Development of prostate cancer quality indicators: a modified Delphi approach

Anna R. Gagliardi, PhD,[1] Neil Fleshner, MD,[2] Bernard Langer, MD,[3] Hartley Stern, MD,[3] Adalsteinn D. Brown, DPhil[4]

[1]Sunnybrook and Women's College Health Sciences Centre, Toronto, Ontario, Canada
[2]University Health Network, Toronto, Ontario, Canada
[3]Cancer Care Ontario, Toronto, Ontario, Canada
[4]University of Toronto, Toronto, Ontario, Canada

GAGLIARDI AR, FLESHNER N, LANGER B, STERN H, BROWN AD. Development of prostate cancer quality indicators: a modified Delphi approach. The Canadian Journal of Urology. 2005;12(5):2808-2815.

Objectives: *There is evidence of variation in both the processes and outcomes of prostate cancer care, resulting in possible harm to patients and increased costs to the health system. Care could be improved by first identifying critical, measurable indicators that correlate with quality of care. This work was conducted to develop indicators of prostate cancer care using a modified three-step Delphi approach.*
Methods: *A 17-member multidisciplinary panel reviewed potential indicators extracted from the medical literature through two consecutive rounds of rating followed by consensus discussion. The panel then prioritized the indicators selected in the previous two rounds.*
Results: *Of 31 possible indicators that emerged from 49 reviewed articles, 11 were prioritized by the panel as benchmarks for assessing the quality of surgical care for prostate cancer. The 11 indicators represent three levels of measurement (regional, hospital, individual provider) across several phases of care (diagnosis, surgery, pathology, and follow-up), as well as broad measures of outcomes.*
Conclusion: *A systematic evidence- and consensus-based approach was used to develop quality indicators of prostate cancer care, with a focus on pre-, peri- and post-operative care as well as outcomes. Some of the indicators selected by the panel were also recommended by a similarly structured panel process. These indicators can be used by individual providers and organizations to monitor the quality of their services, and develop interventions to address any variations.*

Key Words: prostatic neoplasms, quality indicators, performance measurement

Introduction

The quality of cancer care is an increasingly important health issue as a greater number of people will live longer with cancer, placing significant clinical and economic burden on the health care system.[1] This is particularly true for cancers with a high rate of survival such as prostate cancer.[2] For example, the lifetime cost of follow-up care for a 1997 cohort of 15248 Canadian men with prostate cancer was estimated at $150 million after prostatectomy to $689 million after radiation therapy.[3]

The management of prostate cancer is controversial – the usefulness of screening with the prostate-specific antigen (PSA) blood test; appropriate choice of therapy (watchful waiting, surgery or radiation therapy); the type of tests, duration and frequency of follow-up care, and definition of biochemical treatment failure have not been firmly established.[4]

Lack of, or contradictory evidence can lead to variations in practice and outcomes within organizations, and across geographic areas.[5] Studies examining variations in prostate cancer management have focused on only two processes: receipt of either

Accepted for publication September 2005

Address correspondence to Dr. Adalsteinn Brown, University of Toronto, 150 College Street, Room 147, Toronto, Ontario M5S 3E2 Canada

radiation or surgery as the primary treatment modality, and the nature of follow-up care.[6-10] To understand the impact of variations, it would be useful to identify a variety of appropriate processes and outcomes that are reflections of quality of care.

To do this organizations and research groups are adopting and implementing formal consensus methods which offer systematic mechanisms for thoughtfully translating available evidence into objective performance measures.[11] The Delphi method uses questionnaires to elicit anonymous responses over a number of rounds with controlled feedback, whereas the *modified* Delphi process incorporates at least one in-person meeting of participants.[11] The modified Delphi method was used by researchers associated with the RAND Corporation to establish indicators for six types of cancer including breast, cervical, colorectal, lung, skin and prostate cancer.[12]

The RAND initiative developed quality indicators for prostate cancer that were based on evidence published between 1985 and 1997. As part of a provincial oncology performance measurement program in Ontario, Canada, quality indicators for prostate cancer were developed based on more recent evidence. This paper outlines the methods used, and the result of that effort, including participation rates and prioritized indicators. It also adds to the literature on indicator development methods by commenting on the contribution of evidence and consensus to this process.

