The International Federation of Head and Neck Oncologic Societies

Current Concepts in Head and Neck Surgery and Oncology 2018

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Oral Cancer

Jatin Shah, MD

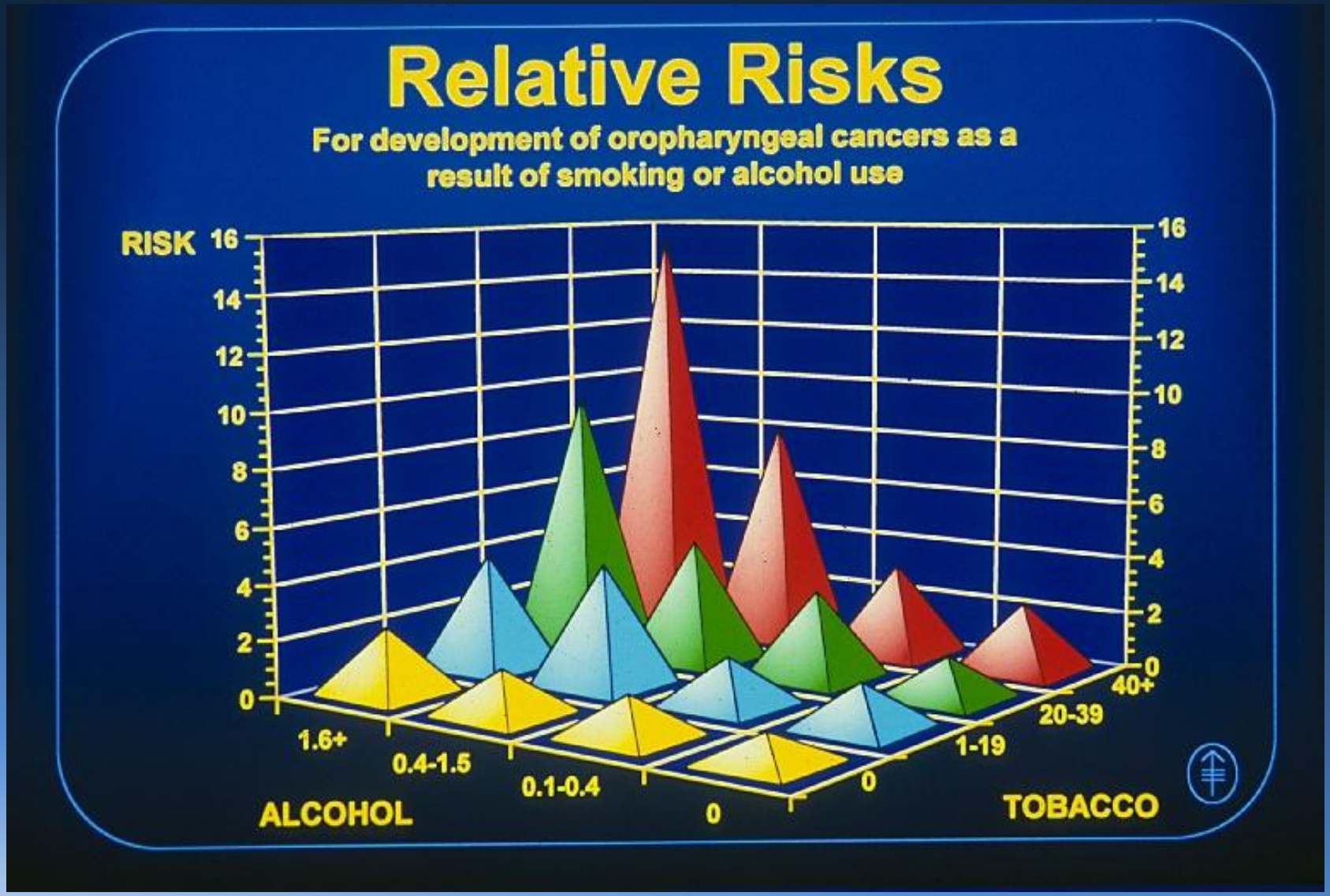
Oral Cancer

6th

Most Common Cancer

Worldwide

Risk Factors



Outline

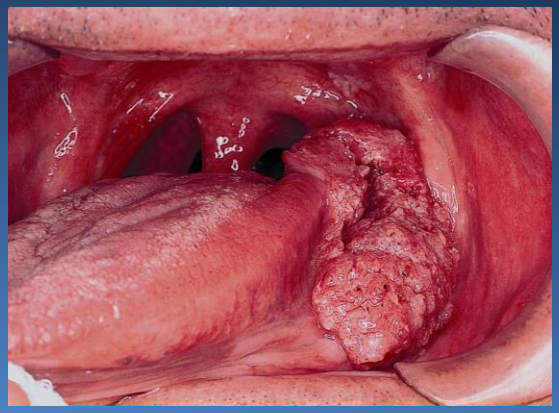
- Staging
- Work up & Treatment Principles
- Factors affecting choice of Rx
- Oncologic outcomes
- Surgical issues influencing outcomes
    - Margins of surgical resection
    - Management of the neck

Oral Cavity is easily accessible for Accurate Clinical Staging







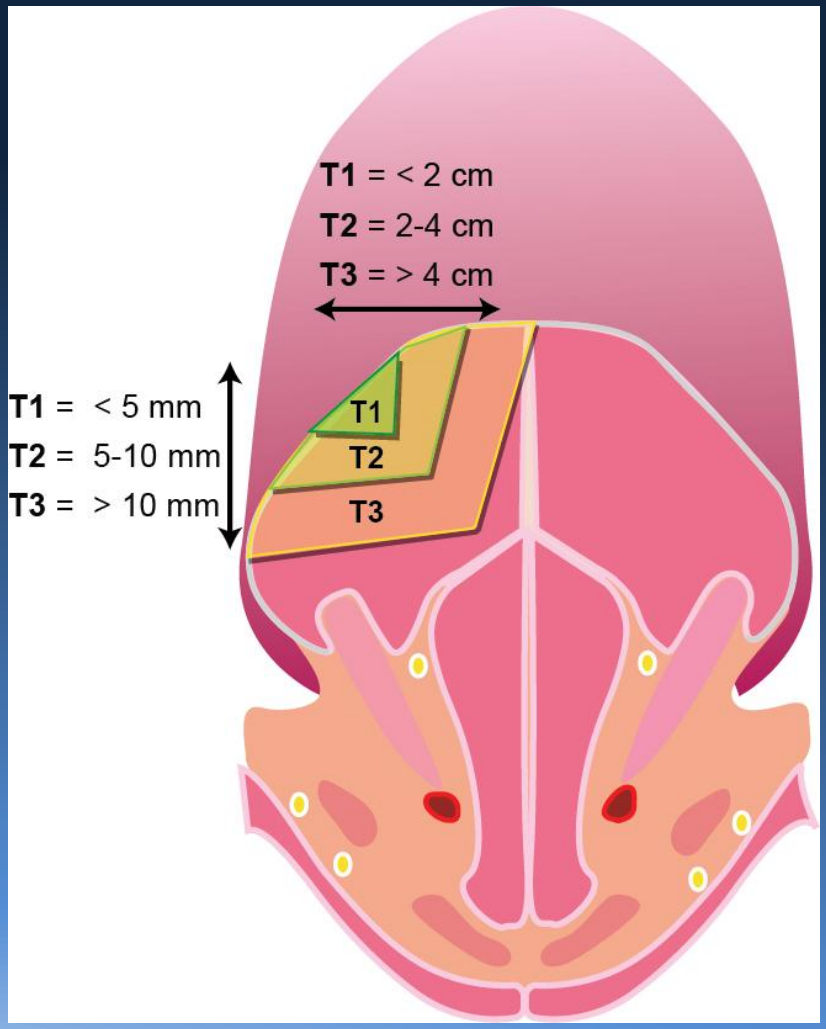


Oral Cancer – 8th Edition T staging

Depth of Invasion (DOI) is added to the primary tumor staging (T)

