

**MINISTRY OF HEALTH PROTECTION UKRAINE
HIGHER STATE EDUCATIONAL ESTABLISHMENT OF UKRAINE
„ UKRAINIAN MEDICAL STOMATOLOGICAL ACADEMY”**

DEPARTMENT OF ONCOLOGY



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year. Manager of department
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METHODICAL RECOMMENDATIONS FOR STUDENTS

<i>Educational discipline</i>	<i>Oncology</i>
<i>Module №</i>	<i>I</i>
<i>Rich in content module №</i>	<i>1</i>
<i>Theme of employment</i>	LIP AND ORAL CAVITY CANCER
<i>Course</i>	<i>V</i>
<i>Faculty</i>	<i>Medical №1, №2</i>

LIP AND ORAL CAVITY CANCER

Anatomical regions

The oral cavity extends from the skin-vermilion junctions of the anterior lips to the junction of the hard and soft palates above and to the line of circumvallate papillae below and is divided into the following specific areas:

- lip;
- anterior two thirds of tongue;
- buccal mucosa;
- floor of mouth;
- lower gingiva;
- retromolar trigone;
- upper gingiva;
- hard palate.

Spread

— The main routes of lymph node drainage are into the first station nodes:

- buccinator,
- jugulodigastric,
- submandibular,
- submental.

Sites close to the midline often drain bilaterally.

— Second station nodes include:

- parotid,
- jugular,
- upper and lower posterior cervical nodes.

Histological classification

- Most head and neck cancers are of the squamous cell variety and may be preceded by various precancerous lesions. An invasive carcinoma will be either well-differentiated, moderately differentiated, poorly differentiated or undifferentiated.
- Other tumors of the glandular epithelium, odontogenic apparatus, lymphoid tissue, soft tissue, and bone and cartilage origin require special consideration

Diagnosis

- Assessment of the primary tumor is based on inspection and palpation when possible and both indirect mirror examination and direct endoscopy when necessary.
- The tumor must be confirmed histologically, and any other pathologic data obtained by biopsy may be included.
- The appropriate nodal drainage areas are examined by careful palpation. Information from diagnostic imaging studies maybe used in staging.
- Magnetic resonance imaging offers an advantage over computed tomographic scans in the detection and localization of head and neck tumors and in the distinction of lymph nodes from blood vessels.

TNM staging (Table 4)

Primary tumor

- TX: Primary tumor cannot be assessed.
- TO: No evidence of primary tumor.
- Tis: Carcinoma in situ.
- T1: Tumor < 2 cm in the greatest dimension.
- T2: Tumor > 2 cm but < 4 cm in the greatest dimension.
- T3: Tumor > 4 cm in the greatest dimension.
- T4: (lip) Tumor invades through the cortical bone, inferior alveolar nerve, mouth floor, or skin of face, Le. chin or nose.
- T4a: (oral cavity) Tumor invades adjacent structures (e.g. through the cortical bone, into the deep (extrinsic) muscle of tongue (genioglossus, hyoglossus, palatoglossus, and styloglossus), maxillary sinus, and skin of face).
- T4b: Tumor invades the masticatory space, pterygoid plates, or skull base and/or encases internal carotid artery

Note: Superficial erosion only of the bone/tooth socket by gingival primary is not sufficient to classify a tumor as T4.

Regional lymph node involvement

- NX: Regional lymph nodes cannot be assessed.
 - N0: No regional lymph node metastases.
 - N1: Metastasis in a single ipsilateral lymph node, < 3 cm in the greatest dimension.
 - N2: Metastasis in a single ipsilateral lymph node > 3 cm but < 6 cm in the greatest dimension; or in multiple ipsilateral lymph nodes, < 6 cm in the greatest dimension; or in bilateral or contralateral lymph nodes < 6 cm in the greatest dimension.
 - N2a: Metastasis in a single ipsilateral lymph node > 3 cm but < 6 cm in the greatest dimension.
 - N2b: Metastasis in multiple ipsilateral lymph nodes < 6 cm.; the greatest dimension.
 - N2c: Metastasis in bilateral or contralateral lymph nodes < 6 cm in the greatest dimension.
 - N3: Metastasis in a lymph node > 6 cm in the greatest dimension.
- Most masses > 3 cm in diameter are not single nodes but confluent nodes or tumors in soft tissues of neck. Midline nodes are considered homolateral nodes.

Metastatic involvement

- MX: Distant metastasis cannot be assessed.
- MO: No distant metastasis.
- M1: Distant metastasis.

Table 4. Lip and oral cavity cancer staging

■ Stage 0	Tis, NO, MO	■ Stage IVA	T4a, NO, MO
■ Stage I	T1.N0. MO		T4a. N1. MO
■ Stage II	T2. NO. MO		T1. N2. M0
■ Stage III	T3.N0. MO		T2. N2. M0
	T1.N1.MO		T3. N2. MO
	T2.N1.M0		T4a. N2. MO
	T3. N1. M0	■ Stage IVB	any T. N3. MO

	■ Stage IVC	T4b. anv N. MO anyT.anyN. MI
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Treatment:

- surgery alone (patients with tumor of the tongue require almost total glossectomy; more advanced lesions require segmental bone resection, hemimandibulectomy, or maxillectomy);
- radiation therapy alone:
- external-beam radiation therapy;
- > interstitial implantation;
- both modalities produces;
- combination of these.