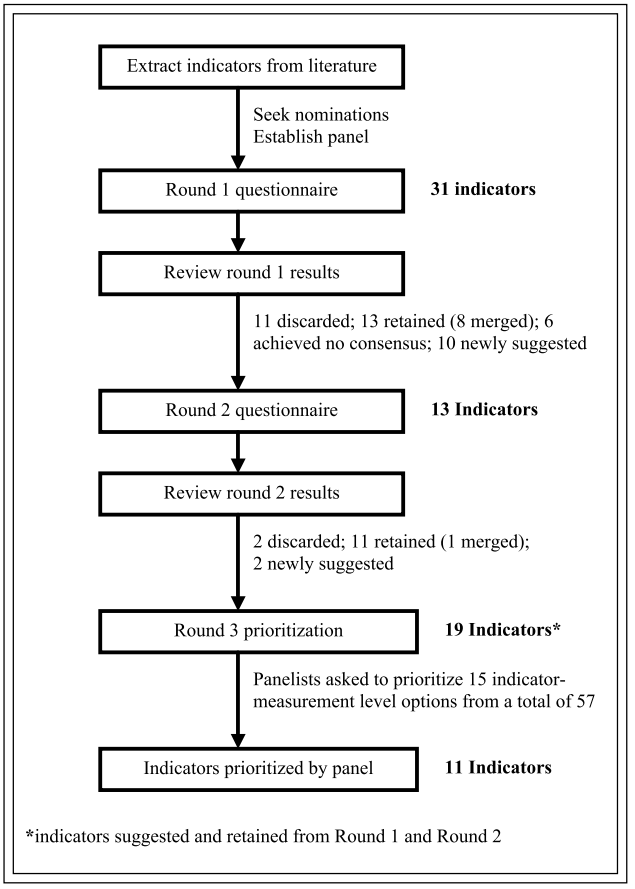

Figure 1. Process used to select and prioritize quality indicators for prostate cancer surgery.

Methods

Quality indicators for prostate cancer were developed using a three-step modified Delphi process, Figure 1, involving expert panels. The indicators were meant to focus on surgery for prostate cancer while considering both pre- and post-operative care, and outcomes of care. Hospital Chief Executive Officers and Regional Vice Presidents of Cancer Services from community and tertiary care hospitals were asked to nominate practicing clinicians that provide care to prostate cancer patients and had demonstrated leadership in quality improvement. The goal was to assemble a 15-member multidisciplinary panel, including one methodologic and one surgical co-chair. The remaining panel was to be comprised primarily of surgeons, but also include professionals who could offer a multidisciplinary perspective on practice, specifically a nurse, pathologist, medical oncologist and radiation oncologist. Nominated clinicians were contacted to describe the intended process and expected time commitment, and confirm their interest in being involved.

A literature search was conducted on MEDLINE and the Internet to identify possible quality indicators of prostate cancer surgery. Articles eligible for review were published in the English language from 1990 to August 2003, and synthesized research evidence describing best practice (guidelines, consensus statements, evaluation studies, systematic reviews or meta-analyses). Two research associates independently reviewed the literature search results to identify suitable articles, and then compared results. The articles were retrieved and reviewed, and possible indicators were tabulated. The co-chairs reviewed data extracted from eligible articles to compile a list of non-duplicate indicators for prostate cancer surgery.

These indicators were formatted as a questionnaire, and distributed by regular mail. Respondents were asked to rate each indicator on a seven-point scale (1=disagree and 7=agree) according to association with quality (overall, surgeon-specific, team level) and patient outcomes, provide written comments, and

suggest additional indicators that warranted consideration by the panel. An email reminder was sent two weeks after initial distribution. Non-responders were also contacted by telephone.