0 - 5, 5 – 10 and > 10 mms

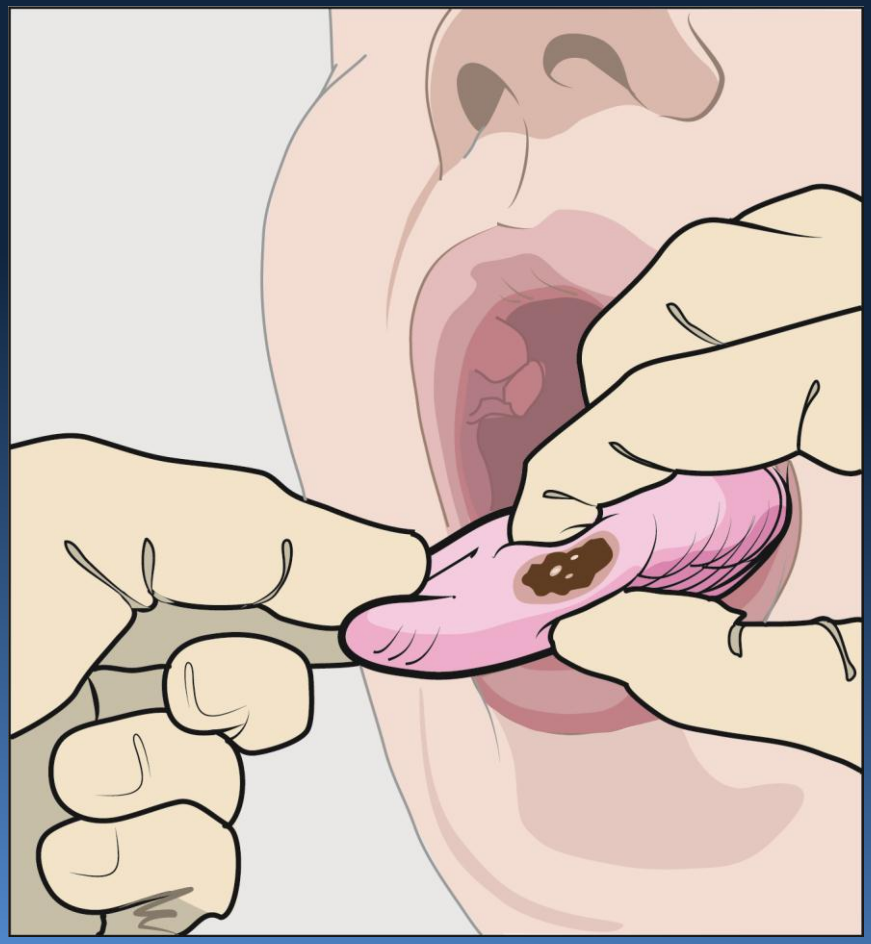
Depth of Invasion in 5 mm increments



Estimate of Depth of Invasion - DOI

Clinicians are expected to palpate the lesion and estimate the DOI as

- Thin - < 5 mms
- Thick - 5 - 10 mms
- Very thick - >10 mms



staging of Primary Tumors of the Oral cavity

T1 - Tumor ≤ 2 cms , DOI ≤ 5 mm

T2 - Tumor > 2 cm but ≤ 4 cm, and DOI ≤ 1

or

Tumor ≤ 2 cm, DOI > 5 mm ≤ 10 mm

T3 - Tumor > 4 cm or tumor of any size and DOI > 10 mm

T4 - T4a : Locally advanced tumor
T4b : Very advanced tumor

N Staging – 8th Edition

Extra Nodal Extension (ENE) of metastatic disease, is now added for N Staging of Mucosal Squamous Cell Carcinomas of the Upper Aero Digestive Tract.

Radiographic Imaging

- Essential for deep extent & bone involvement
- Superior to palpation for lymph node assessment
- CT is the workhorse
- MRI for specific questions:
  Medullary bone invasion
  Perineural spread
- PET scan generally not of added value over cross-sectional anatomic imaging

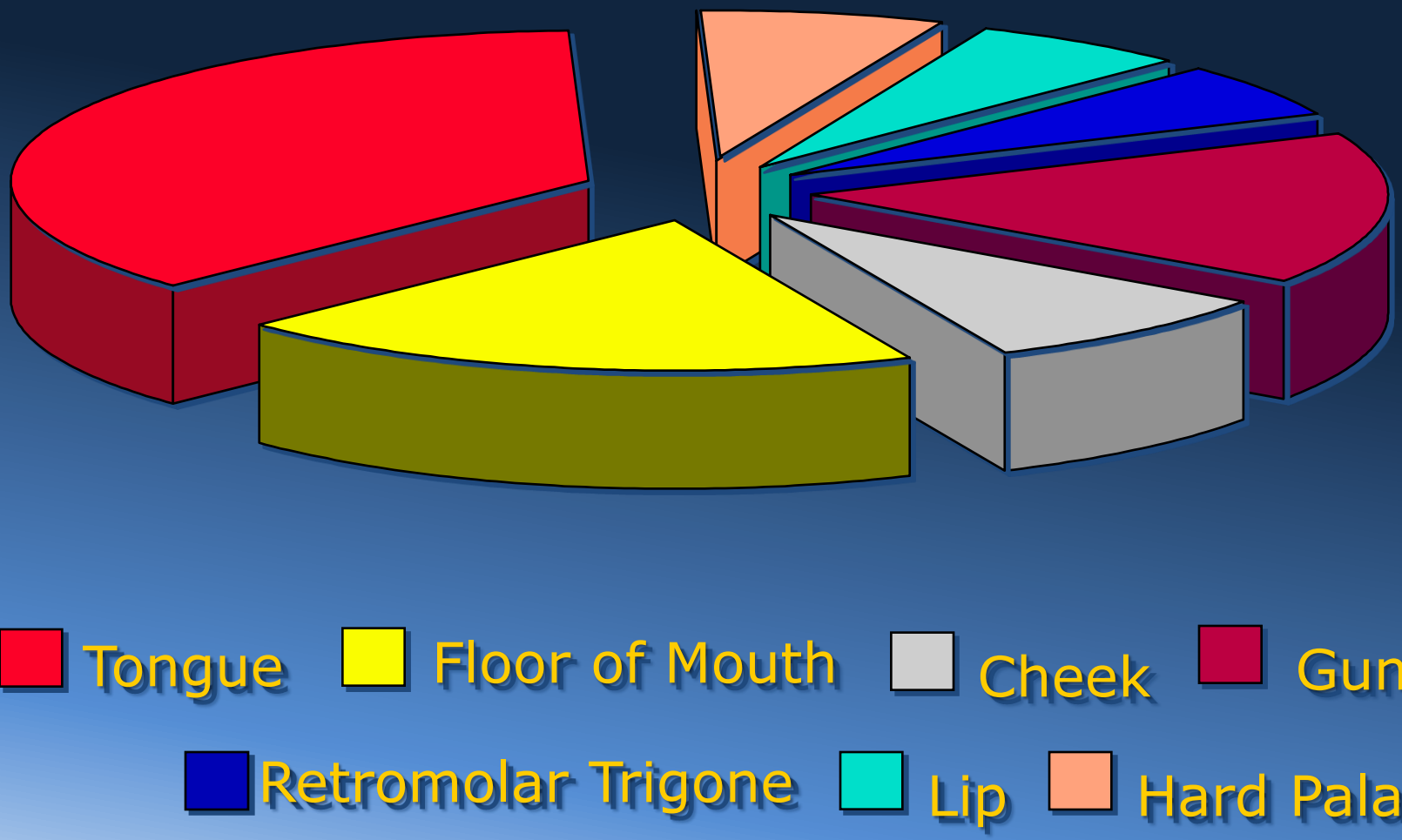
Oral Cancer
Factors Affecting Choice of Therapy

