

# EPIDEMIOLOGICAL PROFILE OF MEN WITH PROSTATE CANCER ATTENDED IN A TEACHING HOSPITAL\*

Marina Viana Fernandes<sup>1</sup>, Júlia Trevisan Martins<sup>2</sup>, Alexandrina Aparecida Maciel Cardelli<sup>3</sup>, Sonia Silva Marcon<sup>4</sup>,  
Renata Perfeito Ribeiro: Enfermeira<sup>4</sup>

<sup>1</sup>Nurse. State University of Londrina. Londrina-PR-Brazil.

<sup>2</sup>Nurse. Ph.D. in Fundamental Nursing. State University of Londrina. Londrina-PR-Brazil.

<sup>3</sup>Nurse. Ph.D. in Public Health. State University of Londrina. Londrina-PR-Brazil.

<sup>4</sup>Nurse. Ph.D. in Nursing. State University of Londrina. Londrina-PR-Brazil.

**ABSTRACT:** This epidemiological, descriptive, cross-sectional research aimed to outline the epidemiological profile of men with prostate cancer assisted in a Teaching Hospital in the south of Brazil. The data were collected through interviews with 54 men, using a structured questionnaire addressing socio-demographic characteristics, health behavior and history of the disease. The SPSS Program, version 19, was used for analysis of the data. The results indicated a mean age of 74.8 years old; the prevalence of Caucasians; low educational level; retirees and living with family members. Behaviors of risk for prostate cancer were identified: poor food; smoking; alcoholic drinks; and a mean time taken to seek treatment of over 30 days. Public managers and the multi-professional team must adopt strategies in order to inform men about the importance of a positive preventive attitude.

**DESCRIPTORS:** Men's health; Prostatic neoplasm; Nursing.

## PERFIL EPIDEMIOLÓGICO DO HOMEM COM CÂNCER DE PRÓSTATA ATENDIDO EM UM HOSPITAL UNIVERSITÁRIO

**RESUMO:** Pesquisa epidemiológica, descritiva com recorte transversal teve por objetivo traçar o perfil epidemiológico de homens com câncer de próstata assistidos em Hospital Universitário do Sul do Brasil. Os dados foram coletados por meio de entrevista à 54 homens, empregando-se formulário estruturado abordando características sociodemográficas, comportamento de saúde e história da doença. Para a análise dos dados utilizou-se o Programa SPSS versão 19. Os resultados apontaram idade média de 74,8 anos, predomínio de brancos; baixa escolaridade; aposentados e coabitação familiar; foram identificados como comportamentos de risco para o câncer de próstata: alimentação inadequada; tabagismo; ingestão de bebida alcoólica; e tempo médio da procura por cuidados superior a 30 dias. Estratégias devem ser adotadas por gestores públicos e equipe multiprofissional para informar o homem sobre a importância de atitude positiva de prevenção.

**DESCRIPTORIOS:** Saúde do homem; Neoplasias da próstata; Enfermagem.

## PERFIL EPIDEMIOLÓGICO DEL HOMBRE CON CÁNCER DE PRÓSTATA ATENDIDO EN UN HOSPITAL UNIVERSITARIO

**RESUMEN:** Investigación epidemiológica, descriptiva con corte transversal que tuvo la finalidad de trazar el perfil epidemiológico de hombres con cáncer de próstata asistidos en Hospital Universitario del Sur de Brasil. Los datos fueron recogidos por medio de entrevista con 54 hombres, utilizándose el formulario estructurado que cuestionaba las características sociodemográficas, comportamiento de salud y historia de la enfermedad. Para el análisis de los datos, fue usado el Programa SPSS versión 19. Los resultados apuntaron edad media de 74,8 años, predominio de blancos; poca escolaridad; jubilados y que vivían con familiares; fueron identificados como comportamientos de riesgo para el cáncer de próstata: alimentación inadecuada; tabaquismo; ingestión de bebida alcohólica; y tiempo medio de busca por cuidados superior a 30 días. Estrategias deben ser adoptadas por gestores públicos y equipo multiprofesional para informar al hombre sobre la importancia de actitud positiva de prevención.

**DESCRIPTORIOS:** Salud del hombre; Neoplasias de la próstata; Enfermería.

---

\*Result extracted from a Masters Dissertation in Nursing – State University of Londrina, presented in 2011.