Rating frequencies were calculated to identify the indicators the panel believed were associated with quality of care and patient outcomes. A report was prepared outlining the indicators that achieved strong consensus for acceptance (seven or more panel members agreed the indicator was associated with quality by selecting 5, 6 or 7 on the Likert scale), strong consensus for exclusion (seven or more panel members disagreed the indicator was associated with quality by selecting 1, 2, 3 or 4 on the Likert scale), unclear consensus, and those newly suggested.

Acceptance, rejection, or the need for further consideration of each indicator was discussed at a one-day meeting. Indicators requiring further consideration were formatted as a questionnaire. This Round 2 questionnaire was given to panel members along with their completed Round 1 questionnaire to promote reflection. Panel members were asked to rate the Round 2 indicators and recommend additional indicators for consideration. Responses were summarized as before, then distributed to the panel members, who discussed the Round 2 indicators and confirmed acceptance or rejection.

All indicators selected from Round 1 and Round 2 were included in a third and final questionnaire. Panel members were asked to prioritize the indicators by choosing those they perceived as most important for improving the quality of prostate cancer care, and the most meaningful level of measurement for each selection (regional/provincial, hospital/team, individual provider). Each choice represented a single vote, to a maximum of 15 choices. Indicators were considered to be a high priority if five or more panel members selected the indicator and measurement level. The type of evidence supporting the indicators selected and discarded by the panel was summarized.

Results

The expert panel included a surgical and a methodologic co-chair, nine surgeons, one medical oncologist, two radiation oncologists, a nurse, and a pathologist, for a total of 16 members who represented various geographic regions, Table 1. These individuals

TABLE 1. **Prostate cancer indicator panel members**

Name	Affiliation*	Role/Focus
Jack Barkin	Humber River Regional Hospital, Toronto (central east)	surgical oncology
Adalsteinn Brown	University of Toronto, Toronto (central east)	co-chair, performance measurement
Ilias Cagiannos	Ottawa Hospital, Ottawa (east)	surgical oncology
Richard Casey	Trafalgar Professional Centre, Oakville (central west)	surgical oncology
Joseph Chin	London Health Sciences Centre, London (south west)	surgical oncology
Libni Eapen	Ottawa Hospital, Ottawa (east)	radiation oncology
Russel Blair Egerdie	Victoria Westmount Medical Centre, Kitchener (central west)	surgical oncology
Scott Ernst	London Regional Cancer Centre, London (south west)	medical oncology
Neil Fleshner	University Health Network, Toronto (central east)	co-chair, surgical oncology
Jonathon Izawa	London Health Sciences Centre, London (south west)	surgical oncology
Leah Jamnicky	University Health Network, Toronto (central east)	nursing
Christopher Morash	Ottawa Hospital, Ottawa (east)	surgical oncology
Laurence Klotz	Sunnybrook and Women's College Health Science Centre, Toronto (central east)	surgical oncology
Jinka Sathya	Juravinski Cancer Centre, Hamilton (central west)	radiation oncology
Robert Siemens	Kingston General Hospital, Kingston (south east)	surgical oncology
Joan Sweet	University Health Network, Toronto (central east)	pathology
John Trachtenberg	University Health Network, Toronto (central east)	surgical oncology
Eric Winquist	London Regional Cancer Centre, London (south west)	medical oncology

*all sites located in Ontario, Canada

are provincial and national leaders in the care of patients with prostate cancer. The majority of clinical panel members are associated with regional cancer centres, and more than half of the clinical panel members are members of provincial multidisciplinary oncology disease site groups that develop evidence-based clinical practice guidelines (www.cancercare.on.ca/access_PEBC.htm). As such, they are not only clinical experts, but possess broader knowledge of how to balance the application of evidence with practical issues such as patient preference and the availability of resources.

The Round 1 questionnaire was distributed on December 8, 2003. The subsequent one-day meeting was held on March 2, 2004. Fifteen individuals completed the Round 1 questionnaire and thirteen participated in the one day meeting, where 11 individuals completed Round 2, and ten completed Round 3.