- Tumor factors
- Patient factors
- Provider/Physician factors

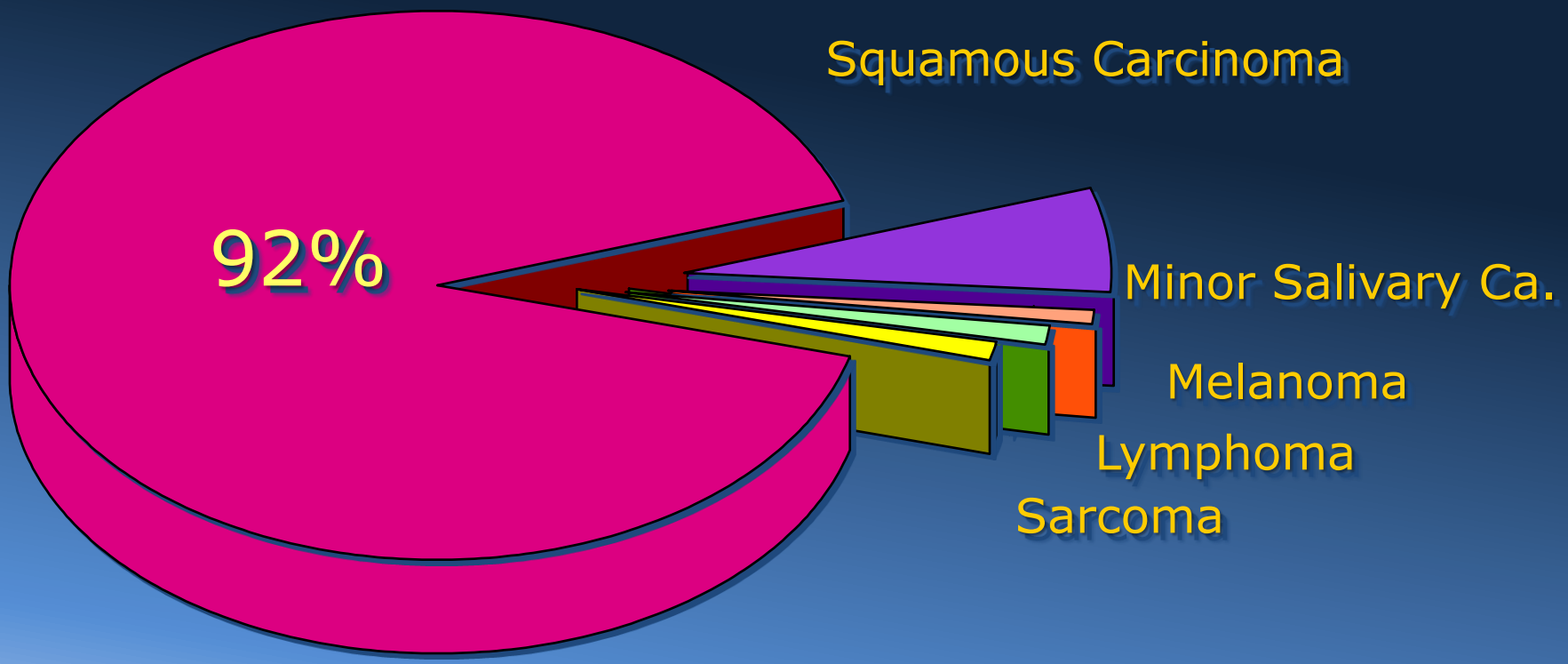
Oral Cancer Tumor Factors

- Site
- Size (T stage)
- Location
- Multiplicity
- Proximity to bone
- Histology, grade, depth of invasion, tumor type
- Status of cervical lymph nodes
- Previous treatment

