

# General practitioners and cancer control

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Cancer was the main underlying cause of death in Australia in 2002–2004, causing 28% of all deaths each year.<sup>1</sup> More than half the population will develop at least one non-melanoma skin cancer (NMSC) in their lifetime, and one in three men and one in four women will develop a major cancer before they reach the age of 75 years.<sup>2</sup> The number of new cancer cases is increasing, as is the number of people living with a diagnosis of cancer. Between 1991 and 2001, there was a 34% increase in the annual number of new cases of cancer (excluding NMSC), largely due to population growth and the ageing population.<sup>2</sup> The risk of cancer increases rapidly with age. In 2000, the median age at diagnosis was 69 years for men and 65 years for women. On a more positive note, the overall 5-year survival rate of cancer is about 60%, and is increasing — Australia's figures are among the best in the world. For many patients, cancer has now become a chronic disease.

Despite the prevalence of cancer, the average general practitioner will only encounter about four new patients each year who will be diagnosed with a potentially fatal cancer, and have about 16 patients with a diagnosed cancer under their care at any one time.<sup>3</sup> A much larger component of cancer-related workload in general practice involves prevention, and dealing with patients with suspicious symptoms or concerns about possible cancer, or who may be at increased risk due to family history or lifestyle factors such as smoking, sun exposure or occupation. In contrast to the small caseload of cancer patients, 20% of the average GP's adult patients will be smokers and 30% will be overweight (body mass index > 25 kg/m<sup>2</sup>),<sup>3</sup> both of which are risk factors for cancer. GPs and their multidisciplinary teams are well placed to promote cancer education through advice on lifestyle changes, and this role is being facilitated by Internet-based patient education resources.

Here, I describe the commonest cancers, and explore the role of the GP in relation to early diagnosis and referral, follow-up and detection of recurrence, and survivorship. I also describe GPs' increasing role in cancer policy and research.

## Context — the commonest cancers

In 2004–2005, 2% of the Australian population (about 390 000 people) reported that they currently had a medically diagnosed neoplasm; 87% of these were malignant.<sup>4</sup> The commonest cancers by far are NMSCs. In 2002 it was estimated that, of 374 000 people treated for skin cancer, 68% were treated for basal cell cancer and 32% for squamous cell cancer,<sup>5</sup> with 54% and 65% of these people, respectively, treated in a primary care setting. After NMSCs, the commonest cancers in men are prostate (23% of all new cases in 2001), colorectal (15%), lung (11%) and melanoma (11%), which collectively account for 60% of all registrable cancers in males. In women, the commonest cancers are breast (29%), colorectal (14%), melanoma (10%) and lung (7%). For men and women combined, colorectal cancer is the most common.<sup>2</sup>

The cancers with the highest burden of mortality in Australia are lung, prostate and colorectal cancers in men, and breast, lung and colorectal cancers in women. By 2011, the total number of new cancer cases is projected to increase by 31%.<sup>6</sup>

## ABSTRACT

- Cancer is the leading cause of death among Australians, causing 28% of all deaths.
- The average general practitioner will only encounter about four new patients each year with a potentially fatal cancer. A GP's cancer-related workload mostly involves prevention, and dealing with patients with suspicious symptoms or concerns about possible cancer, or who may be at increased risk due to family history or lifestyle factors.
- GPs cover the full spectrum of cancer care from prevention to palliation, including providing psychosocial support to patients and their families and carers.
- GPs have a key role in early diagnosis and referral, follow-up and detection of recurrence, and survivorship.
- There is a developing role for GPs in cancer policy and research.

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## The role of the GP

The GP's role in relation to cancer spans the full spectrum of care — prevention, screening, detection, treatment, and palliation — and includes psychosocial support of patients and their families and carers. Traditionally, GPs have been primarily concerned with prevention, screening, diagnosis, supportive care, and palliative care. Treatment and follow-up have typically been the responsibility of specialists, but these views are being challenged.<sup>7</sup>

Although hospitalisation and specialist treatment with surgery, radiotherapy or chemotherapy are critical components of combating cancer, the majority of the cancer patient's "journey" takes place in the community, where GPs and nurses are the cornerstones of continuing care.<sup>8</sup> This journey has been described as comprising three phases, each with its own time course, spheres of influence and participants (Box 1).<sup>9</sup> The GP's involvement centres on Phases 1 and 3, the critical components of which are:

- early diagnosis and referral;
- follow-up and detection of recurrence; and
- survivorship.