### Corresponding author:

Sonia Silva Marcon  
Universidade Estadual de Londrina  
Rua Santos, 488 - 86020-040 - Londrina-PR-Brazil  
E-mail: perfeito@sercomtel.com.br

Received: 18/04/2013  
Finished: 10/03/2014

## INTRODUCTION

Prostate Cancer (PC) is the most commonly diagnosed cancer among men. In 2008, 899,000 new cases and 258,000 deaths were recorded, and calculations indicate an increase of 1.7 million new cases and 499,000 deaths by 2030, which demonstrates that the mortality rates will continue unchanged in the future<sup>(1)</sup>.

In 2012, worldwide, there were 14.1 million new cases of cancer, 8.2 million deaths and 32.6 million people living with this health issue. Of these, eight million new cases and 5.3 million deaths from cancer occurred in less-favored regions. The global rate of its incidence, by standardized age, is nearly 25% greater in men than in women. These rates vary, however, from 79 per 100,000 in South Africa to 365 per 100,000 in Australia/New Zealand, which represents a dangerous and concerning rate in this last region<sup>(2)</sup>.

In relation to mortality, there is less regional variability than in the incidence, with rates being 15% greater among men in the more developed regions. Among men, the highest rates occur in Central and Eastern Europe (173 per 100,000) and lowest in West Africa (69 per 100,000)<sup>(2)</sup>.

In South America, in 2008, PC was the main cause of death among men<sup>(3)</sup>. In Brazil, the estimate for this cancer for the years of 2012 and 2013 was 60,000 new cases, being in the second place among the cancers in general for both sexes, and in first place for the men<sup>(2)</sup>. For 2014, 68,800 new cases of PC are estimated, and the highest incidence estimated is in the Southern region (90 per 100,000 inhabitants)<sup>(4)</sup>.

There are various predisposing factors for PC, including: advanced age, being of African descent, having a family history of the disease, lifestyle, eating habits, sedentarism, obesity and tobacco use<sup>(5-8)</sup>. PC can be prevented and can be avoided if diagnosed early, and it is currently recommended that tracking should be offered for men from the age of 50 years old and with a life expectancy of over 10 years, and for men at high and very high risk from 45 and 40 years old respectively, after the presentation of the benefits and risks to the individual who must make his choice<sup>(9)</sup>. The high rates of the disease are attributed to the fact that seeking preventive health care is not a common health practice among the male population. Men do not normally recognize their own health needs,

thus devalorizing them<sup>(10-12)</sup>. One can go so far as to state that male identity is a risk factor for health<sup>(12-14)</sup>, as men make themselves vulnerable when they accept, without reflection, culturally and socially constituted gender standards.

In spite of the preventive test for PC being available on the public health system, the demand is insignificant. This group has not yet acquired the habit of seeking the health services, even in the presence of health problems<sup>(11)</sup>. In this regard, it is a challenge to implement male health care actions geared towards reflection regarding the influence of these cultural values on the prevention of harm to health, such as diagnosis, treatment, rehabilitation, maintenance and protection of health<sup>(14)</sup>. The Brazilian National Men's Health Policy<sup>(15)</sup> recognizes this population's health problems as a public health problem; for this reason, it was determined that more research should be undertaken in the area.

This being the case, the present study is of fundamental importance, given that investigating the lifestyle and the habits of seeking health care among men can support strategic planning of health promotion, prevention of disease, harm reduction, treatment and recovery and, as a consequence, improvement in the quality of life of these men and of their families.

The study is in accordance with Law N. 10,289, of 20th September 2001<sup>(16)</sup>, which calls for the implementation of the National Program for the Control of Prostate Cancer, and establishes that activities such as the following should be undertaken: an institutional campaign in the media, with messages regarding what prostate cancer is and how it can be prevented; partnerships with the State and Municipal Health Departments, universities, organized civil societies and unions, with debates and lectures being organized on the prevention of, and the ways of combating, this disease.

In the light of the above considerations, this research's aim was to outline the epidemiological profile of men with PC attended in a Teaching Hospital in the South of Brazil.

## METHOD

This is a cross-sectional epidemiological study with a quantitative approach, undertaken between April and October 2011. The population

study was made up of 54 individuals, out of a total of 70 men with PC, registered and monitored in the years 2010 and 2011 in the Uro-oncology Outpatient Center at the Hospital Universitário de Londrina. The inclusion criteria were: to have been diagnosed with PC at least six months previously and to have the physical and cognitive conditions to participate in the interviews.