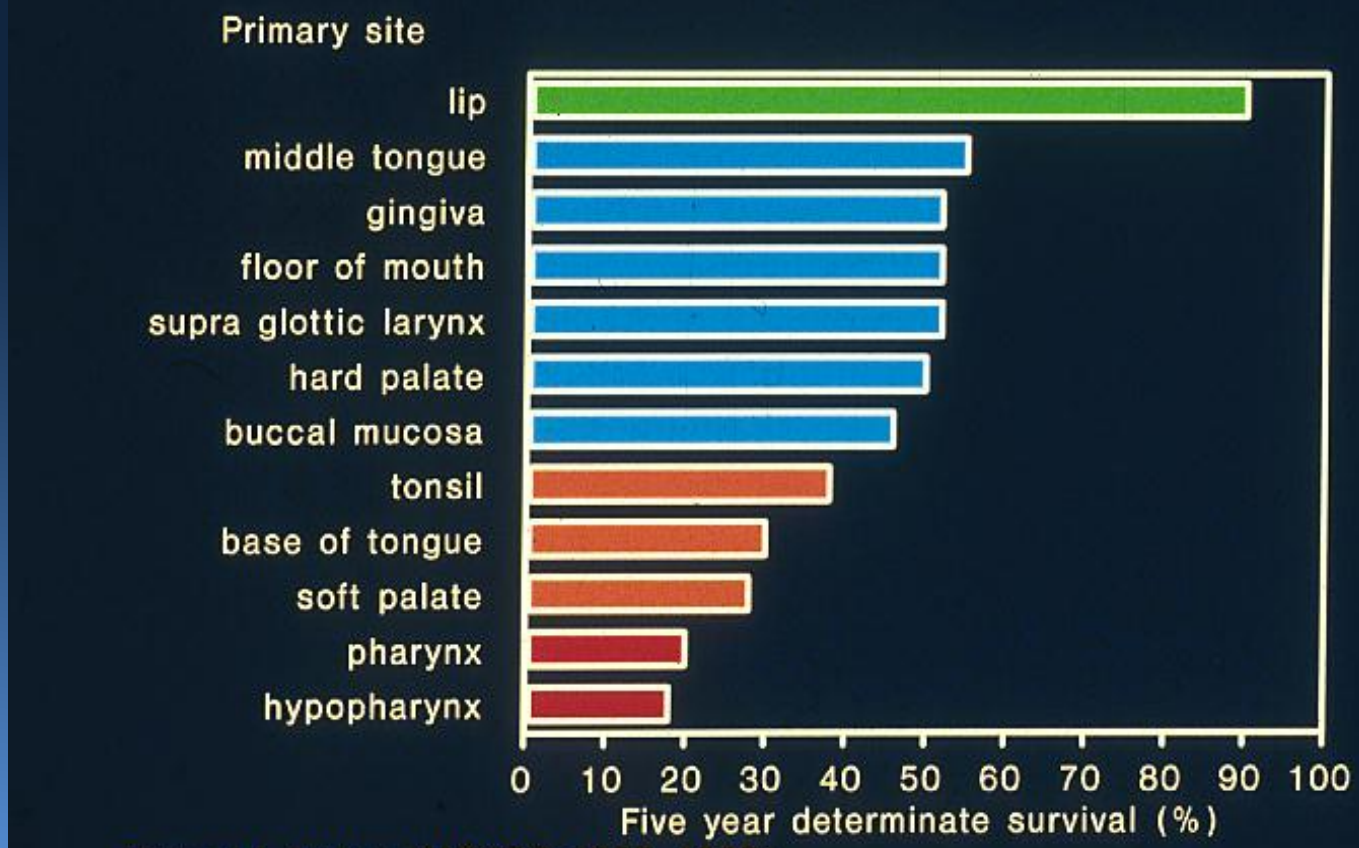
Ca. Oral Cavity - Site Distribution



Ca. Oral Cavity Histological Distribution

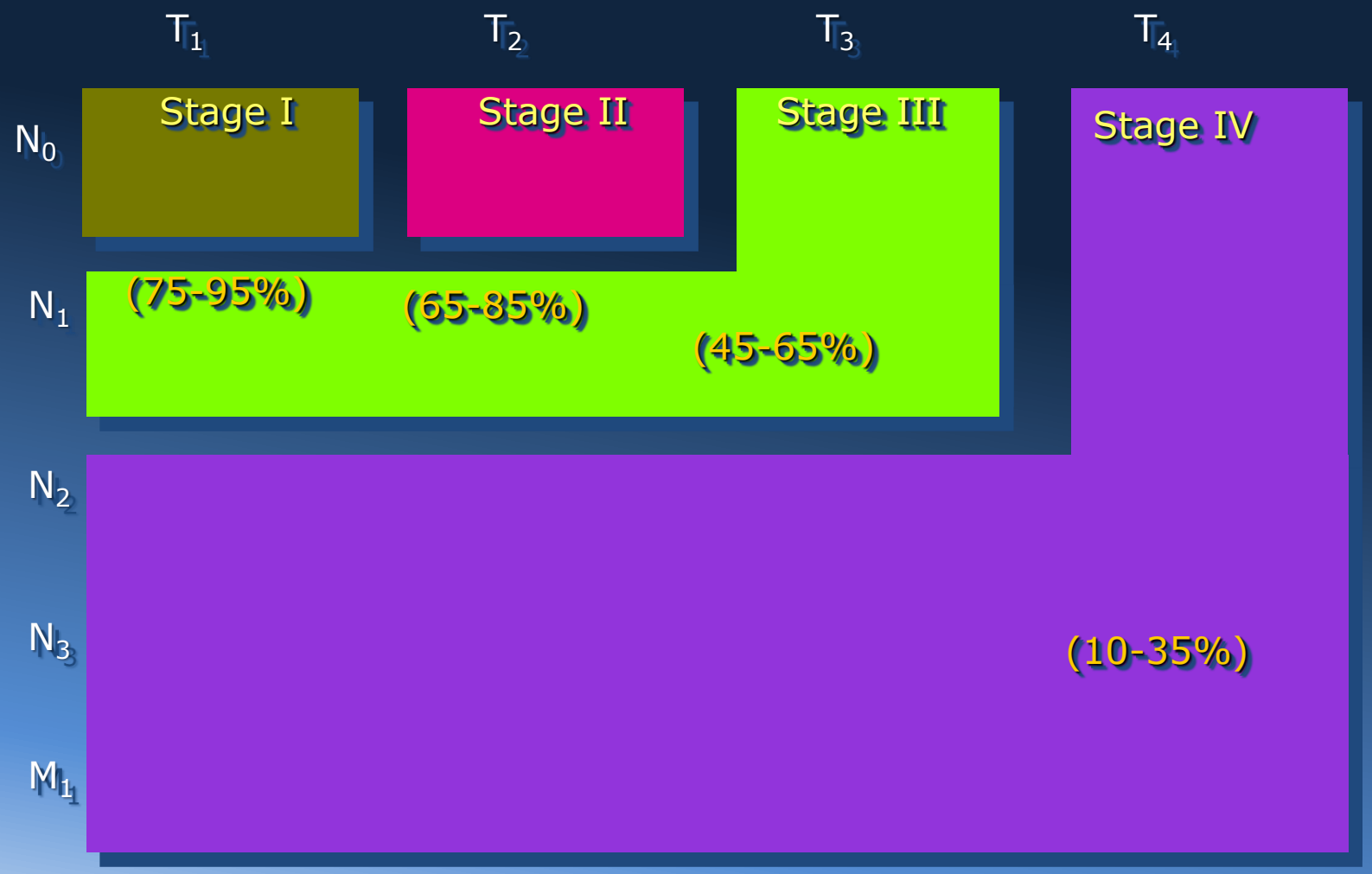


Head and Neck Cancers
Five year Survival



Farr and Arthur (MSKCC 1955-1969)

Ca. Oral Cavity
5 yr. Survival by Stage



Oral Cancer Patient Factors

- Age
- General medical condition
- Life style
- Dental hygiene
- Occupation
- Acceptance
- Tolerance
- Compliance
- Socioeconomic considerations
- Time constraints

Oral Cancer Physician/Provider Factors

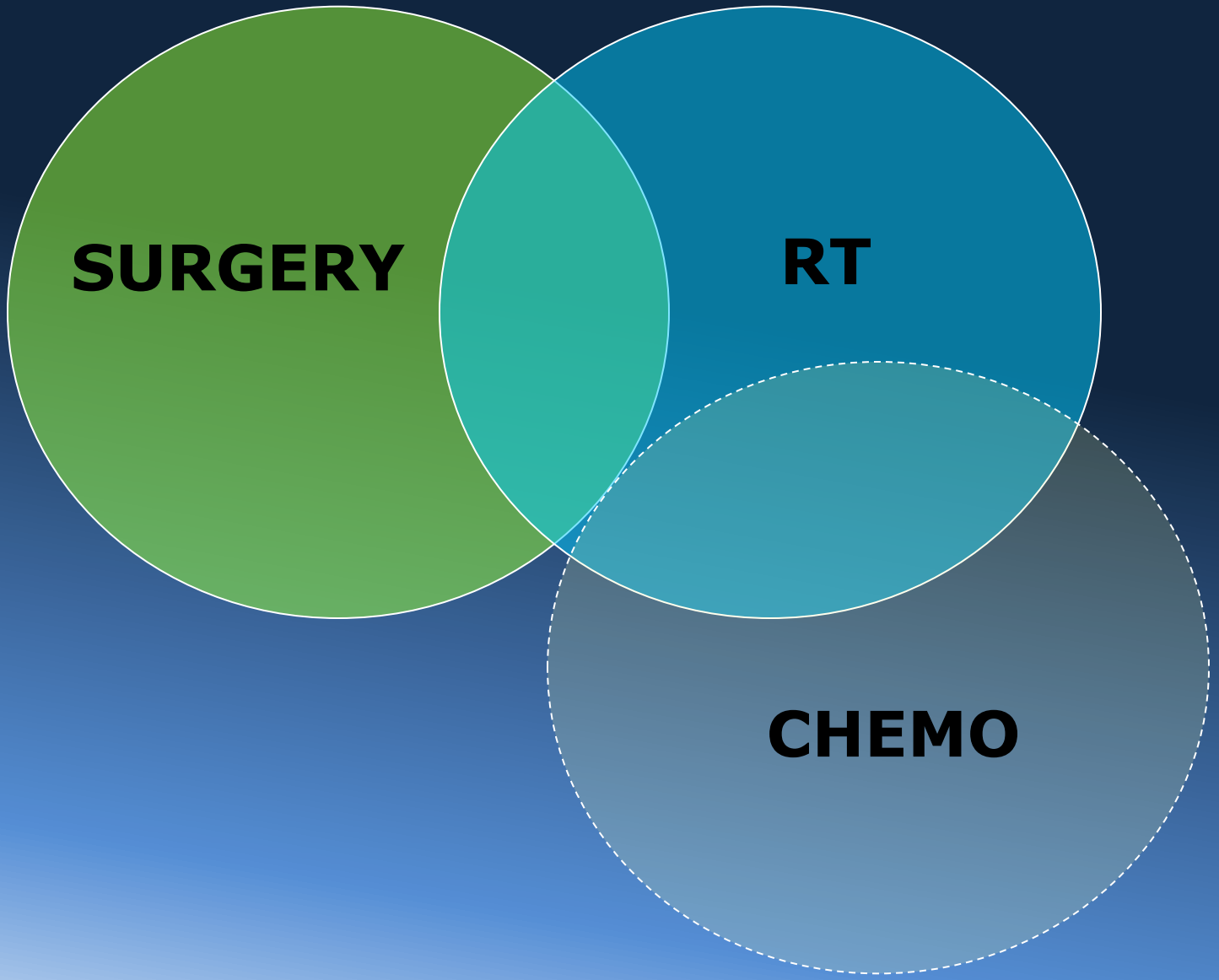
- Expertise
- Surgery
- Radiotherapy
- Chemotherapy
- Dental – prosthetic constraints
- Rehabilitation
- Support services
- Resource allocation
- Third party payer