## Early diagnosis and referral

This is a key role for the GP, as more than 80% of patients with common cancers first present to their GP with symptoms.<sup>10</sup> Randomised controlled trials of breast cancer<sup>11</sup> and colorectal cancer<sup>12</sup> screening have demonstrated that detecting cancers earlier has significant effects on mortality. In an effort to support the United Kingdom's GPs in this critical task, the National Institute for Health and Clinical Excellence (NICE) has recently published *Referral guidelines for suspected cancer*.<sup>13</sup> These guidelines aim to help practitioners distinguish between symptoms associated with common illnesses, and those that might indicate cancer. The guidelines recognise the primacy of history-taking and the communication skills needed to elicit a symptom from a patient. They also identify appropriate and inappropriate investigations for all cancers, and the crucial role of watching and waiting — one of the key skills of general practice.

**1 The cancer patient's "journey" — time course and participants<sup>9</sup>**

Phase	Time course	Participants
1	Period commencing with first presentation of symptoms related to malignancy and ending with the significant oncological event of confirmation of diagnosis	Initially managed by the general practitioner and later involving specialists
2	Period commencing with first review by an oncologist, continuing through treatment of the malignancy, and ending when the patient has "completed treatment" and been placed "on follow-up" by specialists	Oncologist provides most care. GP may not be seen throughout the entire phase
3	Period after completion of therapy. Significant oncological events are recurrence and treatment-related side effects	GP provides routine care. Oncologist provides occasional follow-up visits ◆

Unfortunately, research on the presentation of cancer in general practice is limited, and the positive predictive values for most symptoms are unknown. However, two symptoms have a high predictive value for colorectal cancer: rectal bleeding and change in bowel habit towards increased looseness or increased stool frequency.<sup>14</sup> Having said this, rectal bleeding is a common symptom in the community, and a British GP will see on average only one new case of colorectal cancer a year (see Box 2). For lung cancer, the symptoms or signs with the highest positive predictive value are haemoptysis, fatigue, cough, finger clubbing, weight loss and dyspnoea.<sup>15</sup>

**Follow-up and detection of recurrence**

This is another key role for the GP, involving periodic routine visits and tests, with the broad goals of detecting recurrence, monitoring late effects of treatment, screening for related new primary cancers and providing psychosocial support.<sup>7</sup> The involvement of the GP generally continues from the time of diagnosis until after treatment or death. Indeed, the GP often remains heavily involved with the patient after diagnosis and before any terminal stage. In a study in Glasgow, most patients with early breast cancer consulted their GPs more than 10 times during the year after diagnosis — about double the number of consultations with specialists.<sup>16</sup> The long-held tradition of providing routine follow-up care in hospital-based specialist clinics has recently been challenged by the results of two randomised controlled trials conducted in the UK and Canada.<sup>7</sup> These showed that primary care-based follow-up of breast cancer patients is a safe alternative to specialist follow-up, when measured by a range of outcomes such as delay in diagnosing recurrence, the rate of recurrence-related serious clinical events, health-related quality of life, and patient satisfaction.

Benefits of GP follow-up include adequate time to discuss problems, the GP's personal knowledge of the patient, and an increased likelihood of being seen on the same day for urgent problems. While these two trials were restricted to patients with breast cancer, there is no reason to believe that the findings would not apply to other common cancers.

GPs have indicated their wish to be involved in the ongoing care of their patients with cancer.<sup>17</sup> Moreover, a 2000 UK report on cancer treatment concluded that:

... as many as 70% of patients might safely stop hospital based follow-up without detriment to the desired outcomes of early

recognition of recurrence or new disease, psychosocial support, and opportunities for audit, research and training.<sup>18</sup>

Continuity of care is a critical issue, and further developments will depend on establishing effective and practical systems to facilitate communication between GPs and specialists, including shared-care protocols and guidelines. The key to success lies in enhancing the GP's interaction with the multidisciplinary team, which includes not only oncologists and surgeons, but also a variety of allied health disciplines, cancer nurses, palliative care doctors and outreach nurses.