The literature search produced 113 citations for articles related to the quality of prostate cancer surgery, of which 49 were selected for thorough review. Thirty-one indicators were included in Round 1 and 13 indicators were included in Round 2, Figure 1. In Round 3 panelists were presented with 19 indicators that had been retained from both Round 1 and Round 2. They were asked to prioritize 15 indicators by selecting both the indicator and desired level of measurement (surgeon, hospital, region/province), representing approximately one quarter of the possible indicator-measurement level choices. A total of 11 indicators were prioritized by the panel members,[12-22] and comprise the final list of indicators, Table 2. The remaining indicators were considered important by the panel,[12,14,19,20,23-28] having been retained through two rounds of rating and consensus, but were rated in the final exercise as lower priority. The selected indicators represent several phases of care, including diagnosis, treatment, pathology, and follow-up, plus overall outcomes.

A similar degree of evidence supported the indicators that were selected and discarded in the prioritization exercise, Table 3. Of 11 indicators that were selected, three had been proposed by the panel. Of the remaining eight indicators, five were supported by at least one article, for an average of 2.6 articles per indicator. Of eight indicators that were discarded, three had been proposed by the panel. Of the remaining five indicators, three were supported by at least one article for an average of 3.3 articles per indicator.

Three of the 11 indicators selected by our panel corresponded to those published only by the RAND group. They were "biochemical disease-free and overall survival at 5, 10 and 15 years after primary treatment with either radical prostatectomy or radiation therapy", "proportion of prostate cancer patients with acute surgical complications", and "proportion of prostate cancer patients with length of hospital stay greater than four days following radical prostatectomy". All of these are typical measures for both surgery in general, and cancer care.

Discussion

Several indicators were included in the final prioritized list despite the fact that they were not extracted from the medical literature reviewed for this exercise. One of these indicators was "proportion of patients with clinically low risk prostate cancer age 75 or greater who undergo radical prostatectomy". Panel members believed this indicator reflected a clinical scenario for which surgery would be an inappropriate form of therapy. Another selected indicator with no reviewed evidence was "proportion of prostate cancer patients dying without cancer less than 5 years after surgery". Panel members thought this to be an important indicator because it reflects the consideration of comorbidity and life expectancy in the clinical decision-making process. The third such indicator was "proportion of prostate cancer patients whose PSA level is undetectable at first follow-up". While it was not specifically mentioned in any of the reviewed literature the panel members believed this to be an important indicator of appropriate choice of patients to which to offer radical prostatectomy, and of technical completeness of the cancer surgery.

Selection of these indicators relied heavily on consensus rather than published evidence, perhaps emphasizing the controversy regarding standards for prostate cancer management, as well as a lack of research assessing the appropriateness of care of prostate cancer.[4] Although 49 articles were reviewed, a total of six practice guidelines and ten consensus statements gave rise to the indicators included in Round 3. Of the 11 selected indicators, three were proposed by our panel, while three were extracted from the RAND indicators and likely represent the consensus of that group since we did not find evidence supporting them. This reliance on consensus is an endorsement of the consensus component of the modified Delphi process since the synthesized prostate literature would not of itself have produced a workable set of indicators.

While the consensus indicators selected by our group focused on appropriateness of treatment

TABLE 2. **List of prostate cancer surgery indicators prioritized by expert panel**

