

**Submission  
No 44**

**THE IMPLEMENTATION OF PORTFOLIO COMMITTEE No. 2  
RECOMMENDATIONS RELATING TO WORKFORCE ISSUES, WORKPLACE  
CULTURE AND FUNDING CONSIDERATIONS FOR REMOTE, RURAL AND  
REGIONAL HEALTH**

**Organisation:** Varian

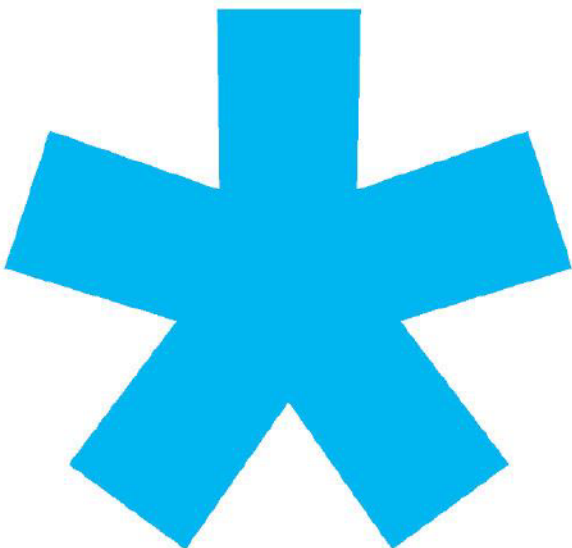
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**Submission to:**

**NSW Select Committee on Remote, Rural, & Regional Health**

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**Inquiry into the implementation of Portfolio Committee No. 2 recommendations relating to workforce issues, workplace culture, and funding considerations for remote, rural, and regional health**



**October 2023**

# Improving Access to Quality Cancer Care in Outer Metropolitan, Rural, & Regional NSW

## Executive Summary

Varian Medical Systems has been serving Australia cancer providers and patients for over 50 years and is committed to achieving our vision of a world without fear of cancer. Varian's radiation therapy and intelligent cancer care solutions touch the lives of over 70,000 cancer patients across the Australasian region each year. We installed one of the first linear accelerators, the device that delivers radiation therapy for cancer treatment, in Sydney in 1967. Today, Varian serves the Australasia market from its headquarters in Belrose on Sydney's Northern Beaches. Varian Australasia is proud to employ a diverse team of caring and inspired people committed to help power new victories over cancer.

Varian is committed to working with the New South Wales government to address the growing burden of cancer, where we have seen over 30% of the 150,000 new cancer cases diagnosed in Australia in 2020 occurring in New South Wales.<sup>1</sup> Outcomes for cancer patients in rural and regional Australia are demonstrably worse than for patients that live in urban areas, with one study showing that rural patients are up to 35% more likely to die within 5 years of diagnosis.<sup>2</sup>

Access to cancer services has been particularly challenging coming out of COVID-19, for example with the closure of breast cancer screening services in August 2021 by BreastScreen NSW due to the redeployment of staff to fight Covid. Experts have since estimated that treatment delays of up to 12 weeks could result in an extra 500 deaths that would otherwise have been avoidable.<sup>3</sup>

One of the major challenges in improving outcomes in rural and regional Australia is utilization of multidisciplinary treatment for cancer patients, meaning that patients have access to the range of potential treatments for cancer, including surgery, radiation therapy, chemotherapy, and immunotherapy.

In particular, access to radiation therapy, a form of cancer treatment that involves killing cancerous cells by exposing them to high-intensity waves, is limited outside of metropolitan areas. Distance from a radiation therapy centre is one of the biggest contributing factors to low utilisation of radiation therapy across Australia, with approximately 1 in 3 cancer patients receiving access to radiotherapy, as opposed to 1 in 2 as recommended by clinical guidelines. **Conservative estimates show that the underutilisation of RT in NSW has**

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<sup>1</sup> Cancer Council - <https://www.cancer.org.au>, 'Planning for the best' - Tripartite National Strategic Plan 2012-2022

<sup>2</sup> Jong KE, Smith DP, Yu XQ, O'Connell DL, Goldstein D, Armstrong BK. Remoteness of residence and survival from cancer in New South Wales. *Med J Aust.* 2004;180(12):618-622.