For collecting data, the researchers used a questionnaire with open and closed questions, and the technique of interview, which was recorded and transcribed in a structured form containing data for identification; socio-demographic variables (age, origin, race, religion, educational level, current and previous employment status, source of income); condition of cohabiting, who cares, type of care, eating habits, consumption of alcoholic drinks, tobacco and drugs, physical activity and leisure activities); perception of the health problem and the search for health care.

The data were compiled in the program Microsoft Office Excel® 2003 and later transferred to the Statistical Package for the Social Sciences (SPSS) program, version 19, and analyzed descriptively in absolute numbers and percentages. The study was approved under Decision N. 007/2011 and CAAE N. 0001.0.268.000-11, respecting ethical principles<sup>(17)</sup>.

## RESULTS

The men's mean age was 74.8 years old, with an age range between 72 and 79 (38.9%); the majority of them were from Londrina (83.3%); stated that they were Caucasians (53.7%); Roman Catholics (74.4%) and lived with their family (89.9%). The educational level, for little over half of the men, was of up to 7 years of study (57.4%). The majority were not working (81.5%) and the source of their income was their pension from the National Institute for Social Security (75.9%).

In relation to the employment status, 18.5% were working, with 2% in occupations in the area of building, 2% in agriculture, running their own businesses 6%, drivers 6%, commercial representatives 2%, realtors 2%, and 2% in the recycling of waste materials. It is emphasized that all the participants of this study who were not self-employed had been given sick leave to undertake the treatment.

Most of these men were cared for (89%) by family members. The types of care identified were related to: financial aspects (70%), domestic processes (28%), emotional, affective and spiritual support (22%) and instrumental activities of daily living (33%).

In relation to the behaviour of the men in the present study, it was ascertained that the foods preferred were rice, beans and pasta (68.5%), that the most practised physical activity was walking (62%), and that receiving and visiting relatives and friends (30%), going to church, watching television programs and listening to the radio (27%) were the most enjoyed leisure activities. Regarding use of tobacco, 28% confirmed that they had smoked for over 51 years, with a mean of 38.4 years. The use of alcoholic drinks was stated by 67%.

The family history demonstrated that 24% of the study population had first degree relatives with a diagnosis of PC, and 41% with other cancers (breast, uterine, lung, laryngeal, esophageal, stomach, gall bladder, liver, intestines, melanomas, leukemia, lymphoma, bone and brain). Obstructive symptoms (43%) and irritative symptoms (40%) most led to the men seeking health care in 30 days (55%). For 68.5% of the men studied, the health service of choice was the primary care service in the Primary Healthcare Units (PHU) or private attendance in clinics. A small proportion (8%) delayed more than six months to seek help and one man waited for 12 years, as shown by the data in Table 1.

It was also observed in Table 1 that the most cited tests undertaken, for the tracking and control of the disease, were: the Prostate-Specific Antigen (PSA) and the Digital Rectal Examination (DRE) in equal proportions (21%) and the transrectal ultrasound-guided prostatic biopsy (20%). A large proportion (38%) did not use medications, 43% were using hormones and chemotherapy agents, and 19% were using specific drugs for mitigating the effects of the obstructive symptoms and improving sexual performance. The surgical operation undertaken most (43%) was the prostatectomy, and 29% of these men received radiotherapy.

Regarding the history of the disease, 37% of those researched discovered the PC through undertaking preventive tests, irrespective of the presence of irritative or obstructive symptoms of the lower urinary tract (LUTS - Lower Urinary

Table 1 - Disease History of with Prostate Cancer. Londrina-PR-Brazil, 2011

History of the Disease	n	%
Family antecedents for the disease		
Father	04	7
Brothers	9	17
Grandfather/uncle/son	3	5
Other type of cancer	22	41
Does not know	8	15
None	8	15
First symptoms		
Irritative	35	40
Obstructive	37	43
Related to sexual potency	7	8
Others*	8	9
Time taken to seek care after the first symptoms		
1 month	30	27
2 to 12 months	10	27
2 to 5 years	7	30
≥ 6 years	4	6
Does not remember	3	6
Type of health service attended		
Primary care	31	16
Secondary care	10	12
Tertiary care	7	16
Private clinic	6	12
Test for tracking and control		
PSA (Prostate-Specific Antigen)	54	21
DRE (Digital Rectal Examination)	54	21
Transrectal ultrasound guided prostatic biopsy	51	20
Bone scintilography	30	12,5
Tomography	34	13
Others	30	12,5
Drug therapy		
Goserelin (Zoladex)	13	23
Cyproterone acetate (Androcur)	7	12
Diethylstilbestrol, cyclophosphamide and decadron	3	5
Endovenous chemotherapy	2	3
None	22	38
Other (doxazosin), finasteride , doxazosin mesylate)	11	19
Surgical therapy and others		
Prostatectomy	35	43
Orchiectomy	18	23
Radiotherapy	23	29
None	4	5

\*Other symptoms: hematuria, fecal incontinence, pain in the pelvic region and in the hypogastrium.