Phase	Level of measurement		
	Reg/Prov	**Hospital**	**Surgeon**
Outcomes	*Biochemical disease free and overall survival of prostate cancer patients at 5, 10, and 15 years after primary treatment by radical prostatectomy or radiation therapy.*	—	• *Biochemical disease free and overall survival of prostate cancer patients at 5, 10, and 15 years after primary treatment by radical prostatectomy or radiation therapy.* • Proportion of prostate cancer patients dying without cancer less than five years after surgery.
Diagnosis	—	—	• Proportion of prostate cancer patients with clinically low risk disease age 75 or greater who undergo radical prostatectomy. •Proportion of patients with low risk prostate cancer who report they were informed about treatment options and adverse effects, and with documentation of involvement in treatment decision.
Treatment	—	*Proportion of prostate cancer patients with length of hospital stay greater than 4 days following radical prostatectomy.*	• *Proportion of prostate cancer patients with length of hospital stay greater than 4 days following radical prostatectomy.* • Proportion of prostate cancer patients with acute surgical complication (blood loss of 2.0 litres or greater; rectal injury; cardiovascular complications such as CHD, MI, heart failure or pulmonary edema; proximal DVT/PE; infection; or placed on long term anticoagulant therapy). • Proportion of patients undergoing prostate cancer surgery who experience loss of potency, incontinence, or undergo procedures for bladder neck contracture or stenosis. • Proportion of prostate cancer patients whose PSA level is undetectable at first follow-up.
Pathology	—	Proportion of needle biopsy pathology reports for prostate cancer patients meeting Canadian national standards (soon to be released).	—
Follow-up	—	—	• Proportion of prostate cancer patients assessed after treatment for voiding function and potency. • Proportion of patients having undergone definitive therapy for prostate cancer who are followed at least twice in the first year then at least annually thereafter.

Italics highlight indicators that are common to different levels of measurement.

TABLE 3. **Evidence supporting considered indicators**

Indicators prioritized by panel
Biochemical disease free and overall survival of prostate cancer patients at 5, 10, and 15 years after primary treatment by radical prostatectomy or radiation therapy[12]
Proportion of prostate cancer patients with acute surgical complication (blood loss of 2.0 litres or greater; rectal injury; cardiovascular complications such as CHD, MI, heart failure or pulmonary edema; proximal DVT/PE; infection; or placed on long term anticoagulant therapy)[12]
Proportion of patients undergoing prostate cancer surgery who experience loss of potency, incontinence, or undergo procedures for bladder neck contracture or stenosis[13]
Proportion of patients with clinically low risk prostate cancer age 75 or greater who undergo radical prostatectomy
Proportion of prostate cancer patients with length of hospital stay greater than four days after radical prostatectomy[12]
Proportion of patients with low risk prostate cancer who report they were informed about treatment options and adverse effects, and with documentation of involvement in treatment decision[12-18]
Proportion of prostate cancer patients dying without cancer less than five years after surgery
Proportion of prostate cancer patients whose PSA level is undetectable at first follow-up
Proportion of needle biopsy pathology reports for prostate cancer patients meeting national standards[19,20]
Proportion of prostate cancer patients assessed after treatment for voiding function and potency[12,21]
Proportion of patients having undergone definitive therapy for prostate cancer who are followed at least twice in the first year then at least annually thereafter[12,15,21,22]
Indicators not prioritized by panel
Proportion of prostate cancer patients who undergo surgery within 4 weeks of decision to operate[13]
Proportion of patients diagnosed with prostate cancer whose preoperative report includes: (PSA, Gleason score, urinary and sexual functioning, T stage, DRE results, life expectancy/comorbidity, age, and family history)[12,14,19,20,23-26]
Proportion of high risk prostate cancer patients referred to a urologist and radiation oncologist before treatment[12]
Proportion of prostate cancer patients who have artificial sphincters inserted
Proportion of patients undergoing radical prostatectomy who experience readmission within 28 days of surgery
Proportion of patients undergoing radical prostatectomy who visit the emergency department within 28 days of surgery
Proportion of prostate cancer patients having radical prostatectomy whose pathology reports include at least current synoptic reporting standards[27,28]
Proportion of prostate cancer patients that have documented information communicated to their primary care physician[12]

• – indicator proposed by panel and not extracted from the literature; numbers – number of publications in which corresponding

decision-making, the RAND consensus indicators focused on complications and survival. Those jointly chosen by our panel and the RAND process focused on shared decision-making with patients, and short- and long-term follow-up to monitor for adverse effects of treatment. We cannot account for the differences in consensus across the two efforts. Differences of opinion are often attributed to knowledge, attitudes and beliefs which can vary across professional group or by geographic region. Differences in prioritized indicators could also be due to temporal trends in the importance of clinical topics, since the RAND work took place prior to the year 2000. Regardless, it is clear that our panel process built upon the work already conducted by RAND.