Oral Cancer Choice of Treatment

- Stage I & II single modality treatment is effective and preferable
- Stage III & IV multimodal therapy is essential

Single modality for early stage cancers

Combined modality for advanced cancers

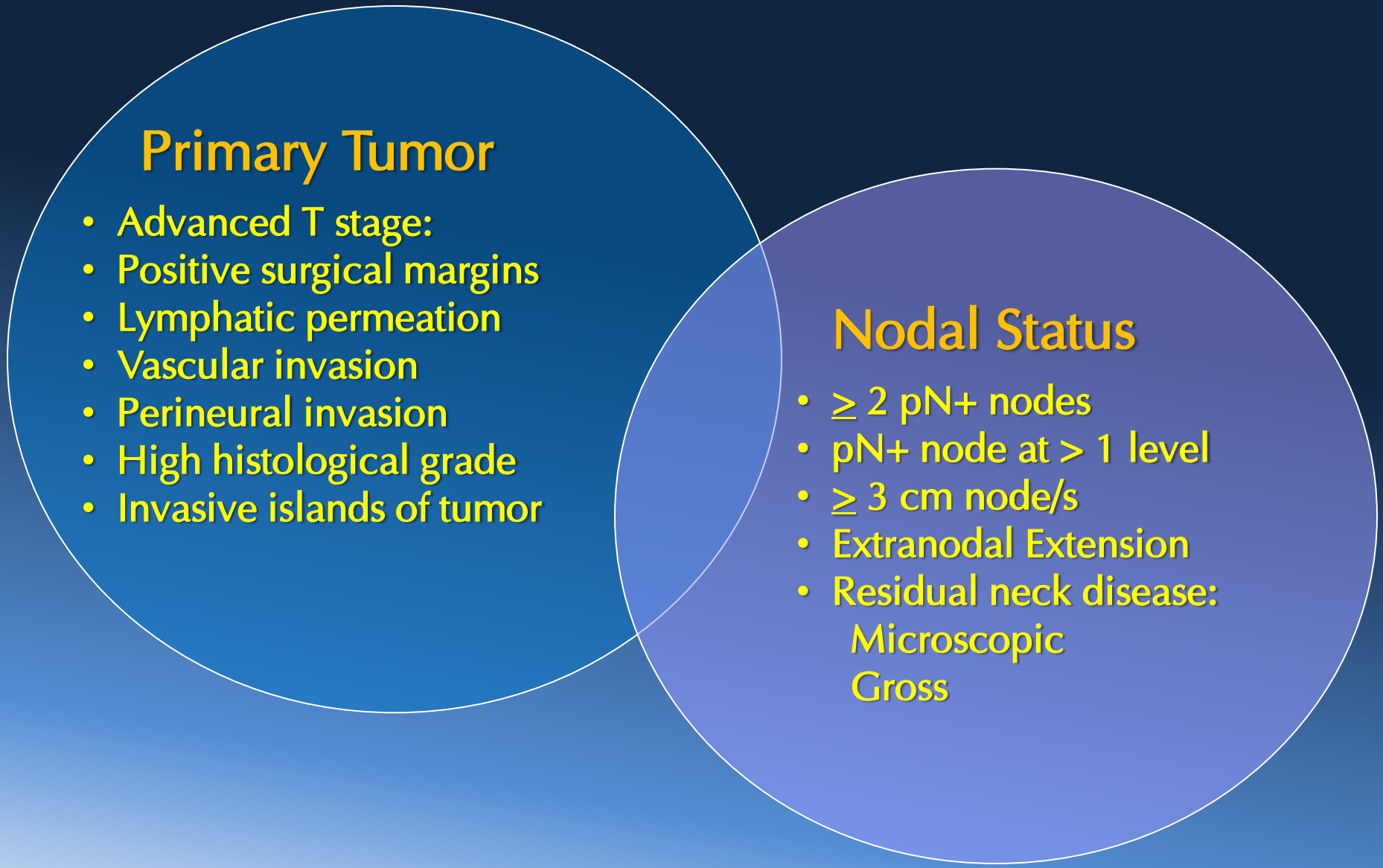


Indications for Adjuvant Treatment

Primary Tumor

- Advanced T stage:
- Positive surgical margins
- Lymphatic permeation
- Vascular invasion
- Perineural spread
- High histological grade
- Invasive islands of tumor

Indications for Adjuvant Treatment



Current Indications for ChemoRT

Primary Tumor

- Advanced T stage:
- Positive surgical margins
- Lymphatic permeation
- Vascular invasion
- Perineural invasion
- High histological grade
- Invasive islands of tumor