Tract Symptoms)<sup>(13)</sup>. The mean time taken for the appearance of the first LUTS was 6.6 years, the mean time taken for seeking health care was 1.4 years, and the mean time until diagnosis of the PC was 4.2 years.

The changes which occurred in the lives of these men, following the development of the PC, were: physical (48%), emotional and affective (48%), spiritual (42%), financial (33%), to do with family relationships (29%) and social (24%).

## DISCUSSION

Among the socio-demographic factors of risk, the only one considered well-established for the development of PC is age. Approximately 62% of the cases diagnosed worldwide occur in men aged 65 years old or over<sup>(7,18)</sup>. This population's study fitted into this age range of risk. The predominance of men with this disease who stated themselves to be Caucasian is similar to Brazilian studies which also identified the prevalence of Caucasian men<sup>(11,19)</sup>. These data, however, diverged from worldwide statistics, which indicated a predominance among individuals of African descent<sup>(1,20)</sup>.

The low educational level identified in the population studied does not call attention, as the individuals are predominantly elderly, and their families – in the first decades of the 20th century – prioritized survival to the detriment of education<sup>(12)</sup>. The low educational level, associated with the low socio-economic level, may have delayed the search for healthcare, principally when the knowledge of PC, its causes, its symptoms and the disease's risk factors is insufficient<sup>(12)</sup>.

The fact that the majority resided in the municipality where the treatment was undertaken may be considered a positive factor for this study's population. The ease of access provides satisfaction and a good link with the health service<sup>(21)</sup>. The presence of a link between the service user-professional-health institution reduces the barriers for the continuity of the clinical monitoring, and allows the monitoring of those patients who are more resistant and who have a tendency to abandon the treatment<sup>(22)</sup>.

The condition of cohabiting with the family may be considered a protective factor for the men in the present study. One study on masculinity and health practices indicated a similar result, in

observing that 62% of the men investigated were married, of whom 53% reported that the family contributed to self-care, in situations when the disease worsened and in situations of clinical stability<sup>(23)</sup>.

In most cases, the origin of the interviewees' income was the pension from the INSS. This income, due to the policy established in Brazil, reduces each year, because the updating of the values does not correspond to the actual inflation rate<sup>(24)</sup>. Other works undertaken with persons who experience chronic illness depict this same difficulty in relation to both personal and family life, due to the need for conciliating domestic expenses and those of transport and buying medications<sup>(25-26)</sup>.

Regarding occupation, some exposed over long periods – or still exposed – these men to carcinogenic agents classified by the International Agency for Research on Cancer (IARC) as suspect for the development of PC. Among these agents are: dusts from asbestos and cadmium; and aromatic amines, which are used in fertilisers, agrotocics, wall paints and hair dyes<sup>(27)</sup>. The association of long periods of exposure to carcinogenic agents, in some professions, and the consumption of tobacco – which in this study had a mean of 38 years – may have increased the risk for PC by 46% for those subjects who smoked or still smoke, as tobacco consumption can facilitate the development of this type of cancer due to the presence of aromatic amines present in the tobacco<sup>(27)</sup>.

Among the physical changes, those related to sexuality, such as changes in the erection, in the quality and in the frequency of erections, or complete impotency, were those mentioned most by these men. Analogous data were identified in other studies<sup>(25-26)</sup>, which revealed that these and other changes resulting from the cancer required significant emotional coping, causing an enormous burden of stress for the men studied.

The type of food preferred by the interviewees was high in calories, which can contribute to the excess of weight. The obesity originating from these foods can potentially influence the development of the PC, due to provoking some alterations such as insulin resistance, alteration in the lipid profile, inflammation, lower concentration of PSA, reduction of androgens and increase of estrogens<sup>(28)</sup>.

