a], Birgitte Grønkær Toft [b], Klaus Brasso [a], Ben Vainer [b], Peter Iversen [a]

[a] *Copenhagen Prostate Cancer Center, Department of Urology, Copenhagen University Hospital, Rigshospitalet, University of Copenhagen, Ole maaløes vej 24, Section 7521, DK-2200 Copenhagen, Denmark*
[b] *Department of Pathology, Copenhagen University Hospital, Rigshospitalet, University of Copenhagen, Blegdamsvej 9, DK-2100 Copenhagen, Denmark*

Received 25 April 2017; received in revised form 20 June 2017; accepted 3 July 2017
Available online 2 August 2017

KEYWORDS
Prostatic neoplasms;
Registries;
Cause of death;
Prognosis;
Risk factors;
Lethal prostate cancer;
Epidemiology;
Clinical characteristics;
Danish Prostate Cancer Registry

Abstract ***Background:*** The diagnostic characteristics of men who eventually die from prostate cancer (PCa) and the extent to which early diagnostic strategies have affected these characteristics are unclear. We aimed to investigate trends in survival and clinical presentation at diagnosis in men who eventually died from PCa.
Patients and methods: Based on the national database, the Danish Prostate Cancer Registry, a nationwide population-based study of all 19,487 men who died from PCa in Denmark between 1995 and 2013 was conducted. Trends in median survival and trends in age, prostate-specific antigen (PSA), clinical stage, and Gleason score (GS) at diagnosis were analysed.
Results: A total of 46.9%, 16.8%, and 36.3% had metastatic (M+), locally advanced/lymph node positive (LaN+), and localised disease, respectively, at diagnosis. Only 0.15% had localised disease, GS $\leq$ 6 and PSA<10. Over time, the proportion of men with M+ disease at diagnosis decreased from 54.0–38.3% ($p < 0.0001$), whereas the proportion LaN + disease increased from 8.6–27.3% ($p < 0.0001$). The proportion of localised disease remained stable at 33.2–41.9%. Median survival increased 2.11 years from 1.88 (95% CI: 1.68–2.08) in 1995 to 3.99 (95% CI: 3.71–4.28) years in 2013, $p < 0.0001$.
Conclusions: In a large population-based study, the results confirmed concurrent literature that the majority of men who eventually died from PCa had LaN+ or M+ disease at diagnosis. The proportion of men with M+ disease at diagnosis decreased significantly over time, parallelled by an increase in median survival. Taken together, this indicates a lead-time effect on survival, which presently, however, is not substantial enough to result in a reduced PCa-specific mortality.
© 2017 Elsevier Ltd. All rights reserved.

* *Corresponding author.*
E-mail addresses: helgstrand1@me.com (J.T. Helgstrand), andreasroder@gmail.com (M.A. Røder), ninakhp@gmail.com (N. Klemann), birgitte.groenkaer.toft@regionh.dk (B.G. Toft), klaus.brasso@regionh.dk (K. Brasso), ben.vainer@regionh.dk (B. Vainer), peter.iversen@regionh.dk (P. Iversen).

http://dx.doi.org/10.1016/j.ejca.2017.07.007
0959-8049/© 2017 Elsevier Ltd. All rights reserved.

1. Introduction

Prostate cancer (PCa) is curable if detection is advanced to a point where the disease is still localised or locally advanced [1]. As a consequence of PCa's long asymptomatic phase, early detection and treatment strategies have been introduced and advocated to reduce PCa-mortality [2–4]. Prostate-specific antigen (PSA) testing has been the primary driver of early detection strategies and has resulted in dramatic increases in incidences of PCa worldwide [5]. However, only a modest reduction in PCa-mortality has been observed, and currently, systematic PSA screening in healthy men is not advocated in most countries [6,7]. In Denmark, PCa-mortality has remained stable at of 19/100,000 men (world standard population) [8]. Although PSA screening has never been recommended in Denmark, development in incidence mirrors countries where more systematic PSA screening has been used [5,8]. Central to the debate about early detection is the risk of overdiagnosis and overtreatment. Numerous studies have identified prognostic factors defining patients at risk of PCa-specific mortality [9,10]. Fewer studies have investigated the disease course and characteristics at diagnosis in large population-based studies of patients who ultimately died from PCa. To study such a population, we identified the complete population-based cohort of Danish men who died from PCa between 1995 and 2013 (n = 19,487). We analysed the characteristics at diagnosis and PCa-specific survival and how these changed over time.

