Oral and Oropharyngeal Cancer - Staging With Illustrations

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Staging with Illustrations

Staging is a way of describing where a cancer is located, if or where it has spread, and whether it is affecting the functions of other organs in the body. Doctors use diagnostic tests to determine the cancer?s stage, so staging may not be complete until all the tests are finished. Knowing the stage helps the doctor to decide what kind of treatment is best and can help predict a patient?s prognosis. There are different stage descriptions for different types of cancer.

One tool that doctors use to describe the stage is the TNM system. This system judges three factors: the tumor itself, the lymph nodes around the tumor, and if the tumor has spread to other parts of the body. The results are combined to determine the stage of cancer for each person. There are five stages: stage 0 (zero) and stages I through IV (one through four). The stage provides a common way of describing the cancer, so doctors can work together to plan the best treatments.

TNM is an abbreviation for tumor (T), node (N), and metastasis (M). Doctors look at these three factors to determine the stage of cancer:

- How large is the primary tumor, and where is it located? **(Tumor, T)**
- Has the tumor spread to the lymph nodes? **(Node, N)**
- Has the cancer metastasized to other parts of the body? **(Metastasis, M)**

Tumor. Using the TNM system, the "T" plus a letter or number (0 to 4) is used to describe the size and location of the tumor. Some stages are also divided into smaller groups that help describe the tumor in even more detail. Specific tumor stage information is listed below.

TX: Indicates the primary tumor cannot be evaluated.

T0: No evidence of a tumor is found.

Tis: Describes a stage called carcinoma (cancer) in situ. This is a very early cancer where cancer cells are found only in one layer of tissue.

T1: Describes a tumor that is 2 centimeters (cm) at its greatest dimension.

T2: Describes a tumor that is larger than 2 cm, but not larger than 4 cm.

T3: Describes a tumor that is larger than 4 cm.

T4: Describes any of the following conditions:

T4a (lip): Describes a tumor that began on the lip, but invades adjacent tissue, such as the bone floor of the mouth or the skin of the face.

T4a (oral cavity): The tumor invades through the cortical bone deep into structures in the mouth, such as the muscle of the tongue or into the sinuses.

T4a (oropharynx): The tumor has spread to the larynx, tongue, or jawbone.

T4b (oral cavity): The tumor invades the base of the skull and/or encases the internal arteries.

T4b (oropharynx): The tumor has moved into the nasopharynx, skull base, or nearby arteries and muscles.

Node. The ?N? in the TNM staging system is for lymph nodes, the tiny, bean-shaped organs that help fight infection. Lymph nodes near where the cancer started are called regional lymph nodes. Lymph nodes in other parts of the body are called distant lymph nodes. There are many lymph nodes in the head and neck area, and careful assessment of lymph nodes is an important part of staging.

NX: Indicates the regional lymph nodes cannot be evaluated.

N0: There is no evidence of cancer in the regional nodes.

N1: Indicates that cancer has spread to a single node on the same side as the primary tumor and that the cancer found in the node is 3 cm or smaller.

N2: Describes any of these conditions:

N2a: Cancer has spread to a single lymph node on the same side as the primary tumor, and is larger than 3 cm, but not larger than 6 cm.

N2b: Cancer has spread to more than one lymph node on the same side as the primary tumor, and none measure larger than 6 cm.

N2c: Cancer has spread to more than one lymph node on either side of the body, and none measure larger than 6 cm.

N3: Cancer found in lymph nodes is larger than 6 cm.

Distant metastasis. The "M" in the TNM system describes cancer that has spread to other parts of the body.

MX: Indicates distant metastasis cannot be evaluated.

M0: Indicates the cancer has not spread to other parts of the body.

M1: Describes cancer that has spread to other parts of the body.

Cancer stage grouping

Doctors assign the stage of the cancer by combining the T, N, and M classifications.

Stage 0: Describes a carcinoma in situ (Tis), with no spread to lymph nodes (N0) or distant metastasis (M0).

Stage I: Describes a small tumor (T1), with no spread to lymph nodes (N0) and no distant metastasis (M0).

Stage II: Describes a tumor that is smaller than 4 cm (T2), and has not spread to lymph nodes (N0) or to distant parts of the body (M0).

Stage III: Describes all larger tumors (T3), with no spread to lymph nodes (N0) or metastasis (M0), as well as smaller tumors (T1, T2) that have spread to regional lymph nodes (N1), but have no sign of metastasis (M0).

Stage IVA: Describes any invasive tumor (T4a) with either no lymph node involvement (N0) or spread to only a single, same-sided lymph node (N1), but no metastasis (M0). It is also used for any tumor (any T) with more significant nodal involvement (N2), but no metastasis (M0).

Stage IVB: Describes any tumor (any T) with extensive nodal involvement (N3), but no metastasis (M0).

Stage IVC: Indicates there is evidence of distant spread (any T, any N, M1).

Tumor grade (G). Doctors also describe a primary tumor by its grade, which is determined by using a microscope to examine tissue from a tumor (called a histologic examination). The doctor compares the tumor tissue with normal tissue, and the grade describes how closely the cancer cells resemble normal tissue under a microscope. Normal tissue contains many different types of cells grouped together, which is called differentiated. Tissue from tumors usually has cells that look more alike each other (called poorly differentiated). Generally, the more differentiated the tissue, the better the prognosis. A tumor's grade is described using the letter "G" and a number.

GX: The grade cannot be evaluated.

G1: The cells look more like normal tissue (well differentiated).

G2: The cells are only moderately differentiated.

G3 and G4: The cells don?t resemble normal tissue (poorly differentiated).

Recurrent: Recurrent cancer is cancer that comes back after treatment. If there is a recurrence, the cancer may need to be staged again (called re-staging) using the system above.

Used with permission of the American Joint Committee on Cancer (AJCC), Chicago, Illinois. The original source for this material is the AJCC Cancer Staging Manual, Seventh Edition (2010), *published by Springer-Verlag New York, www.cancerstaging.net* [2].

Links:
[1] http://www.cancer.net/about-us
[2] http://www.cancerstaging.net