

PROSTATE CANCER

Includes Invasive Cancers Only; Does Not Include Carcinoma In Situ

Background

This case definition was developed in 2010 by the Armed Forces Health Surveillance Center (AFHSC) in collaboration with a working group of subject matter experts from the Office of the Assistant Secretary of Defense for Health Affairs (ASDHA), the United States Army Public Health Command (USAPHC) and the United States Military Cancer Institute. The definition was developed for the purpose of epidemiological surveillance of invasive cancers and was used in a June 2012 Medical Surveillance Monthly Report (MSMR) article on incident diagnoses of cancers.¹

Clinical Description

Prostate cancer is the most common solid tumor malignancy diagnosed in men. Most cancers are confined to the prostate gland, slow growing and cause few or no symptoms. Digital rectal exam and prostate-specific antigen (PSA) testing are often used to screen for prostate cancer; however, PSA screening protocols are controversial because scientific evidence is lacking that early detection decreases morbidity and mortality.² The definitive diagnosis of prostate cancer is made by biopsy and microscopic examination of the cells of the prostate gland. Once a diagnosis is made treatment options are many; radical prostatectomy, radiotherapy and watchful waiting are the most common. Treatment decisions are based on stage of disease, the microscopic appearance of cells from biopsy, PSA level, and patient preference. The latter is often influenced by side effects (e.g., incontinence, impotence), long-term risks, and financial and emotional costs of different therapies. The primary risk factors for prostate cancer include obesity, age, race, and heredity.^{3,4}

Case Definition and Incidence Rules

For surveillance purposes, a case of prostate cancer is defined as:

- *One hospitalization* with any of the defining diagnoses of prostate cancer (see ICD9 and ICD10 code lists below) in the *primary* diagnostic position; or
- *One hospitalization with a V-code* indicating a radiotherapy, chemotherapy, or immunotherapy treatment procedure (see ICD9 and ICD10 code lists below) in the *primary* diagnostic position; AND any of the defining diagnoses of prostate cancer (see ICD9 and ICD10 code lists below) in the *secondary* diagnostic position; or

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¹ Armed Forces Health Surveillance Center. Incident Diagnoses of Cancers and Cancer-related Deaths, Active Component, U.S. Armed Forces, 2000-2011. *Medical Surveillance Monthly Report (MSMR)*. 2012 June; 19(6): 18-22.

² Naitoh, J, Seiner, R, Dekernion, J., Diagnosis and Treatment of Prostate Cancer. *American Family Physician*. 1998 April; 57(7): 1531-1539.

³ American Cancer Society. Cancer Facts & Figures. 2015. Atlanta: American Cancer Society; 2015. <http://www.cancer.org/research/cancerfactsstatistics/cancerfactsfigures2015/index>. Accessed August 2015.

⁴ Prostate Cancer. Centers for Disease Control and Prevention. Available at: http://www.cdc.gov/cancer/prostate/basic_info/index.htm. Accessed August 2015.



Case Definition and Incidence Rules *(continued)*

- *Three or more outpatient medical encounters, occurring within a 90-day period, with any of the defining diagnoses of prostate cancer (see ICD9 code list below) in the primary or secondary diagnostic position.*

Incidence rules:

For individuals who meet the case definition:

- The incidence date is considered the date of the first hospitalization or outpatient medical encounter that includes a defining diagnosis of prostate cancer.
- An individual is considered an incident case only *once per lifetime*.

Exclusions:

- None

Codes

The following ICD9 and ICD10 codes are included in the case definition:

Condition	ICD-10-CM Codes	ICD-9-CM Codes
Prostate cancer	C61 (malignant neoplasm of prostate)	185 (malignant neoplasm of prostate)

Procedures	ICD-10-CM Codes	ICD-9-CM Codes
Related treatment procedures <i>(Radiotherapy, chemotherapy, immunotherapy)</i>	Z51.0 (encounter for antineoplastic radiation therapy)	V58.0 (radiotherapy)
	Z51.1 (encounter for antineoplastic chemotherapy and immunotherapy)	V58.1 (encounter for chemotherapy and immunotherapy for neoplastic conditions)
	- Z51.11 (encounter for antineoplastic chemotherapy)	V58.11 (encounter for antineoplastic chemotherapy)
	- Z51.12 (encounter for antineoplastic immunotherapy)	V58.12 (encounter for antineoplastic immunotherapy)

Development and Revisions

- In September of 2015 the case definition was updated to include ICD10 codes.



- This case definition was developed in 2010 by the Armed Forces Health Surveillance Center (AFHSC) in collaboration with a working group of subject matter experts. The definition was developed based on expert consensus opinion, reviews of the ICD9 codes, the scientific literature, and previous AFHSC analyses.

Case Definition and Incidence Rule Rationale

- This case definition is designed to capture cases of *invasive* prostate cancer only. Carcinoma in situ of the prostate, also known as prostatic intraepithelial neoplasia (PIN), ICD9 233.4 / ICD10 D07.5 codes (carcinoma in situ of prostate), are not included in the code set.
- This case definition is designed to capture cases of *primary* cancers only. Metastatic cancer to the prostate is rare and is not included in this case definition.
- Case finding criteria for this definition requires one hospitalization record with a case-defining ICD9 or ICD10 code for prostate cancer in the *primary* diagnostic position *unless* a code for a related treatment procedure is in the primary diagnostic position; then the case-defining ICD9 or ICD10 code for prostate cancer is allowed in the *secondary* diagnostic position.
- The case finding criterion of *three or more outpatient medical encounters, within a 90-day period*, with a defining diagnosis of prostate cancer is used to identify cases that do not meet the other criteria in the definition. Exploratory analysis of the Defense Medical Surveillance System (DMSS) data revealed that this criterion yielded optimal specificity.⁵ The period of 90 days was established to allow for the likelihood that “true” cases of prostate cancer would have second and third encounters within that interval.
- This case definition was developed for a report on ten different invasive cancers. As such, the same case finding criteria are used for all types of cancer in the report. This broad application of a single case definition may affect the sensitivity and specificity in varying ways for the individual cancers. Furthermore, surgical treatment procedures such as hysterectomy, mastectomy, prostatectomy, and other procedures unique to certain types of cancer are not included in the code set for individual cancers.

Reports

AFHSC reports on prostate cancer in the following reports:

- Periodic MSMR article on cancers and cancer-related deaths.

Review

Sep 2015	Case definition reviewed and updated by the AFHSC Surveillance Methods and Standards (SMS) working group.
Apr 2013	Case definition reviewed and adopted by the AFHSC Surveillance Methods and Standards (SMS) working group.
Jun 2012	Case definition reviewed and adopted by the AFHSC MSMR staff.

⁵ Detailed information on this analysis is available through AFHSC MSMR staff; reference DMSS Requests #R080127, #R080159, #R090184, #R090302, #R090341, #R100181, and #R100303 (DoD Cancer Incidence), 2008-2009.



Comments

None