The use of a prioritization exercise differentiates this work from that of the RAND group.[12] Typical Delphi-like exercises result in an unprioritized list of indicators, or the indicators are informally prioritized as part of the consensus process. The process employed here actually

TABLE 3. **Evidence supporting considered indicators**

Proposed by panel	Evidence: Consensus statement	Guideline	RAND
			x
			x
		1	
•			
			x
	3	3	x
•			
•			
	2		
	1		x
	1	2	x
		1	
	5	2	x
			x
•			
•			
•			
	2		
			x

indicators were mentioned.

consisted of five distinct steps: rating, consensus, rating, and consensus, followed by prioritization. In this manner panel members were asked to provide different types of feedback at different stages, which may result in a more systematic and thoughtful undertaking. The prioritized list is also of benefit to policy-makers who can more easily identify a core cadre of critical indicators if such decisions are resource-limited.

Despite employing a comprehensive literature search based on both subject headings and keywords it may have failed to find all relevant literature. We chose to review synthesized sources of evidence such as systematic reviews and practice guidelines that described structures or processes resulting in desirable patient outcomes. This strategy may have missed other indicators that were investigated in single trials or other types of studies evaluating prostate cancer care. However, this limitation may have been overcome by the fact that the members of the panel included experts in cancer care who were likely to be very familiar with the literature, particularly those involved in the development of practice guidelines, and had the opportunity to suggest additional indicators throughout the selection process.

This work contributes a package of evidence- and consensus- based indicators for evaluating the quality of care of patients with prostate cancer which can be applied in any jurisdiction. The indicators focus on surgical care while considering pre- and post-operative management, thereby reflecting functions that span the continuum of care and including constructs that are thought to contribute to the overall quality of care.[29]

The modified Delphi process we employed specifically asked panelists to rate potential indicators regardless of perceived availability of administrative data by which they could be measured, thusly producing an "ideal" complement of indicators. Identification of, and agreement on priority indicators represents only the first phase of a performance measurement program. The feasibility of measuring the indicators must next be assessed. This involves identifying whether administrative data is readily available with which to measure the indicators, or collecting the required data through medical record abstraction, surveys or interviews. □

References

1. Tomiak EM, Diverty B, Verma S et al. Follow-up practices for patients with early stage breast cancer: a survey of Canadian oncologists. *Cancer Prev Control* 1998;2(2):63-71.
2. Ellison LF, Stokes J, Gibbons L, Lindsay J, Levy I, Morrison H. Monograph series on aging-related diseases: X. Prostate cancer. *Chronic Dis Can* 1998;19(1)1-18.
3. Grover SA, Coupal L, Zowall H et al. The economic burden of prostate cancer in Canada: forecasts from the Montreal Prostate Cancer Model. *CMAJ* 2000;162(7):987-992.
4. Lee F, Patel HR. Prostate cancer: management and controversies. *Hosp Med* 2002;63(8):465-470.
5. Wennberg J, Gittelsohn A. Variations in medical care among small areas. *Sci Am* 1982;246(4):120-134.