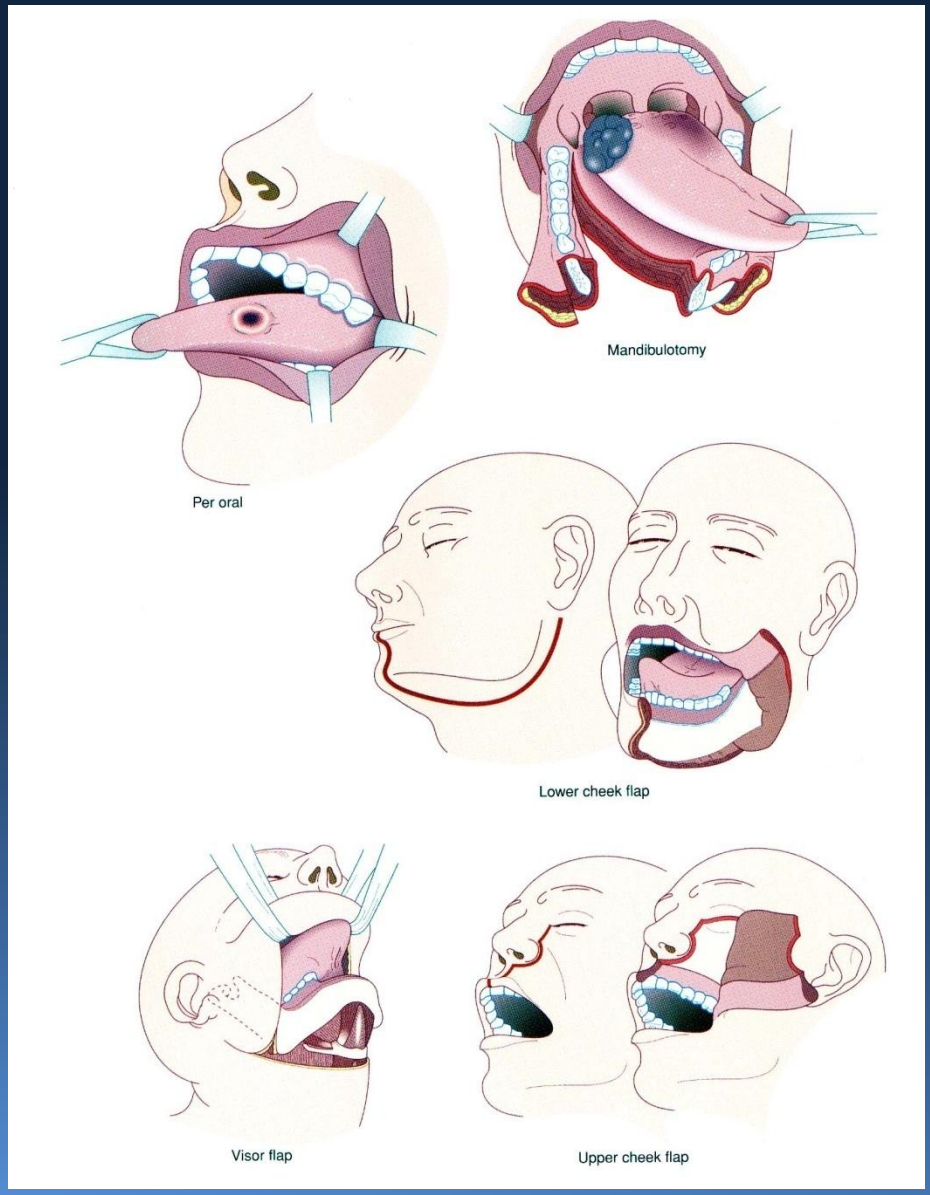
Nodal Status

- ≥ 2 pN+ nodes
- pN+ node at > 1 level
- ≥ 3 cm node/s
- Extranodal Extension
- Residual neck disease:
  - Microscopic
  - Gross

Oral Cancer Surgical Approaches

- Per oral
- Pull through
- Lower cheek flap
- Upper cheek flap
- Visor flap
- Mandibulotomy

Surgical approaches to the oral cavity



Oral Cancer

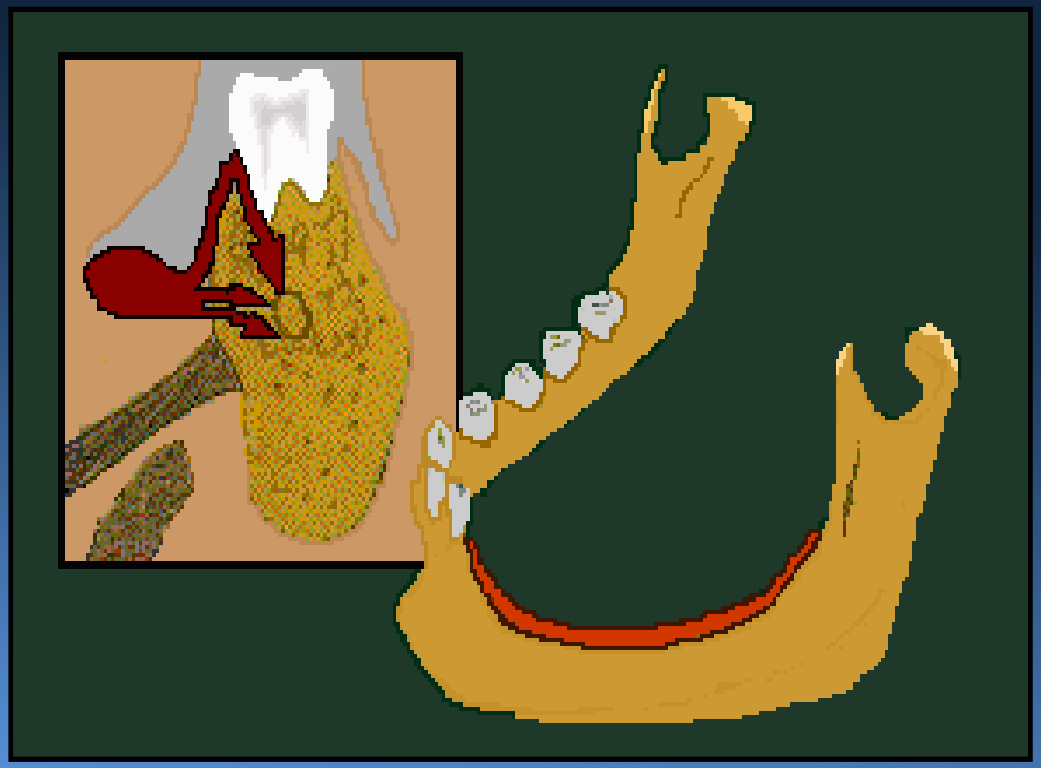
Surgical approach depends on:

- Tumor size
- Tumor site
- Tumor location
- Proximity to mandible or maxilla
- Need for neck dissection
- Need for reconstructive surgery

Management of the Mandible

- Mechanism of tumor invasion
- Mandible sparing approaches

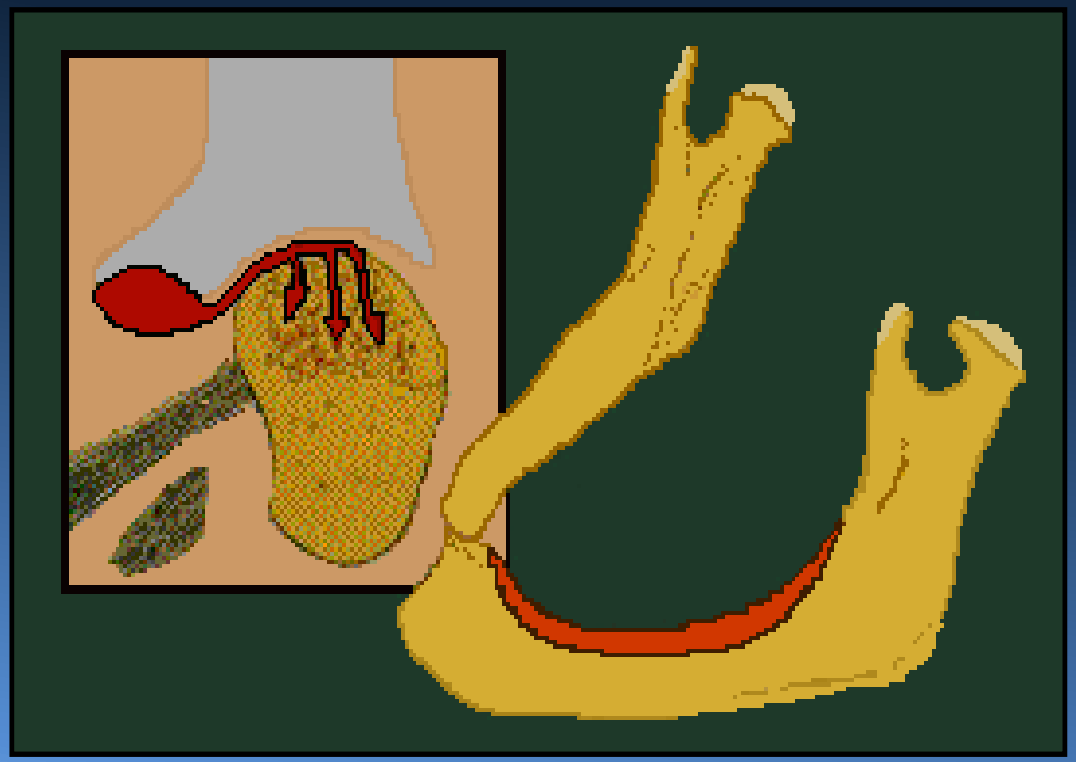
Mandible Invasion by Oral Cancer



Dentate Mandible

Marginal mandibulectomy feasible for invasion of the alveolar process or minimal cortical erosion.

