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Guideline 11-6 Version 2

A Quality Initiative of the Program in Evidence-Based Care (PEBC), Cancer Care Ontario (CCO)

Optimal Treatment Strategies for Localized Ewing's Sarcoma of Bone after Neoadjuvant Chemotherapy

The Expert Panel on Localized Ewing's Sarcoma of Bone after Neoadjuvant Chemotherapy

February 14, 2022

An assessment conducted in November 2023 deferred the review of Guideline 11-6 Version 2. This means that the document remains current until it is assessed again next year. The PEBC has a formal and standardized process to ensure the currency of each document (PEBC Assessment & Review Protocol)

Guideline 11-6 Version 2 is comprised of 6 sections. You can access the summary and full report here:
https://www.cancercareontario.ca/en/guidelines-advice/types-of-cancer/31731

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PEBC Report Citation (Vancouver Style): Werier J, Yao X, Caudrelier J, Di Primio G, Ghert M, Gupta A, et al. Optimal treatment strategies for localized Ewing's sarcoma of bone after neoadjuvant chemotherapy. Toronto (ON): Cancer Care Ontario; 2015 December 22 [Endorsed 2022 February 14]. Program in Evidence-based Care Guideline No.: 11-6 Version 2 ENDORSED.

Journal Citations (Vancouver Style): Werier J, Yao X, Caudrelier J, Di Primio G, Ghert M, Gupta AA, et al. A systematic review of optimal treatment strategies for localized Ewing's sarcoma of bone after neo-adjuvant chemotherapy. Surg Oncol. 2016;25(1):16-23.

Werier J, Yao X, Caudrelier JM, di Primio G, Ghert M, Gupta A, et al. Evidence-based guideline recommendations on treatment strategies for localized Ewing's sarcoma of bone following neo-adjuvant chemotherapy. Surg Oncol. 2016 Jun;25(2):92-7.

Conference Citation (Vancouver Style): Ghert M, Yao X, Verma S, Kandel RA, Gupta A, Di Primio G, et al. Local treatment strategies for non-metastatic Ewing's sarcoma of bone: a systematic review and meta-analysis [abstract 2303771]. Presented at: Connective Tissue Oncology Society 20th Annual Meeting; 2015 Nov 4-7; Salt Lake City, Utah, USA.

Guideline Document History

GUIDELINE VERSION	SYSTEMATIC REVIEW		PUBLICATIONS	NOTES and KEY CHANGES
	Search Dates	Data		
Original Dec 2015	2000 to 2015	Full Report	Peer review publication. Web publication.	N.A.
Version 2	2015 to Jul 2021	New data found in Section 6: Document Assessment and Review	Updated web publication	2015 recommendations are ENDORSED

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Section 1: Recommendations

This section is a quick reference guide and provides the guideline recommendations only. For key evidence associated with each recommendation, the systematic review, and the guideline development process, see the Full Report.

GUIDELINE OBJECTIVES

- To make recommendations regarding the choice of surgery, radiation therapy (RT), or the combination of surgery plus RT for survival and local control in patients with localized Ewing's sarcoma of bone following neoadjuvant chemotherapy.
- To determine the appropriate surgical planning imaging (pre-chemotherapy magnetic resonance imaging [MRI] or post-chemotherapy MRI) to identify optimum resection margins in patients with localized Ewing's sarcoma who undergo surgery following neoadjuvant chemotherapy.

TARGET POPULATION

- Patients of any age diagnosed with localized Ewing's sarcoma of bone who have completed neoadjuvant chemotherapy for the first objective
- Patients of any age diagnosed with localized Ewing's sarcoma of bone who will undergo surgical management following neoadjuvant chemotherapy for the second objective

INTENDED USERS

General surgeons, orthopaedic oncology surgeons, medical oncologists, radiation oncologists, pathologists, radiologists, and other clinicians who are involved in the treatment of the target patients in the province of Ontario.

RECOMMENDATIONS

Recommendation 1
In patients with localized Ewing's sarcoma of bone following neoadjuvant chemotherapy: • Either surgery alone or RT alone is a reasonable treatment option; the combination of surgery plus RT is not recommended as an initial treatment option. • The local treatment for an individual patient should be decided by a multidisciplinary tumour board together with the patient after consideration of the following: 1) patient characteristics (e.g., age, tumour location, tumour size, response to neoadjuvant chemotherapy, and existing comorbidities), 2) the potential benefit compared with the potential complications from surgery and/or toxicities associated with RT, and 3) patient preference.

Qualifying Statements for Recommendation 1

- If complete tumour resection is impossible, RT alone may be the optimal choice.
- RT may be a treatment option postoperatively in patients who have residual tumours or positive margins.

- The optimal RT dose has not been determined. The reported RT doses in this document ranged from 55 to 60 Gray for RT alone (except one study published in 1999) and from 35 to 60 Gray for RT as an adjuvant to surgery.

Added to the 2022 Endorsement:

- One retrospective data analysis of patients in the Euro-EWING99 trial treated with induction chemotherapy reported that a combination of RT and surgery decreased local recurrence more than RT alone in patients with non-sacral tumours of the pelvis. This evidence requires corroboration from further studies to warrant a review of or change to the current recommendation. See Section 6 for details.

Recommendation 2
In patients with localized Ewing's sarcoma who will undergo surgery: • Both pre-chemotherapy and post-chemotherapy MRI scans should be taken into consideration for surgical planning. In certain anatomic locations with good chemotherapy response, the post-chemotherapy MRI may be the appropriate imaging modality to plan surgical resection margins.