6. Fleshner N, Rakovitch E, Klotz L. Differences between urologists in the United States and Canada in the approach to prostate cancer. *J Urol* 2000;163(5):1461-1466.
7. Cazzaniga LF, Marjinoni MA, Bossi A et al. Interphysician variability in defining the planning target volume in the irradiation of prostate and seminal vesicles. *Radiother Oncol* 1998;47(3):293-296.
8. Plawker MW, Flesher JM, Vapnek EM, Macchia RJ. Current trends in prostate cancer diagnosis and staging among United States urologists. *J Urol* 1997;158(5):1853-1858.
9. Savage P, Bates C, Abel P, Waxman J. British urological surgery practice. *Br J Urol* 1997;79(5):749-755.
10. Feldman-Stewart D, Brundage MD, Hayter C et al. What prostate cancer patients should know: variation in professionals' opinions. *Radiother Oncol* 1998;49(2):111-123.
11. Fink A, Kosecoff J, Chassin M, Brook RH. Consensus methods: Characteristics and guidelines for use. *Am J Public Health* 1984;74(9):979-983.
12. Spencer BA, Steinberg M, Malin J, Adams J, Litwin MS. Quality of care indicators for early stage prostate cancer. *J Clin Oncol* 2003;21(10):1928-1936.
13. Royal College of Radiologists Clinical Oncology Information Network. British Association of Urological Surgeons. Guidelines on the management of prostate cancer. *Clin Oncol* 1999;11(2):S53-S88.
14. Klotz LH, Fradet Y. Controversies in the management of localized prostate cancer: Consensus development by Canadian urologists. *Can J Urol* 2002;9(Suppl 1):30-35.
15. Aus G, Abbou CC, Pacik D et al. EAU guidelines on prostate cancer. *Eur Urol* 2001;40(12):97-101.
16. Boccon-Gibod L, Bertaccini A, Bono AV et al. Management of locally advanced prostate cancer: A European consensus. *Int J Clin Pract* 2003; 57(3):187-194.
17. Middleton RG, Thompson IM, Austenfeld MS et al. Prostate Cancer Clinical Guidelines Panel summary report on the management of clinically localized prostate cancer. The American Urological Association. *J Urol* 1995;154(6):2144-2148.
18. Valdagni R, Bertoni F, Bossi A et al. Minimal requirements in prostate cancer irradiation: A consensus document by the AIRO Lombardia Cooperative Group. *Tumori* 1999;85(2):143-148.
19. Delahunt B, Nacey JN. Broadsheet number 45: thin core biopsy of prostate. The Royal College of Pathologists of Australia. *Pathology* 1998;30(3):247-256.
20. van der Kwast TH, Lopes C, Santonja C et al. Guidelines for processing and reporting of prostatic needle biopsies. *J Clin Pathol* 2003;56(5):336-340.
21. Newling DW, Estrada Arras C, Bono A. History and physical examination in prostate cancer. Which information is essential in diagnosis and follow-up? *Prog Clin Biol Res* 1990;357:151-156.
22. Baker LH, Hanks G, Gershenson D et al. NCCN Prostate Cancer Practice Guidelines. The National Comprehensive Cancer Network. *Oncology* 1996;10(11 Suppl):265-288.
23. Richie JP, Murphy GP, Walther P. Prostate cancer surgical practice guidelines. Society of Surgical Oncology practice guidelines. *Oncology* 1997;11(6):907-912.
24. Grignon DJ, Hammon EH. College of American Pathologists Conference XXVI on clinical relevance of prognostic markers in solid tumors. Report of the Prostate Cancer Working Group. *Arch Pathol Lab Med* 1995;119(12):1122-1126.
25. Middleton RG. Management of clinically localized prostate cancer. Guidelines from the American Urological Association. *CA Cancer J Clin* 1996;46(4):249-253.
26. Bostwick DG, Foster CS. Predictive factors in prostate cancer: current concepts from the 1999 College of American Pathologists Conference on Solid Tumor Prognostic Factors and the 1999 World Health Organization Second International Consultation on Prostatic Cancer. *Semin Urol Oncol* 1999;17(4):222-272.
27. Amin MB, Grignon D, Bostwick D, Reuter V, Troncoso P, Ayala AG. Recommendations for the reporting of resected prostate carcinomas. Association of Directors of Anatomic and Surgical Pathology. *Am J Clin Pathol* 1996;105(6):667-670.
28. Imperato PJ, Waisman J, Wallen M et al. Results of a cooperative educational program to improve prostate pathology reports among patients undergoing radical prostatectomy. *J Community Health* 2002;27(1):1-13.
29. Donabedian A. The quality of care: How can it be assessed? *JAMA* 1988;260(12):1743-1748.