Mandible Invasion by Oral Cancer



Edentulous Mandible

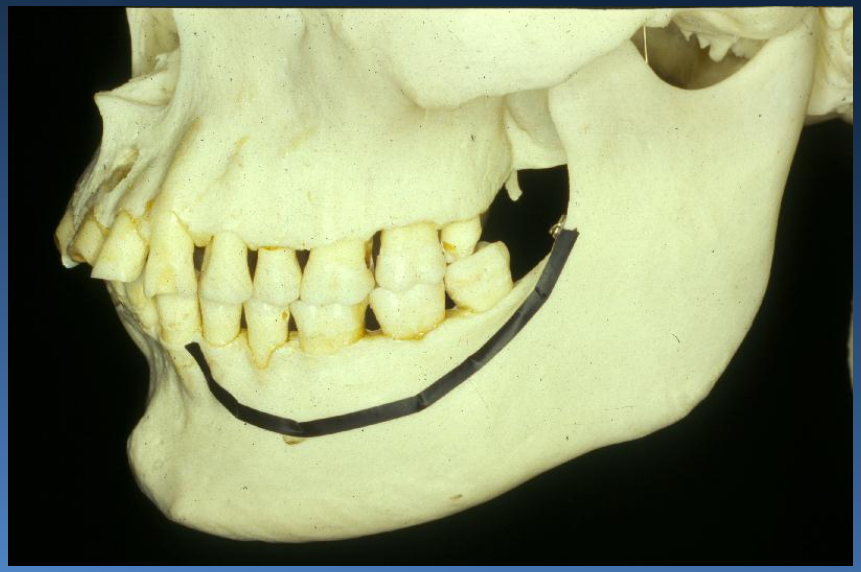
Marginal mandibulectomy feasible for minimal erosion of the alveolar process.

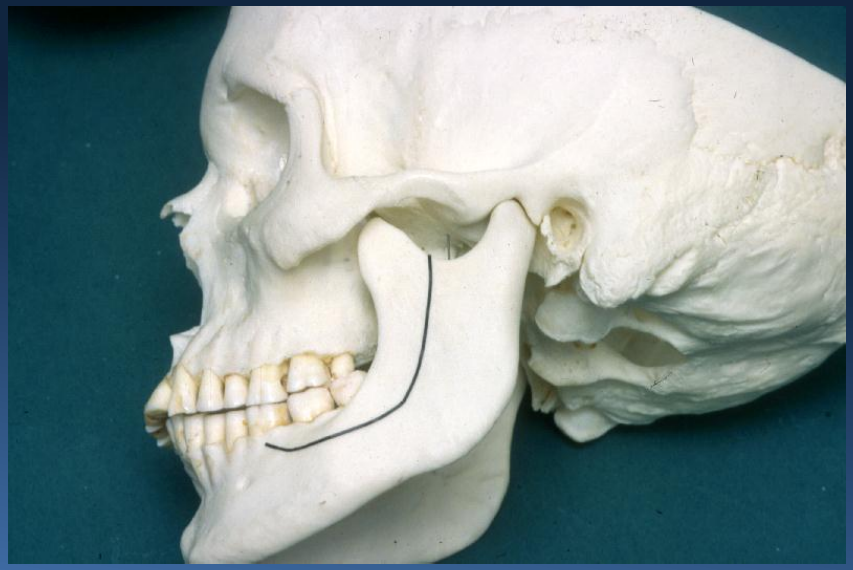
Mandible Sparing Indications

- For margins around tumor
- Approximation by tumor
- Cortical erosion

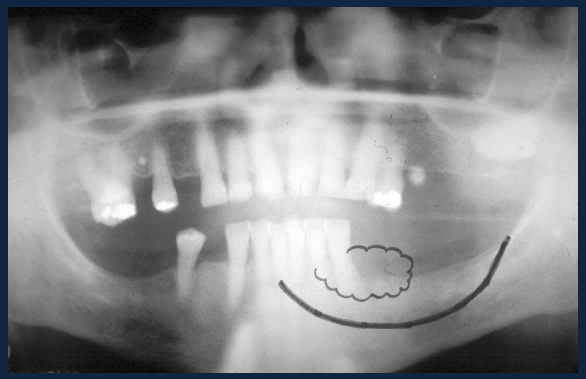
Marginal Mandibulectomy Contraindications

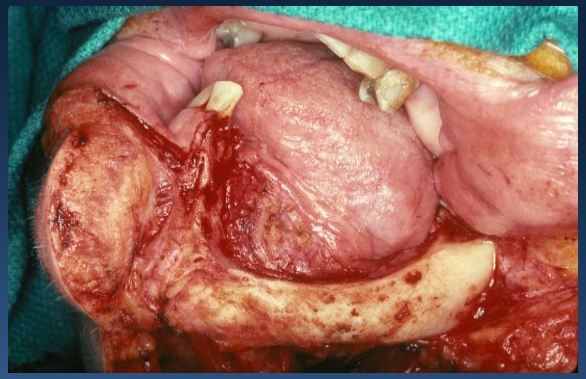
- Gross tumor invasion
- Massive soft tissue disease
- Radiated, edentulous mandible

