Australian cancer patients denied radiation therapy

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The Australian College of Radiologists (ACR) has revealed that up to 10,000 cancer patients in Australia are missing out on radiation therapy, due to a lack of machines and a chronic shortage of trained staff.

The findings were released in a recent report entitled *National Strategic Plan for Radiation Oncology*, produced by the Faculty of Radiation Oncology (FRO) and the Royal Australian and New Zealand College of Radiologists (RANZCR). Its aim was to address the crisis in the radiation sector outlined in nearly 50 studies over the past two decades, which had been commissioned by various State and Commonwealth governments. While these studies had identified serious deficiencies in the resourcing, organisation and provision of radiation services for cancer patients, nothing had been done to remedy the situation. The deterioration of radiation oncology resources had simply continued.

Radiation oncology is an essential component in the treatment of many types of cancer, involving the application of ionizing radiation to affected areas. With the incidence of cancer on the rise, and medical bodies predicting one in three men and one in four women will suffer some form of the disease by the time they reach 75 years of age, the availability of treatment options is critical.

Advances in technology, particularly during the past decade, have meant that this once potentially dangerous form of treatment is now safer and more effective, greatly improving patient outcomes. Innovations in the field have, for example, created far greater accuracy in the delivery of a dose of radiation to the site of a tumor, thereby reducing the chances of damage to surrounding organs.

In 1996 the Australian Health Technology Advisory Committee (AHTAC) undertook a major study of technological advances in the field of radiation. It recommended that between 50 and 55 percent of all cancer patients be referred for treatment, that regular reviews of equipment be conducted out in the light of technological changes, and that radiation therapy facilities be expanded to allow for future needs. Reviews of staffing and training needed to be conducted on a regular basis.

While various government bodies agreed with the AHTAC's national benchmark, by the year 2000 only 38 percent of cancer patients were receiving radiation treatment. The shortfall meant that 10,000 people, who could have benefited from radiation treatment, did not receive it that year. It is ironic, the ACR report points out, that this should occur when technological developments in the field offer significantly enhanced outcomes.

An estimated 40 percent of cancer patients can expect a normal life expectancy or complete cure following treatment and up to 18 percent of these can be attributed to radiotherapy. One Australian study indicated that radiotherapy improved survival by 16 percent, meaning that for the year 2000, approximately 1,600 cancer patients may have died prematurely. The rest of the 10,000 who were denied treatment failed to obtain pain control, the suppression of other symptoms or the prolongation of their lives. In total, some 12,320 years, or 7.7 years per person, were prematurely lost from a lack of radiotherapy in 2000 alone.

According to the report, the low uptake of radiation therapy is caused by a variety of factors, including ignorance of the role of radiotherapy in cancer treatment, the lack of professionally trained staff, problems related to access to treatment, delays between referral and commencement of treatment and inadequate equipment.

Radiation oncology services are provided through 37 centres in urban and regional Australia. The vast majority of patients are treated with megavoltage X-rays produced by linear accelerators. In November 2000, there were 99 linear accelerators—72 located in the public sector and 27 in the private sector. In total, 124 are needed to achieve the 50 percent benchmark recommended by the AHTAC.

The ACR report found that nationally, the mean age of a linear accelerator was 6.9 years—4.5 years in the private sector compared with 7.6 years in the public sector. Fourteen linear accelerators were older than 10 years, 21 were aged 8 to 10 years, 20 were between 5 and 8 years old while 42 were less than 5 years old. All machines 10 years and older were located in the public sector.

Megavoltage equipment replacement is recommended at 10 years, which means that 14 percent of linear accelerators currently in use should be replaced immediately and 21 percent should be replaced within the next two years. The report found that, due to the aging of equipment, downtime as a result of breakdowns was increasing. By far the greatest contributing factor to downtime, however, was staff shortages.

A radiation oncology team is comprised of a number of different professionals, including radiation oncologists, radiation therapists, medical physicists, oncology nurses, social workers, counsellors, engineers and technical personnel and administrative support. Last year there were 154 radiation oncologists in Australia, or 7.48 per one million people nationally, well below the recommended rate of 8.8. Radiation therapists, responsible for treatment planning and delivery, numbered 841 at the end of 2000. The Radiation Therapy Advisory Panel to the Australian Institute of Radiography recommends 1.06 radiation therapists per hour of linear accelerator operation, yet the national average last year was 0.99, significantly short of the benchmark. Moreover, the number of new graduates entering the profession in recent years has not kept up with the numbers leaving to take up more attractive positions overseas.

Ernie Hughes, general secretary of the Australian Institute of Radiography, told the *World Socialist Web Site* that staff shortages had been building up over the last 10 years. “Cuts in government funding are a major part of the problem,” he said. “There are only five universities in Australia producing graduates. Last year, in South Australia, the university funding was going to be cut entirely. Radiation therapy lecturers don’t earn much here, and research is not provided for. As a result, radiation therapists are actively head-hunted by overseas institutions.”

The situation is similar for medical physicists and engineers, where the ACR found that staff shortages were exacerbated by a lack of adequate training programs, combined with an increased demand due to technological advances in the field.

As the report concluded, not only is urgent action needed to overcome current shortfalls in staff levels and equipment, but a major expansion is also required to meet future demands. Last year 84,560 new cancers were diagnosed in Australia. By the year 2010, it is estimated that 57,368 new cancers will require radiotherapy. If the present trends continue, the radiation therapy treatment rate for people with cancer is likely to fall to 32 percent by 2005 and below 30 percent by 2010. The number of people being denied treatment will increase accordingly.

In the wake of the ACR’s damning findings, Federal Liberal government Health Minister, Dr Michael Wooldridge, has announced a national inquiry into radiation treatment, which will investigate staff and equipment shortages. At the same time, however, the minister suggested that “rigid” demarcations existed between the various radiation specialists. “I think it’s time to have a look at whether these things are still relevant,” he declared, implying that staff shortages could be resolved by establishing a multi-disciplined workforce, as opposed to providing increased funding for machinery and training.