Evaluation of the Surgical Margin: An Issue of Oral and Maxillofacial Clinics

The surgical margin is a critical aspect of surgical oncology, as it plays a significant role in determining the outcome of the surgery. The surgical margin is the distance between the edge of the resected tissue and the nearest tumor cells. A clear surgical margin is defined as the absence of tumor cells at the edge of the resected tissue, while a close or involved surgical margin indicates the presence of tumor cells at the edge of the resected tissue.

The evaluation of the surgical margin is essential for assessing the adequacy of the surgical resection and for predicting the risk of local recurrence. A clear surgical margin is associated with a lower risk of local recurrence, while a close or involved surgical margin is associated with a higher risk of local recurrence.



Evaluation of the Surgical Margin, An Issue of Oral and Maxillofacial Clinics of North America (The Clinics:

Dentistry Book 29)

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Methods of Evaluating the Surgical Margin

There are a number of methods that can be used to evaluate the surgical margin. The most common method is histopathological examination, which involves examining the resected tissue under a microscope to determine the presence or absence of tumor cells. Other methods include cytological examination, which involves examining cells from the resected tissue, and molecular biological techniques, such as polymerase chain reaction (PCR), which can be used to detect the presence of tumor-specific DNA or RNA.

Factors Affecting the Surgical Margin

The surgical margin is affected by a number of factors, including the size and location of the tumor, the type of surgery performed, and the skill of the surgeon. The size and location of the tumor can affect the difficulty of achieving a clear surgical margin. Tumors that are large or located in close proximity to critical structures may be more difficult to resect with a clear surgical margin. The type of surgery performed can also affect the surgical margin. Some surgical procedures, such as Mohs micrographic surgery, are designed to achieve a clear surgical margin by removing the tumor tissue in thin layers and examining the edges of the resected tissue under a microscope. The skill of the surgeon is also an important factor in achieving a clear surgical margin. Surgeons who are experienced in performing a particular type of surgery are more likely to achieve a clear surgical margin.

Consequences of a Close or Involved Surgical Margin

A close or involved surgical margin is associated with a higher risk of local recurrence. Local recurrence is the reappearance of the tumor in the same area where it was originally removed. Local recurrence can occur if tumor

cells are left behind at the edge of the resected tissue. The risk of local recurrence is higher if the surgical margin is close or involved.

Management of a Close or Involved Surgical Margin

The management of a close or involved surgical margin depends on the specific circumstances of the case. In some cases, it may be necessary to perform additional surgery to remove the remaining tumor cells. In other cases, it may be necessary to administer radiation therapy or chemotherapy to kill any remaining tumor cells. The decision of how to manage a close or involved surgical margin should be made by a multidisciplinary team of specialists, including surgeons, oncologists, and radiation therapists.

The evaluation of the surgical margin is an essential aspect of surgical oncology. A clear surgical margin is associated with a lower risk of local recurrence, while a close or involved surgical margin is associated with a higher risk of local recurrence. The management of a close or involved surgical margin depends on the specific circumstances of the case.

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