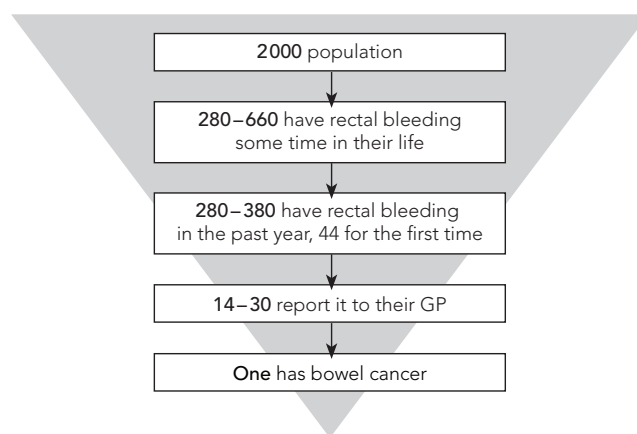
**Survivorship**

The number of patients surviving cancer is growing dramatically. It has been estimated that there are 10.5 million cancer survivors in the United States — about 3.6% of the population.<sup>19</sup> The number of those living with cancer in the US has tripled since 1971, and that number is increasing by 2% each year.<sup>20</sup> Although overall survival has increased, there is emerging evidence that the quality of life of survivors has not kept pace. The Lance Armstrong Foundation in the US recently surveyed 1020 American cancer survivors and found that half of them had continuing unmet non-medical needs.<sup>21</sup> These included psychological and financial issues that were not being addressed due to non-recognition or lack of available physician skills or resources. Seventy-eight per cent of the surveyed survivors had not sought help from anyone who might have provided psychological or social support, and 70% stated that their physicians had been unable to assist with non-medical issues.

The GP, with his or her ongoing relationship with the patient and the patient's family and carers, is well positioned to identify and address these unmet non-medical and medical needs, which have such a crucial influence on quality of life. The notion of survivorship has highlighted the need for supportive and palliative care, which increasingly is seen as being distinct from terminal care. Here again the GP has a crucial role to play.

It has been argued that one of the important potential benefits of primary care-based follow-up for cancer survivors is comprehensive care.<sup>7</sup> Indeed, two-thirds of cancer patients have significant comorbidity and a third have at least two comorbid conditions.<sup>22</sup>

**2 Relative incidence of rectal bleeding and bowel cancer in the community and in primary care<sup>14</sup>**



Numbers have been adjusted to an approximate general practitioner list size of 2000 patients. ◆

However, compared with non-cancer controls, patients followed up solely by a GP are more likely to receive general medical and preventive care, but less likely to receive cancer-specific surveillance such as mammography and colonoscopy.<sup>23</sup> This may well reflect uncertainty about the respective roles of GPs and specialists in the ongoing care of cancer patients — strengthening the case for clearer and more effective communication across the primary–secondary care interface and for involvement of the GP in the multidisciplinary team.

### Policy and research

With this increasing awareness and acknowledgement of the importance of primary care in cancer control, there has been a move towards including GPs in cancer control policy and research. The UK National Health Service has had a Cancer Plan since 2000, and has made major efforts towards engaging GPs in cancer control.<sup>24</sup> For example, the Chairman and several members of the Guideline Development Group and the Guideline Review Panel for the recently published NICE *Referral guidelines for suspected cancer*<sup>13</sup> were GPs. In addition, the National Cancer Research Institute, which oversees all cancer research in the UK and comprises 21 Clinical Studies Groups, includes a Primary Care Development Group.<sup>25</sup> The New Zealand Ministry of Health has developed a Cancer Control Strategy, which it is now implementing, with GP representation on the Cancer Control Taskforce and Implementation Committee.<sup>26</sup>

The Australian Government's National Service Improvement Framework for Cancer<sup>8</sup> has had GP input, and the National Cancer Control Initiative completed a national scoping exercise to determine the priorities for the primary care sector in relation to cancer, recommending five key areas for further work:<sup>27</sup>

- Investigation of GPs' contact with cancer patients;
- Dissemination and implementation of educational materials to assist GPs in supporting men to make informed decisions about prostate-specific antigen testing;
- Implementation of modules three (development and dissemination of consumer summary cards) and four (rural and remote strategy) of the psychosocial care guidelines implementation strategy;
- Review of different methods of diagnosing and managing skin lesions in primary care; and
- A demonstration project to develop facilitation of multidisciplinary care coordination across the continuum of cancer care.

### Conclusion

At a time when both the number of new cancer cases and the number of people living with cancer are increasing, GPs have a key role to play in cancer control. While spanning the full spectrum of cancer care from prevention through to palliation, the GPs' involvement centres on early diagnosis and referral, follow-up and detection of recurrence, and survivorship. With increasing representation on policy and research bodies, the GPs' role in cancer care can only be strengthened.

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### Competing interests

None identified.