2. Patients and methods

2.1. Men with lethal PCa

All men recorded as having died from PCa during 1995–2013 were extracted from the Danish Register of Causes of Death (RCOD), which has been reported to have a 93% concordance rate between PCa registered as the underlying cause of death and manual reviews of patients charts [11,12]. Fig. 1 presents the flow of inclusion. Based on the Danish Civil Registration System (CPR), number assigned to all Danish citizens, diagnostic characteristics and date of diagnosis were identified in the Danish Prostate Cancer Registry (DaPCaR) [13]. DaPCaR is a national database previously described in detail, that holds integrated information on histopathology, clinical findings and survival (vital status) [14]. Tumour classification and date of diagnosis from men not identified in DaPCaR was obtained from the Danish Cancer Registry (DCR) [15]. A total of 6254 men did not have histopathologically verified PCa in DaPCaR, and for these men, manual review of their histopathological history was performed in the Danish Pathology Registry to

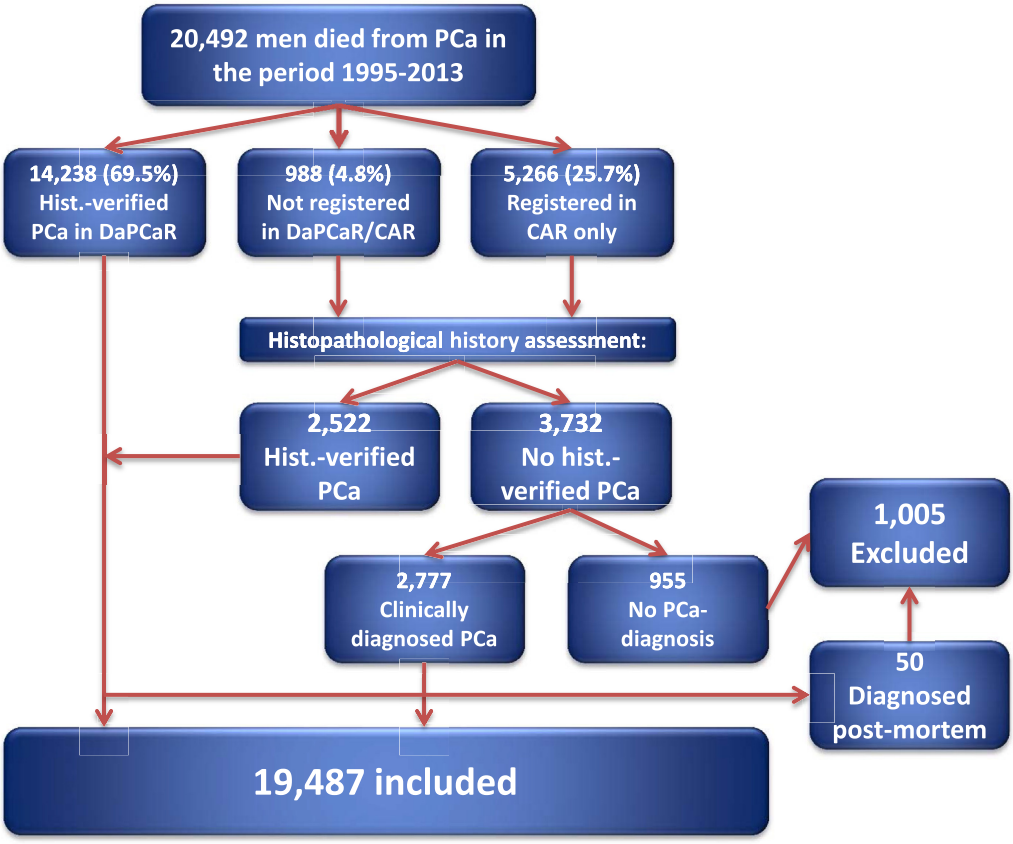

Fig. 1. Flow of inclusion.

Download English Version:

https://daneshyari.com/en/article/5526193

Download Persian Version:

https://daneshyari.com/article/5526193

Daneshyari.com