



EVIDENCE-BASE MEDICINE

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Question?

- Is continuous intraarterial infusion chemotherapy (IAIC) better than surgery for early lip cancer (stage I-II)?





PICO

- Patient/ problem: early lip cancer
- Intervention: continuous intraarterial infusion chemotherapy
- Comparison: surgery
- Outcome: disease free/ functional preservation, cosmetics





Database

- UpToDate
- Pubmed mesh searching: lip neoplasm vs. surgical treatment → 728
- Medline: early lip cancer → 3






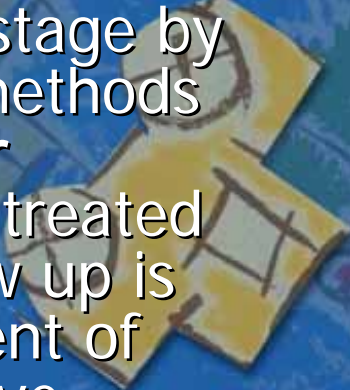


UpToDate

- Surgery: difficult reconstruction
- Radiation: pigmentation, fibrosis





Carcinoma of the lower lip: treatment results at Indiana University Hospitals. [Hornback NB.](#) [Shidnia H.](#) *Cancer.* 41(1):352-7, 1978 Jan.

- **Abstract:** Sixty-six consecutive cases of carcinoma of the lower lip were seen at the Indiana University Hospitals from 1960 to 1972. Each patient's records were reviewed as to age, sex, race, stage, stage by treatment modality, pathology, treatment methods used and cause of failure. **Early lip cancer** represents a highly curative lesion whether treated by surgery or radiation therapy. Close follow up is mandatory on all patients as the development of neck nodes, if discovered late, carries a grave prognosis. Advanced carcinoma of the lip can be successfully treated with current radiation therapy techniques using fractionated doses providing excellent cosmetic results.
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Surgical Management of Squamous Cell Carcinoma of the Lip: Analysis of a 10-Year Experience in 223 Patients

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Background: The most common type of lip carcinoma is squamous cell carcinoma (SCC), accounting for approximately 90% of all oral malignancies. Currently, surgery and/or radiotherapy are considered the standards of care for SCC of the lip.

Materials and Methods: We retrospectively analyzed medical records of patients diagnosed with SCC of the lip at the Clinic for Maxillofacial surgery at University of Belgrade (Belgrade, Serbia) during a period between 1991 and 2000.

Results: A total of 223 patients with SCC of the lip were diagnosed and treated during a 10-year period. The overall male-to-female ratio was 5 to 0. The most frequently affected site was the lower lip (92.8%). Mean diameter of the tumor was 30.1 mm (range, 5 to 80 mm). Neck lymph node metastases at presentation was detected in 26.5% of patients, who subsequently underwent neck dissection. We observed a linear trend in the association between the size of the tumor and the clinical stage of the neck ($\chi^2 = 15.1$; $df = 1$; $P < .0001$). Different surgical techniques were used for reconstruction of the lip defect after tumor removal. After a median follow-up of 56 months (range, 15 to 78 months), local recurrence occurred in 10.8% of patients while regional metastases developed in 4.5% of patients. Mortality from SCC of the lip was only 2.2%.

Conclusion: SCC of the lip generally has a favorable outcome. Recently, there have been no major advances in lip reconstruction but rather continued improvement on accepted techniques. Early detection is essential for the successful treatment of SCC of the lip, which requires a multidisciplinary approach.


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In accordance with the TNM system, 89 patients (39.9%) were in stage T1, 112 (50.2%) in T2, and 21 patients (9.4%) were in T3 stage. In only 1 patient (0.5%) the lesion was in stage T4; 59 patients (26.5%) presented with nodal disease at diagnosis. All patients were in M0.

Postsurgical complications occurred in 42 patients (18.8%): 40 patients (17.9%) had infection, 1 patient (0.5%) had necrosis, while in only 1 patient (0.5%) was tracheostomy required. No patients had compromised lip function. The majority of patients had acceptable cosmetic outcome.




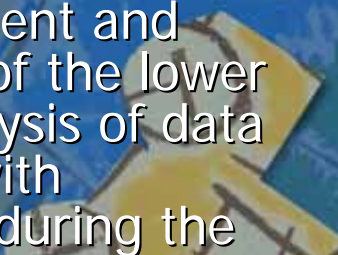
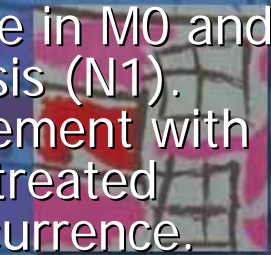



[Squamous cell carcinoma of the lip. Retrospective analysis of 42 cases]

[Article in Italian]

