Clinician's Commentary on Canestraro et al.¹

What is the extent of oncology rehabilitation services for individuals who are currently receiving or have undergone cancer treatment in Canada? To answer this question, Canestraro and colleagues administered a descriptive cross-sectional online survey to facilities offering medical treatments for cancer as well as to those listed as providing rehabilitation services for cancer patients and survivors.¹ Their findings demonstrate the scarcity of oncology rehabilitation services and programmes across the country.

Through a comprehensive search, Canestraro and colleagues identified 179 facilities across Canada; only 62 survey responses were received, however, and of these only 20 reported having a formal oncology rehabilitation programme in their facility. A total of 41 facilities reported that they did *not* have a formal oncology rehabilitation programme and cited lack of funding and lack of access to space and equipment as primary barriers. At many of these sites, oncology patients were being referred to non-specific rehabilitation programmes such as outpatient orthopaedic services or private clinics.

This study is timely. In Canada, the number of people diagnosed with cancer each year continues to increase, while at the same time survival is improving. The most recent prevalence data, published in 2009, are based on people diagnosed between 1995 and 2004,² and as of January 1, 2005, there were more than 700,000 survivors of cancer in Canada.² Thus it is likely that the true number of survivors has surpassed the 1,000,000 mark today. Clearly, current rehabilitation service levels are inadequate to meet the needs of this growing population.

THE NEED FOR CANCER REHABILITATION PROGRAMMES

In the process of curing cancer, treatments cause physiologic changes to normal tissues and body functions that can have a negative impact on function and overall performance status.^{3,4} Cancer treatments often produce symptoms such as pain, fatigue, dyspnea, and lymphedema, sequelae that are amenable to rehabilitation. As Canestraro and colleagues highlight in their article, there is a growing body of evidence supporting the benefits of rehabilitative interventions and a role for physical therapy.¹

Fatigue is now considered the most common and problematic side effect of cancer treatment,⁵ with reported prevalence rates as high as 96% following chemotherapy and radiation therapy. Cancer-related fatigue is described as a subjective sense of tiredness or exhaustion that is not proportional to activity level, interferes with usual functioning, and is not consistently relieved by rest or sleep.⁶ The fatigue may be related to other factors, such as pain, sleep problems, poor nutrition, side effects of medications, and anaemia.⁶ Deconditioning as a result of inactivity during treatment is a secondary problem that may increase fatigue levels in cancer survivors. Research evidence supports physical exercise as an effective intervention to ameliorate symptoms of fatigue in cancer survivors.⁷

Cancer-related pain is one of the most prevalent symptoms, occurring in up to 50% of people with cancer.^{8,9} Pain may result from surgical procedures, radiation therapy, chemotherapy, or the disease itself. Neuropathic pain, for example, may result from damage to a nerve or nerve root due to prolonged nerve compression, surgical resection of a nerve, or damage from

chemotherapeutic agents and/or radiotherapy. For survivors of breast cancer, physical therapy has been shown to reduce pain and restore shoulder range of motion, muscle strength, and posture.^{10,11}

Dyspnea, or shortness of breath, is a distressing and debilitating symptom that may be directly related to primary or metastatic lung cancer.¹² Indirect causes of dyspnea include treatment-related side effects from radiation therapy (e.g., pneumonitis) or chemotherapy (e.g., pulmonary toxicity) and secondary effects of cancer treatment such as anaemia, cachexia, pulmonary embolism, and anxiety.¹² Exercise therapy, along with other adjunctive treatments, has been shown to improve symptoms of dyspnea in survivors of lung cancer.¹³

Lymphedema is a localized swelling that results from damage to the lymphatic system. In cancer survivors, lymphedema may manifest following surgery that removes lymph nodes or after radiation therapy to a lymph-node region. For example, lymphedema may present in the ipsilateral arm following axillary lymph-node dissection for breast cancer or in the leg following ilioinguinal dissection for melanoma. Chronic lymphedema is known to negatively affect quality of life, and recurrent infections in the limb, functional impairment, and pain can occur secondarily to this condition.^{14,15} Interventions prescribed for lymphedema are most often carried out by a physical therapist and have been shown to reduce limb volume and improve symptoms.^{16,17}

Canestraro and colleagues demonstrate that gaps in service provision exist in most regions across Canada. As they state in their Conclusions, the results of their study highlight the need for further development of formal cancer rehabilitation programmes. The time is ripe for us to advocate for expansion of cancer rehabilitation services and programmes in our respective regions.

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