<sup>3</sup> <https://www.smh.com.au/national/nsw/delays-in-breast-cancer-surgery-linked-to-increased-deaths-20210818-p58jss.html>

resulted in the premature death of 1,162 people and the suboptimal management of local cancer containment for 5,062 people over a five-year period.<sup>4</sup>

Improving radiotherapy capacity requires a holistic approach that ensures treatment is closer to patients and augments human capabilities through AI & remote care solutions. Recommendations outlined by Portfolio Committee No. 2 should be accelerated in a few key areas to meet this challenge. These include implementation of cloud-based remote care and AI solutions; clear data governance requirements that are aligned with global best practice; and adequate funding for awareness programs, travel, and treatment.

## RECOMMENDATIONS

- **Deliver on regional RT commitments:** Fulfill the commitment to build the remaining regional radiation therapy sites in NSW, including through the expansion of networked cancer centres that can deliver high quality care to cancer patients in regional settings.
- **Implement Secure Cloud Platforms:** Ensuring that data security requirements allow for the use of cloud platforms is crucial. Cloud platforms can provide scalable and cost-effective solutions for remote access to healthcare data. It is essential to choose local cloud service providers and implement robust encryption and access controls to safeguard patient information.
- **Utilize AI for Data Anomaly Detection:** Consider leveraging AI-driven solutions for data anomaly detection. Machine learning algorithms can help identify unusual patterns or behaviours in patient data, which may indicate security breaches or data integrity issues.
- **Implement best practice framework for health data governance:** Apply a single national data governance framework that is clear and strikes a balance between the capacity to access health data for valid uses and the need to maintain data security and individual privacy. Ensure consistency in guidance on data collection, management, and sharing across all states and territories and adopt global interoperability standards, technologies, protocols, and guidelines.
- **Provide funding for radiotherapy awareness campaigns for GP's and patients:** The NSW government can play a constructive role in improving the understanding of radiotherapy treatment among clinicians and patients by funding a targeted awareness campaign on the benefits of modern radiotherapy treatment. This could be done in collaboration with organisations such as Targeting Cancer to support their work in NSW on GP and patient awareness.

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<sup>4</sup> Merie R, Gabriel G, Shafiq J, Vinod S, Barton M, Delaney GP. Radiotherapy underutilisation and its impact on local control and survival in New South Wales, Australia. *Radiotherapy and Oncology*. 2019;141:41-7.

## Background

### ***The Problem: Lack of Access to Radiation Therapy Among Cancer Patients in Rural/Regional New South Wales***

Radiation therapy, a critical pillar of cancer treatment, is an essential health service that should be accessible to cancer patients across New South Wales, regardless of where they live. A number of studies conducted across Australia over the past decade show major differences in utilisation of radiation therapy in a patient's cancer treatment depending on where they live, with significantly lower utilisation rates for rural and regional cancer patients.

This submission aims to provide perspective on progress made in implementing the PC2 recommendations relevant to cancer patient access to radiotherapy. Of particular interest are recommendations 30, 38, 39, & 42.

### ***Recommendation 30 – Virtual Care Technology***

COVID-19 has helped accelerate the uptake of telemedicine across NSW. However, there is still room to improve access to cancer care by implementing digital and remote solutions specific to radiotherapy. These solutions can help address the gaps in human capital that often exist in regional Australia.

An effective way to do this is through a hub and spokes model that combines cutting edge radiotherapy technology with a strong network of skilled clinicians to provide in-person and remote support for planning and delivering treatment. By linking up cancer centres that can share resources and utilise talent across metropolitan and regional sites, providers are able to deliver highly specialised and complex cancer treatments with skilled talent that can often be difficult to secure outside of capital cities.

Much of the support for regional radiation therapy treatment, such as the complex process of planning for the treatment, can be provided remotely and augmented with AI and machine learning tools. Creating highly complex radiation therapy treatment plans is traditionally very time consuming and requires specialised skills, with talent often difficult to secure outside of capital cities.

A remote approach to radiation therapy planning removes this barrier and allows for the delivery of both high-quality and efficient care across regional NSW. Machine learning software that is already in use across many cancer sites in Australia further enables providers to cut down on treatment planning times and ensure greater standardisation within and across cancer centres. These tools support greater efficiencies through relieving heavy patient loads and staff shortages.

Remote solutions can also enable teams to log in to any centre in a cancer network and help troubleshoot machine breakdowns. This capability is essential for companies like Varian to perform predictive and preventive maintenance and minimize the need for on-site

engineers, particularly in rural and regional areas where travel distance can exacerbate delays in fixing machines and result in delayed patient treatments.

These technologies are readily available in NSW. However, radiotherapy manufacturers have faced challenges over the last few years in implementing remote machine monitoring and maintenance, largely due to data security concerns. Varian is committed to working with the NSW government to address these concerns and ensure the continuation of essential remote support services.