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- **BACKGROUND:** To examine to what extent physicians follow a regional guidelines for the diagnosis, staging, treatment and follow-up of patients with squamous cell carcinoma of the lower and upper lip. **METHODS:** Design: retrospective analysis of data from the medical records of 42 patients diagnosed with squamous cell carcinoma of the lower and upper lip during the period 1990-2000. Setting: Department of head and neck pathology, oral cavity and audio-verbal communication of Naples University. Participants: the data were collected by this Department. **RESULTS:** In accordance with the TNM system, the 50% of cases was in stage T1, 33% in T2, 14% in T3. In few cases (3%) the lesion was in stage T4. All cases were in M0 and only 8% of cases presented nodal disease at diagnosis (N1). The type of treatment in relation to age was in agreement with the guidelines in 34% of cases. Of the 42 surgically-treated patients, only 4 showed, after 12 months, a local recurrence. **CONCLUSIONS:** Prognosis is good if squamous carcinoma is diagnosed early.
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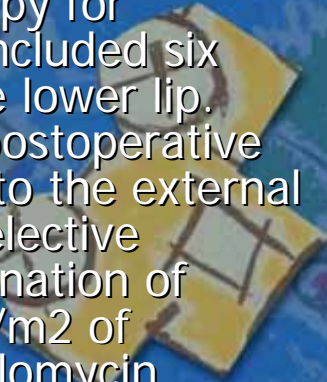


T1 and T2 lip cancer: a superselective method of facial arterial infusion therapy--preliminary experience.

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PURPOSE: To formulate and evaluate a facial arterial infusion chemotherapy for squamous cell lip carcinoma. **MATERIALS AND METHODS:** The study included six patients (age range, 46-84 years) with squamous cell carcinoma of the lower lip. There were two T1 tumors, three T2 tumors, and one T1-compatible postoperative recurrent tumor. A 4-F, double-lumen balloon catheter was inserted into the external carotid artery through the superficial temporal artery and placed for selective infusion into the tumor-feeding facial artery. Patients received a combination of mitomycin C (4.4 mg/m² per body surface area) on day 1 and 3.2 mg/m² of peplomycin sulfate on days 1-7 (22.4 mg/m² per week), or, when peplomycin sulfate was contraindicated, 16 mg/m² of cisplatin only on days 1-5 (80 mg/m² per week). Two to three cycles of chemotherapy were given until tumor disappearance was histologically confirmed. **RESULTS:** Complete tumor disappearance was achieved in all cases. One patient had a self-limiting asthma attack during peplomycin sulfate treatment, and another had transient partial hair loss. No disfigurement, recurrence, or late complications were observed at a mean follow-up of 5.0 years (range, 2.3-11.2 years). **CONCLUSION:** The described facial arterial infusion chemotherapy appears to be a safe and curative treatment for T1 and T2 squamous cell lip carcinomas.



Radiology. 1999 Oct;213(1):173-9.

Continuous intraarterial infusion chemotherapy for early lip cancer

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KEYWORDS

Early lip cancer;
Intraarterial infusion
therapy;
Methotrexate

Summary Most lip cancers are usually diagnosed and can be treated with good prognosis at an early stage. This study reports our experience of treating seven, previously untreated, patients with lip cancer in stage I or II using intraarterial infusion chemotherapy with a single agent. They were all males with ages ranging from 37 to 69 years. An implantable port-catheter system was used for catheterization. Methotrexate 50 mg was infused continuously to the external carotid artery every 24 h using a portable pump. Methotrexate was given continuously for a mean period of 7 days (range, 4–10 days) and the total administrated dose of methotrexate for intraarterial infusion ranged from 200 to 500 mg (mean, 350 mg). These seven patients were then given weekly bolus of methotrexate (25 mg) via intraarterial route for a range of 6–12 weeks. In every case the tumor regressed dramatically and disappeared completely after treatment within a mean period of 2.5 months. Only one patient died, of non-disease related pneumonia 3 years after infusion therapy. The remaining patients are still alive and no recurrence of carcinoma has been observed at a median follow-up period of 28 months. There was no catheter-related complication. The side effects of infusion chemotherapy were mild and tolerable. Our technique of continuous intraarterial infusion therapy for treatment of early lip cancers seems to be as effective as other standard techniques such as surgery or radiation therapy. This modality achieves good tumor response rates, an excellent cosmetic result, preservation of function and minimal side effects.

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Table 1 The demographic characteristics of patients with early lip cancer

Case	Age (y/o)/sex	Tumor size (mm)	Site of tumor	Site of tumor feeding artery	TNM	Continuous infusion of MTX (mg)	No. of weekly bolus of low dose of MTX (25 mg)	Survival/current status
1	46/M	40 × 30	Upper lip	Right	T2N0M0	300	6	7 y, 6 mo/Disease free
2	45/M	35 × 30	Lower lip	Left	T2N0M0	400	8	3 y/Died
3	58/M	35 × 30	Lower lip	Left	T2N0M0	420	8	2 y, 10 mo/Disease free
4	68/M	18 × 10	Lower lip	Right	T1N0M0	280	6	2 y, 4 mo/Disease free
5	59/M	28 × 15	Lower lip	Right	T2N0M0	350	9	2 y, 3mo/Disease free
6	69/M	20 × 15	Lower lip	Left	T1N0M0	200	10	1 y, 1 mo/Disease free
7	37/M	30 × 30	Lower lip	Both	T2N0M0	500	12	1 y/Disease free

Table 2 The side effects of intraarterial infusion chemotherapy in patients with early lip cancer

Toxicity	Grade 1	Grade 2	Grade 3	Grade 4
Leucocytopenia	2	5	—	—
Thrombocytopenia	3	4	—	—
Anemia	—	—	—	—
Stomatitis	2	5	—	—
Skin rash	1	6	—	—
Transaminase elevation	3	3	1	—





Conclusion

- The IAIC for early lip cancer is also a good treatment option, especially functional preservation and cosmetics
- Less cases are executed than surgery

