Journal of Orthopedic Oncology

Commentary Open Access

# Biopsy Technique Usage for Diagnosis of Ewing Sarcoma

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## Commentary

Ewing's sarcoma (EwS) is a rare, high-grade cancer that causes micrometastasis a priori in most patients because more than 90% of patients die of disseminated disease without systemic therapy [1]. It is most commonly diagnosed in the 20 years of life. However, patients present with tumors in almost every part of their body, from newborns to the age of 80.

Current EwS therapy highlights a multimodal approach that has resulted in improved overall survival (OS) in localized disease as a result of collaborative research [2]. Despite multimodal treatment, survival is still associated with a poor prognosis for metastatic disease, which is 20-25% of patients, primarily lung (70-80%) and bone / bone marrow (40-45%) [3]. In addition, recurrence is observed in 30-40% of patients with primary non-metastatic disease and increases to 60-80% in EwS patients with metastatic disease at diagnosis. Recurrences are most often systemic (71-73%), followed by complex (12-18%) and local (11-15%) recurrences with a 5-year survival rate of 15-25% after recurrence and local recurrence outperforms whole body [4]. Controlling systemic tumors remains the greatest therapeutic challenge.

Nevertheless, many aspects of the disease require further research. B. Cells of potential origin, phenomena of oncogene dependence and oncogene plasticity, EwS, CIC rearranged sarcoma, sarcoma with genetic BCOR changes, and round cell sarcoma with EWSR1 non-ETS fusion (previously all known together) There was a different molecular activity and clinical association of fusion proteins in "Ewing-like sarcoma"). The term refers to morphological similarity, but misleads both the genetic background and clinical similarity. Therefore, it is referred to as "related entity") [5].

Correct diagnosis of EwS remains important and requires an interdisciplinary approach. After clinical suspicion and radiological confirmation, there are various options for obtaining the biological material needed for the histological diagnosis of suspicious bone tumors [6]. MRI provides important information for biopsy planning by distinguishing between solid tumor tissue, cysts, necrosis, hemorrhage, and extraosseous tumor areas [7]. Knowing imaging requires a representative biopsy of different parts of the tumor.

To assess histological subtypes, add appropriate molecular genetic analysis, and guide multimodal therapy decisions, a close examination of suspicious sarcomas has more material than can be obtained by fine needle aspiration is required [8]. Therefore, one of the surgical incision biopsies, i.e. an open biopsy or a percutaneous core needle biopsy (CNB) with a CT / MRI scan is required to enable correct diagnosis of sarcoma and to properly define treatment strategies. It is usually sufficient to take a sample from an extraosseous soft tissue tumor. Bone tissue removal is only necessary if the tumor is in the bone. The biopsy method chosen by EwS remains controversial, as randomized controlled trials comparing CNB with open biopsies have not yet been conducted. If EwS is suspected, an open or CNB biopsy is recommended. In addition, if possible, suspicious isolated bone and lymph node metastases should be biopsied at presentation [9].

Historically, open biopsy techniques have been associated with a significant increase in the risk of tumor dissemination along the biopsy tube if the scars were not removed in bulk during surgical resection of the tumor [10]. However, open biopsy is a short incision (2-4 cm; in the area of the limbs, access should always be longitudinal), a small opening in the bone, forced wound drainage to prevent hematoma, and Sutures can also be done intradermal. Circulating EwS cells were detected in the blood during removal of uncontaminated tumors, but were not associated with survival. The CNB probably represents a safe, minimally invasive and inexpensive technique (shortening hospital stay) with a low incidence of complications (infection, hematoma, fractures, and shortened treatment-free duration) [11]. The potential for tumor dissemination by intervention along the CNB tube has not yet been fully elucidated [12]. As a result, resection of the CNB tube is recommended by several authors without sufficient evidence of increased risk of tumor dissemination along the CNB tube or local recurrence if the CNB tube is not resected [13]. However, if bleeding from the CNB occurs, it should not be tolerated. Biopsy track was placed to minimize contamination of normal tissue and achieve the highest possible yield, until reliable data ruled out an increased risk of tumor dissemination after CNB in EwS must be included in the final surgical resection.

## Acknowledgement

None

## Conflict of Interest

None

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**Received:** 2-May-2022, Manuscript No: joo-22-63956; **Editor assigned:** 4-May 2022, Pre-QC No: joo-22-63956 (PQ); **Reviewed:** 18-May 2022, QC No: joo-22-63956; **Revised:** 20-May 2022, Manuscript No: joo-22-63956 (R); **Published:** 24-May-2022, DOI: 10.4172/2472-016X.1000169

**Citation:** Stefan Z (2022) Biopsy Technique Usage for Diagnosis of Ewing Sarcoma. J Orthop Oncol 8: 169.

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