### **Recommendation 38 – Funding to Deliver on Rural Health Plan**

In 2019, the Federal government committed to expand cancer treatment capacity through new radiation therapy services in 13 regional locations to address the gap in access for cancer patients that live long distances from a treatment centre. Of the 13 identified regional locations, seven were in NSW. They were South Coast (Eurobodalla), Grafton/Clarence Valley, Tweed region, Mid North Coast (Nambucca/Kempsey), Taree Region, Armidale, and Western NSW/Griffith. Five of the seven have moved forward and are in various stages of development. Armidale and Eurobodalla have not progressed due to market failure and there are ongoing questions about the viability of some of the other sites due to bulk billing requirements.

A hub and spokes model that utilises a network of highly skilled clinical experts combined with remote solutions and leading radiation therapy technology is critical to ensuring the success of these sites.

### **Recommendations 39 & 42 – Collaboration w/ Primary Health Networks & Improved Communication w/ Communities on Available Health Services**

To improve access to radiotherapy across NSW, it is essential for primary care providers and patients to understand the potential benefits of radiotherapy and the significant advances in radiotherapy technology and treatment made over the last decade. At present, a lack of understanding of radiotherapy among both groups is contributing to patients missing out on treatment. For example, one study from 2020 shows that exposure to oncology practice and the teaching of core oncology knowledge remains low for medical students in Australia, with students expressing more confidence in situations where surgical management of cancer would be indicated compared to radiation therapy. This same study showed that one third of final year medical students incorrectly believed that external beam radiation therapy turned patients radioactive.<sup>5</sup> From the cancer patient perspective, another study from NSW found that 60 percent of patients opted out of RT due to concern around the long-term side-effects of treatment. That same study also showed that 43 percent of patients cited a lack of patient-centred resources on RT as a reason for declining the treatment.<sup>6</sup>

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<sup>5</sup> Bravery BD, Shi K, Nicholls L, Chelvarajah R, Tieu MT, Turner S, et al. Oncology and Radiation Oncology Awareness in Final Year Medical Students in Australia and New Zealand. *J Cancer Educ.* 2020;35(6):1227-36.

<sup>6</sup> Sundaresan P, King M, Stockler M, Costa D, Milross C. Barriers to radiotherapy utilization: consumer perceptions of issues influencing radiotherapy-related decisions. *Asia-Pacific Journal of Clinical Oncology.* 2017;13(5):e489-e96.

Additional funding and collaboration with organizations such as Targeting Cancer is needed to support awareness campaigns for GP's and patients of the benefits of radiotherapy.

## DUBBO CASE STUDY: RURAL AND REGIONAL ACCESS TO RADIATION ONCOLOGY SERVICES

Cancer is the leading cause of death in Western NSW, with mortality rates 8% higher than in the rest of the state. In this region, geographical barriers and distance to treatment centres can prevent patients from receiving or continuing their cancer care. Access to radiation therapy treatment can be particularly challenging given physical demands of daily work, such as for those within the farming community. In the past, the high number of radiation therapy treatments, requiring patients to travel for treatments over a five-to-six-week period, served as a huge barrier in convincing patients to receive treatment. Western NSW Health have introduced several initiatives to address these barriers and adapt radiation therapy services to meet the needs of the local community, including:

- Visiting Medical Officer Program: This program has been used successfully to secure specialist care that meets the needs of patients and their individual cancers. One of the major benefits of this program for the community is the range of expertise that can be offered at the site with the VMO model. Rather than one individual with more general knowledge, the site can source care from specialists with deep expertise in different types of cancers. In-person care is augmented by virtual tumour boards and telehealth meetings. In addition, Varian technology is used for remote treatment planning and task management.
- Hypofractionated Radiotherapy: Hypofractionation delivers higher doses of radiation per daily treatment, requiring fewer treatments in total. Treatment can be adapted to the patient based on their location and accommodation needs, reducing time off work, away from home and family, and reducing financial burden of travel, while maintaining best practice care. Advanced technology is required to deliver this type of treatment.
- Telehealth: Consultations take place with the patient via video call, while radiation oncologists provide remote support to radiation therapists through video calls.
- Mobile screening: WNSW run rural cancer screening initiatives to help rural communities and identify at-risk patients.

Feedback from the patient community in WSNW has been positive regarding the quality and accessibility of care. There are also positive residual effects on the healthcare system, including reduced hospital admissions, less IPTAAS claims, lower costs, and reduced carbon emissions.