Stage I treatment

Small lesions of the lip:

- surgery and radiation therapy produce similar cure rates, and the method of treatment is determined by the anticipated cosmetic and functional results.

Small anterior tongue lesions:

- wide local excision transorally + either surgery or radiation therapy (interstitial implantation alone or with external-beam radiation therapy).

Small lesions of the buccal mucosa:

- surgery + radiation therapy (including brachytherapy);
- larger T1 lesions may be treated by surgical excision with split-thickness skin graft or radiation therapy.

Small lesions of the floor of mouth:

- surgery + radiation therapy.

Small lesions of the lower gingiva:

- intraoral resection with or without a rim resection of bone and repaired with a split-thickness skin graft + radiation therapy.

Small tumors of the retromolar trigone:

- limited resection of the mandible + radiation therapy. Small lesions of the upper gingiva and hard palate:
- surgical resection + postoperative radiation therapy.

Stage II treatment

Small lesions of the lip:

- surgery + radiation therapy (external-beam and/or interstitial techniques).

Small anterior tongue lesions:

- radiation therapy + surgery. Small lesions of the buccal mucosa:

- radiation therapy + surgery. Small lesions of the floor of mouth:

- surgery + radiation therapy. Small lesions of the lower gingiva:

- intraoral resection with or without a rim resection of bone and repaired with a split-thickness skin graft + radiation therapy.

Small tumors of the retromolar trigone:

- limited resection of the mandible + radiation therapy. Small lesions of the upper gingiva and hard palate:
- surgical resection + postoperative radiation therapy.

Stage III treatment

Advanced lesions of the lip:

- surgery + radiation therapy (external-beam radiation therapy with or without brachytherapy, superfractionated);
- chemotherapy (preoperatively, before radiation therapy, as adjuvant therapy after surgery, or as a part of combined modality therapy).

Moderately advanced (late T2, small T3) lesions of the anterior tongue:

- external-beam radiation therapy with or without interstitial implant;
- surgery with postoperative radiation therapy.

Advanced lesions of the buccal mucosa:

- surgical resection + radiation therapy, generally postoperative.

Moderately advanced lesions of the floor of mouth:

- rim resection + neck dissection or partial mandibulectomy with neck dissection + radiation therapy (external-beam + interstitial implant).

Moderately advanced lesions of the lower gingiva:

- combined radiation therapy and radical resection or by radical resection alone.

Advanced lesions of the retromolar trigone:

- surgical composite resection + postoperative radiation therapy.

Moderately advanced lesions of the upper gingiva and of the hard palate:

- radiation therapy alone or a combination of surgery and radiation therapy.

Stage IV treatment

Advanced lesions of the lip:

- surgery + radiation therapy (external-beam radiation therapy with or without brachytherapy, superfractionated).

Advanced lesions of the anterior tongue:

- combined surgery (total glossectomy, sometimes requiring laryngectomy) + combined with postoperative radiation therapy.

Advanced lesions of the buccal mucosa:

- surgical resection + radiation therapy, generally postoperative.

Advanced lesions of the floor of mouth:

- A combination of surgery and radiation therapy (postoperative or preoperative).

Advanced lesions of the lower gingiva:

- poorly controlled by surgery, radiation therapy, or a combination.

Advanced lesions of the retromolar trigone:

- surgical composite resection + postoperative radiation therapy.

Advanced lesions of the upper gingiva and hard palate:

- surgery in combination with radiation therapy.

All stage IV lesions:

- + chemotherapy.

Recurrent treatment

- If radiation therapy was used initially, surgery is the preferred treatment.
- If surgery was used to treat the lesion initially, surgery, radiation therapy, or a combination of these may be considered.

- Although chemotherapy has been shown to induce responses, no increase in survival has been demonstrated.

Prognosis

- Small cancers of the retromolar trigone, hard palate, and upper gingiva are highly curable by either radiation therapy or surgery, with survival rates of as much as 100 %.
- Local control rates of as much as 90 % can be achieved with either radiation therapy or surgery in small cancers of the anterior tongue, floor of mouth, and buccal mucosa.
- Moderately advanced lesions of the retromolar trigone without evidence of spread to the cervical lymph nodes are usually curable and have shown local control rates of as much as 90 %; such lesions of the hard palate, upper gingiva, and buccal mucosa have a local control rate of as much as 80 %.
- In the absence of clinical evidence of spread to the cervical lymph nodes, moderately advanced lesions of the floor of mouth and anterior tongue are generally curable, with survival rates of as much as 70 % and 65 %, respectively.
- The overall 5-year survival rate for patients with stage III disease was 30—40 %.

The text are taken from a textbook “Oncology”. Edited by prof.
I.B.Shepotin, prof. R.T.Evans. Kiev “Medicine”, 2008, p.168-176.