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### References

- 1 Australian Bureau of Statistics. Cancer in Australia: a snapshot, 2004–05. (ABS Cat. No. 4822.0.55.001.) Canberra: ABS, 2006.
- 2 Australian Institute of Health and Welfare, Australasian Association of Cancer Registries. Cancer in Australia 2001. AIHW Cancer Series No. 28. (AIHW Cat. No. CAN 23.) Canberra: AIHW, 2004.
- 3 National Cancer Control Initiative. The primary care perspective on cancer: an introductory discussion. Melbourne: NCCI, 2003.
- 4 Australian Bureau of Statistics. National Health Survey: summary of results Australia 2004–05. (ABS Cat. No. 4364.0.) Canberra: ABS, 2006.
- 5 National Cancer Control Initiative. The 2002 national non-melanoma skin cancer survey. Melbourne: NCCI, 2003.
- 6 Australian Institute of Health and Welfare, Australasian Association of Cancer Registries, National Cancer Strategies Group. Cancer incidence projections, Australia 2002 to 2011. AIHW Cancer Series No. 30. (AIHW Cat. No. CAN 25.) Canberra: AIHW, 2005.
- 7 Grunfeld E. Cancer survivorship: a challenge for primary care physicians. *Br J Gen Pract* 2005; 55: 741–742.
- 8 National Health Priority Action Council. National Service Improvement Framework for Cancer. Canberra: Australian Government Department of Health and Ageing, 2006.
- 9 Miller A. Cancer education survey of cancer specialists and Divisions of General Practice for the Cancer Institute of New South Wales. Sydney: Cancer Institute of New South Wales, 2004.
- 10 Fergusson RJ, Gregor A, Dodds R, Kerr G. Management of lung cancer in South East Scotland. *Thorax* 1996; 51: 569–574.
- 11 Nyström L, Rutqvist LE, Wall S, et al. Breast cancer screening with mammography: overview of Swedish randomised trials. *Lancet* 1993; 341: 973–978.
- 12 Towler B, Irwig L, Glasziou P, et al. A systematic review of the effects of screening for colorectal cancer using the faecal occult blood test, Hemoccult. *BMJ* 1998; 317: 559–565.
- 13 National Institute for Health and Clinical Excellence. Referral guidelines for suspected cancer. Clinical Guideline CG27. London: NICE, 2005.
- 14 Hamilton W, Sharp D. Diagnosis of colorectal cancer in primary care: the evidence base for guidelines. *Fam Pract* 2004; 21: 99–106.
- 15 Hamilton W, Sharp D. Diagnosis of lung cancer in primary care: a structured review. *Fam Pract* 2004; 21: 605–611.
- 16 Macleod U, Ross S, Twelves C, et al. Primary and secondary care management of women with early breast cancer from affluent and deprived areas: retrospective review of hospital and general practice records. *BMJ* 2000; 320: 1442–1445.
- 17 Grunfeld E, Mant D, Vessey MP, Fitzpatrick R. Specialist and general practice views on routine follow-up of breast cancer patients in general practice. *Fam Pract* 1995; 12: 60–65.
- 18 Royal College of General Practitioners and Faculty of Clinical Oncology, Royal College of Radiologists. Cancer care follow-up: an evolving service. London: RCGP and RCR, 2000.
- 19 National Cancer Institute. Estimated United States cancer prevalence. <http://cancercontrol.cancer.gov/ocs/prevalence> (accessed Apr 2007).
- 20 Cancer survivors: living longer, and now, better. *Lancet* 2004; 364: 2153–2154.
- 21 Wolff SN, Nichols C, Ulman D, et al. Survivorship: an unmet need of the patient with cancer — implications of a survey of the Lance Armstrong Foundation (LAF) [abstract]. 2005 ASCO Annual Meeting. [http://www.asco.org/asco/publications/abstract\\_print\\_view/1,1148,\\_12\\_002643-000\\_18](http://www.asco.org/asco/publications/abstract_print_view/1,1148,_12_002643-000_18) (accessed Apr 2007).
- 22 Ogle KS, Swanson GM, Woods N, Azzouz F. Cancer and comorbidity: redefining chronic diseases. *Cancer* 2000; 88: 653–663.
- 23 Earle CC, Neville BA. Under use of necessary care among cancer survivors. *Cancer* 2004; 101: 1712–1719.
- 24 United Kingdom Department of Health. The NHS Cancer Plan: a plan for investment, a plan for reform. London: Department of Health, 2000.
- 25 National Cancer Research Network Clinical Studies Groups. <http://www.ncrn.org.uk/Csg/index.asp> (accessed Apr 2007).
- 26 New Zealand Minister of Health. The New Zealand Cancer Control Strategy. Wellington: Ministry of Health and the NZ Cancer Control Trust, 2003.
- 27 National Cancer Control Initiative. Report to the Department of Health and Ageing on Phases I and II of the Primary Care Perspective on Cancer Project. Melbourne: NCCI, 2004.

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