One study undertaken in Australia predicted a reduction of 4882 cases of PC by 2025, if the men were to practice physical exercise, an appropriate diet, and reduce obesity<sup>(28)</sup>. The undertaking of leisure activities and physical exercise was frequent in the population studied and may be related to the time available as a result of their being retired. This fact evidences that there was a search for improvement in the quality of life and in health conditions on the part of the men with PC. On the other hand, a significant proportion of the men reported some behaviors of risk for health, such as the consumption of alcoholic drinks and the use of tobacco.

The family history indicates that (24%) of the men investigated had 2.2 times the risk for developing PC, as a result of having first degree relatives with the disease<sup>(7)</sup>. Previous knowledge about the family disease antecedents, of the lower urinary tract symptoms, and of the predisposing factors, could have favored the practice of self-care among these men, as the mean time until they sought health care, for (45%), was over 30 days, reaching up to 12 years. This situation evidences that the men did not give value to the symptoms, principally the obstructive symptoms, which predominated over the others. The incidence of PC in patients who develop acute urinary retention has been estimated at between 13 and 25%<sup>(7)</sup>.

The tests undertaken were those indicated for tracking PC: the digital rectal examination, the total PSA concentration, and transrectal or pelvic ultrasound used for undertaking the prostate biopsy<sup>(8,29)</sup>. The introduction of verifying the PSA level contributed to the reduction of the male resistance to the diagnosis of PC, which is not ascertained with the digital rectal examination, which, in spite of being a low cost preventive measure, is a procedure which conflicts with the male imaginary to the point that it discourages innumerable men from the prevention of prostate cancer<sup>(12)</sup>.

The Primary Health care services were mentioned as the first places where attendance was sought. This result marks a differential in these individuals' behavior. Studies reveal that men seek the specialized health services most when they are ill<sup>(12,22)</sup>.

The therapies used corresponded to those indicated in the guidelines for treatment of PC, and involved: use of medications, surgical operations

and radiotherapy, or only clinical monitoring, associated or not with other procedures, depending on the stage of the disease<sup>(7,29)</sup>.

In the light of the above, the data indicates that the health professionals participate in the implementation of the actions constituted by the health policies directed at assistance for men, when they undertake the tracking of the disease and adopt measures for the prevention of ill health and the promotion of health. In this context, it is fundamental for nurses to have knowledge of current oncological treatments, so that they will be able to undertake educational activities which contribute to the patients' adherence to the treatment<sup>(30)</sup>.

## FINAL CONSIDERATIONS

This study indicates that the men took more than one year to seek healthcare following the appearance of the first lower urinary tract symptoms, reinforcing that the health services need to develop informational strategies for the man-family binomial, regarding the importance of a positive attitude in relation to the prevention of diseases.

Many health professionals adopted, in their practice, actions geared towards the early detection of PC, as a large proportion of the population researched was diagnosed through preventive tests undertaken in the PHU.

The need is emphasized for local, state and national public or private bodies to improve the health problems, in relation to improving the male population's quality of life, as the increase in life expectancy is a reality in Brazil.

Although the study's objectives were achieved, there are limits, due to the method adopted; that is to say, as this is a transversal study which was applied at a specific time and undertaken only with a group of patients with PC in a Teaching Hospital, it cannot be generalized.

It is believed, however, that the study contributed to the advance of knowledge, given that in Brazil, specific studies on the male gender remain incipient. Thus, it is suggested that further studies should be undertaken in the same institution, as well as in others, with the aim of promoting men's health, preventing diseases, and reducing health problems.

## REFERENCES

1. IARC. International Agency for Research on Cancer, World Health Organization [Internet]. 2012 [acesso em 12 abr 2013]. Study finds prostate cancer increasing in most countries. Rates remain highest in highest income regions of the world. Press Release, n. 209. Disponível: [http://www.iarc.fr/en/media-centre/pr/2012/pdfs/pr209\\_E.pdf](http://www.iarc.fr/en/media-centre/pr/2012/pdfs/pr209_E.pdf)
2. IARC. International Agency for Research on Cancer, World Health Organization [Internet] 2012 [acesso em 16 jan 2014]. GLOBOCAN 2012. Estimated cancer Incidence, Mortality and Prevalence Worldwide in 2012. Disponível: <http://globocan.iarc.fr/Default.aspx>
3. IARC. International Agency for Research on Cancer, World Health Organization [Internet] 2008 [acesso em 01 mar 2013]. GLOBOCAN 2008. Prostate cancer incidence, mortality and prevalence world wide in 2008. Disponível: <http://www.iarc.fr/en/media-centre/iarcnews/2010/globocan2008.php>
4. INCA. Instituto Nacional do Câncer. Coordenação Geral de Ações e Estratégias.
5. INCA. Instituto Nacional do Câncer. Estimativa 2014: incidência de câncer no Brasil. Rio de Janeiro: Inca; 2014. [Internet] [acesso em 14 jan 2014]. Disponível: <http://www.inca.gov.br/estimativa/2014/>
6. Crawford ED. Understanding the epidemiology, natural history, and key pathways involved in prostate cancer. *Urology*. 2009;73(5 Suppl):4-10. [acesso em 01 set 2011] Disponível: <http://www.sciencedirect.com/science/article/pii/S0090429509002842>
7. Correa FM. Epidemiologia. In: Guimarães RQ. Manual de oncologia. 3ª ed. São Paulo: BBS; 2008. p.73-88.
8. Rhoden EL, Averbek MA. Câncer de próstata localizado. *Rev. Assoc. Med. Rio Gd. Sul*. [Internet] 2010;54(1) [acesso em 15 ago 2013]. Disponível: [http://www.amrigs.org.br/revista/54-01/20-488\\_cancer\\_de\\_prostata.pdf](http://www.amrigs.org.br/revista/54-01/20-488_cancer_de_prostata.pdf)
9. Dall'Oglio MF, coordenador. Diretrizes de câncer de próstata. Rio de Janeiro: SBU; 2011. 92p. [Internet] [acesso 15 jan 2014]. Disponível: [http://sbues.org.br/diretrizes/cancer\\_prostata.pdf](http://sbues.org.br/diretrizes/cancer_prostata.pdf)
9. ACS. American Cancer Society. Prostate Cancer: Early Detection. [Internet] 2014 [acesso 13 jan 2014]. Disponível: <http://www.cancer.org/cancer/prostatecancer/moreinformation/prostatecancerearlydetection/prostate-cancer-early-detection-toc>
10. Gonçalves IR, Padovani C, Popim RC. Caracterização epidemiológica e demográfica de homens com câncer de próstata. *Ciênc. saúde colet*. 2008;13(4):1337-42.
11. Vieira LJES, Santos ZMSA, Landim FLP, Caetano JN, Neta CAS. Prevenção do câncer de próstata na ótica do usuário portador de hipertensão e diabetes. *Ciênc. saúde colet*. 2008;13(1):145-52.
12. Gomes R, Nascimento EF, Rebello LEFS, Araújo FC. As arranhaduras da masculinidade: uma discussão sobre o toque retal como medida de prevenção do câncer prostático. *Ciênc. saúde colet*. 2008;13(6):1975-84.
13. Paschoalick RC, Lacerda MR, Centa ML. Gênero masculino e saúde. *Cogitare enferm*. [Internet] 2006;11(1) [acesso 7 dez 2013]. Disponível: <http://ojs.c3sl.ufpr.br/ojs2/index.php/cogitare/article/view/5979/4279>
14. Fontes WD, Barbosa TM, Leite MC, Fonseca RLS, Santos LCF, Nery TCL. Atenção à saúde do homem: interlocução entre ensino e serviço. *Acta Paul. Enferm*. 2011; 24(3):430-3.
15. Ministério da Saúde (BR). Secretaria de Atenção à Saúde [Internet]. Brasília; 2008. [acesso em 21 dez 2012]. Política nacional de atenção integral à saúde do homem: princípios e diretrizes. Disponível: <http://dtr2001.saude.gov.br/sas/PORTARIAS/Port2008/PT-09-CONS.pdf>.
16. Brasil. Lei nº 10.289, de 20 de setembro de 2001. Institui o Programa Nacional de Controle do Câncer de Próstata. [Internet] [acesso em 11 jan 2014]. Disponível: [http://www.planalto.gov.br/ccivil\\_03/leis/leis\\_2001/l10289.htm](http://www.planalto.gov.br/ccivil_03/leis/leis_2001/l10289.htm)
17. Ministério da Saúde (BR). Conselho Nacional e Saúde. Comissão Nacional de Ética em Pesquisa. Resolução nº169/96. Dispõe sobre as diretrizes e normas regulamentadoras de pesquisas envolvendo seres humanos. Brasília: MS; 1996.
18. INCA. Instituto Nacional do Câncer. Coordenação Geral Ações Estratégicas. Coordenação de Prevenção e Vigilância. Estimativa 2012: incidência de câncer no Brasil. Rio de Janeiro: INCA; 2011.118p
19. Paiva EP, Motta MCS, Griep RH. Conhecimentos, atitudes e práticas acerca da detecção do câncer de próstata. *Acta Paul. Enferm*. 2010;23(1):88-93
20. Romero FR, Romero AW, Almeida RM, Tambara Filho R. The prevalence of prostate cancer in Brazil is higher in Black men than in White men: systematic review and meta-analysis. *Int Braz J Urol* 2012;38(4):440-7. [acesso 15 jan 2014]. Disponível: [http://www.brazjurol.com.br/july\\_august\\_2012/Romero\\_440\\_447.pdf](http://www.brazjurol.com.br/july_august_2012/Romero_440_447.pdf)
21. Dall'agnol CM, Lima MADS, Ramos DD. Fatores que interferem no acesso de usuários a um ambulatório básico de saúde. *Rev. Eletr. Enf*. [Internet] 2009;11(3) [acesso em 18 dez 2012]. Disponível: <http://www.fen.ufg.br/revista/v11/n3/v11n3a27.htm>

22. Palermo PU, Kuehn BM. Veterans health system cited by experts as a model for patient-centered care. *JAMA*. 2012;307(5):442-3. . <http://jama.jamanetwork.com/article.aspx?articleid=1228886>
23. Nascimento ARA, Trindade ZA, Gianordoli-Nascimento IF, Pereira FB, Silva SATC, et al. Masculinidades e práticas de saúde na região metropolitana de Belo Horizonte – MG. *Saúde soc.* [Internet] 2011;20(1) [acesso em 10 jan 2013]. Disponível: <http://dx.doi.org/10.1590/S0104-12902011000100020>
24. Bulla LC, Kaefer CO. Trabalho e aposentadoria: as repercussões sociais na vida do idoso aposentado. *Rev. Virtual Textos Contextos.* [Internet] 2003;2(2) [acesso em 15 maio 2013]. Disponível: <http://revistaseletronicas.pucrs.br/ojs/index.php/fass/article/viewFile/957/737>
25. Cardoso CCL, Rosalini MHP, Pereira MTAM A. O cuidar na concepção dos cuidadores: um estudo com familiares de doentes crônicos em duas unidades de saúde da família de São Carlos-SP. *Serv. soc. rev.* 2010;13(1):24-42. <http://www.uel.br/revistas/uel/index.php/ssrevista/article/view/8732/9090>
26. Miliorini JP, Fernandes MV, Decesaro MN, Marcon SS. A família no contexto hospitalar: apreendendo os anseios e expectativas relacionadas com doença crônica. *Rev. Rene.* 2008;9(3):81-91.
27. INCA. Instituto Nacional do Câncer. Coordenação de Prevenção e Vigilância. *Vigilância do câncer relacionado ao trabalho e ao ambiente.* 2ª ed. Rio de Janeiro: INCA; 2010.
28. Baade PD, Meng X, Sinclair C, Youl P. Estimating the future burden of cancers preventable by better diet and physical activity in Australia. *MJA.* 2012;196(5):337-28-9.
29. Campos HLM, Dias FMV, Moraes SC, Vargas SC. Aspectos culturais que envolvem o paciente com diagnóstico de neoplasia de próstata: um estudo na comunidade. *Rev. bras. cancerol.* 2011;57(4):493-501. [acesso em mai 2012] Disponível: [http://www.inca.gov.br/rbc/n\\_57/v04/pdf/05\\_artigo\\_aspecto\\_culturais\\_envolvem\\_paciente\\_diagnostico\\_neoplasia\\_prostata.pdf](http://www.inca.gov.br/rbc/n_57/v04/pdf/05_artigo_aspecto_culturais_envolvem_paciente_diagnostico_neoplasia_prostata.pdf)
30. Lira ALBC, Sá ID, Nogueira ILA, Medeiros MDC, Fernandes MICD, et al. Integridade da pele em idosos: revisão de literatura segundo as cartas de promoção da saúde. *Cogitare enferm.* 2012;17(4):767-74. (<http://ojs.c3sl.ufpr.br/ojs2/index.php/cogitare/article/viewFile/30389/19664>)