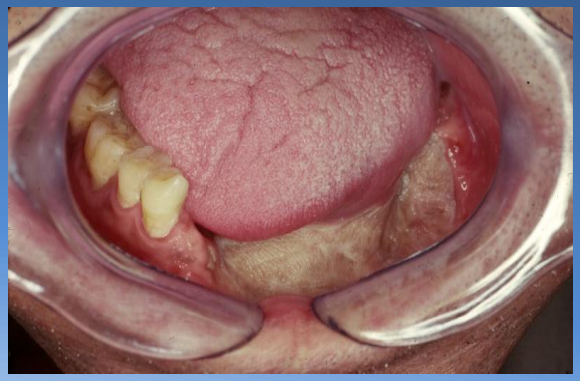




Marginal Mandibulectomy

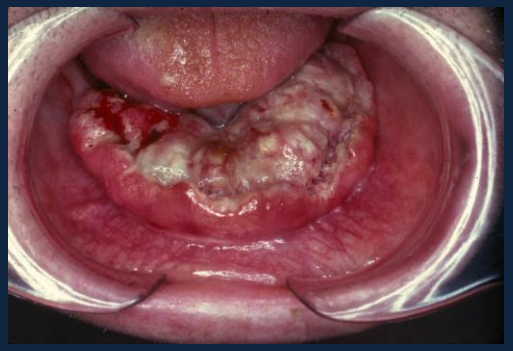


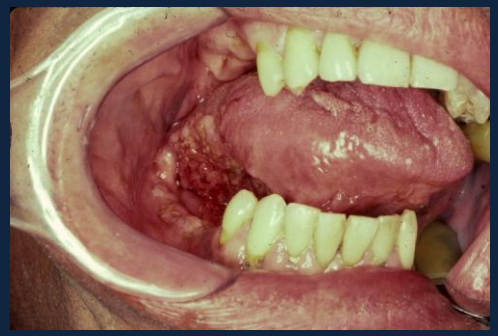


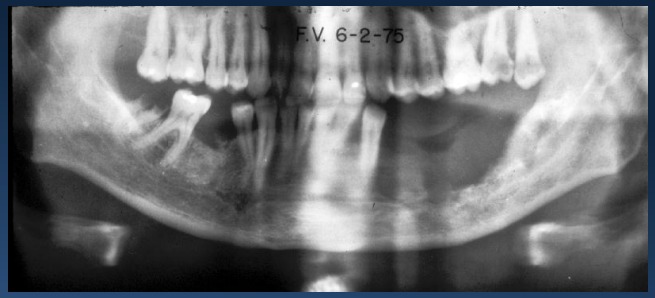


Segmental Mandibulectomy Indications

- Gross invasion by oral cancer
- Primary bone tumor
- Metastatic tumor
- Inferior alveolar nerve invasion



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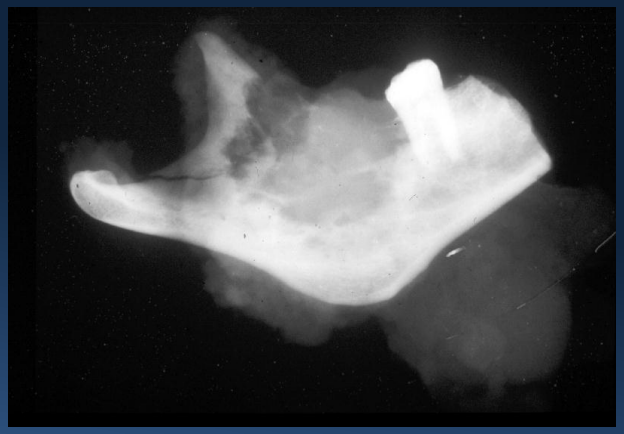

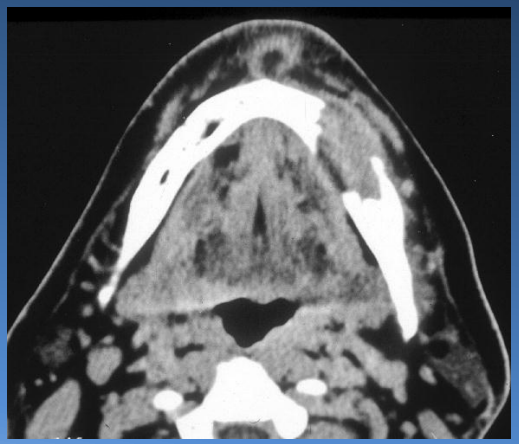

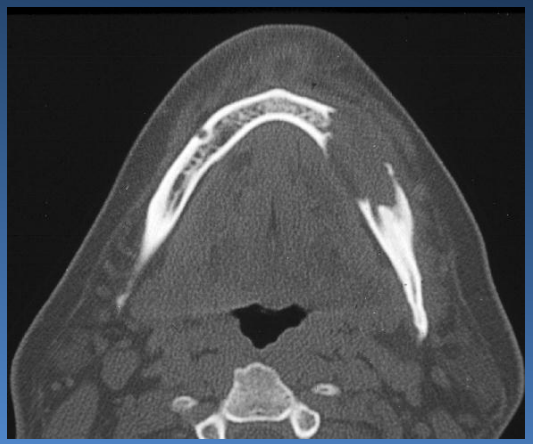


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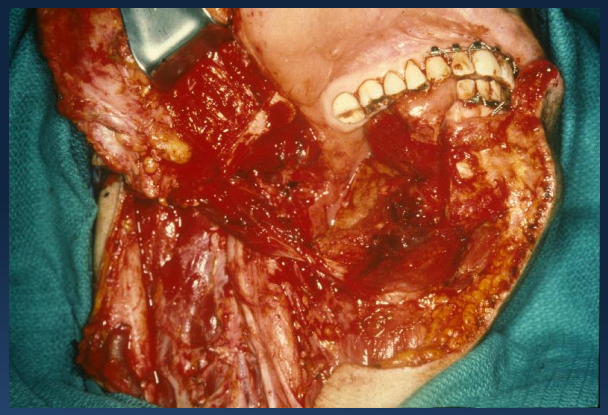
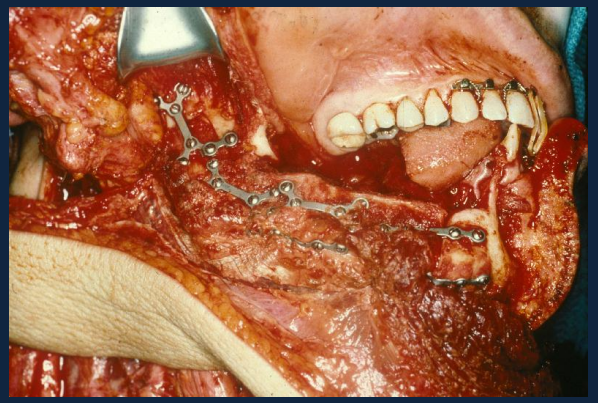
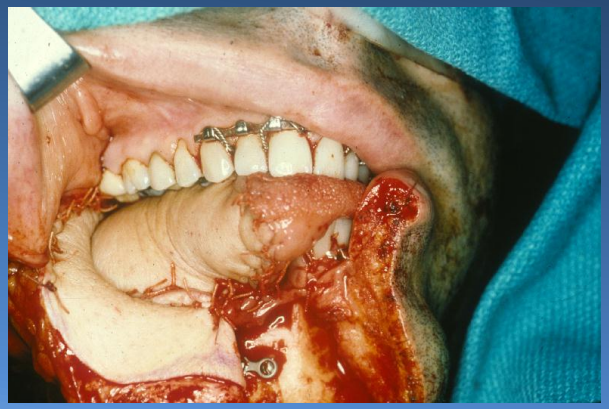
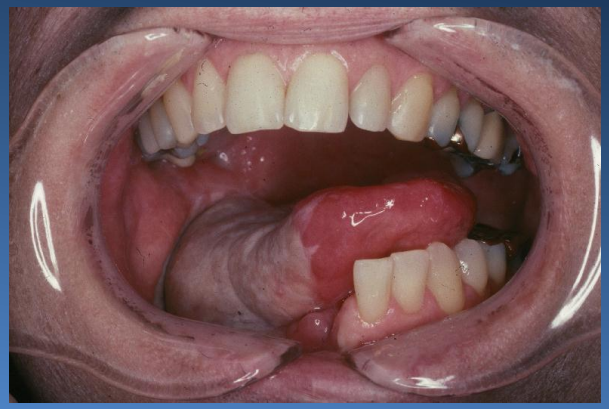
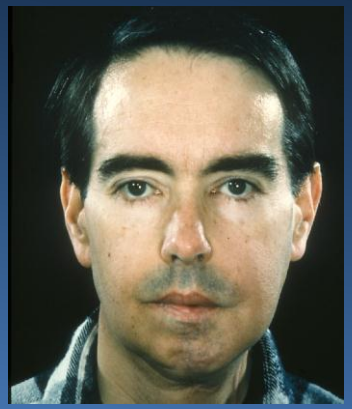
Segmental Mandibulectomy

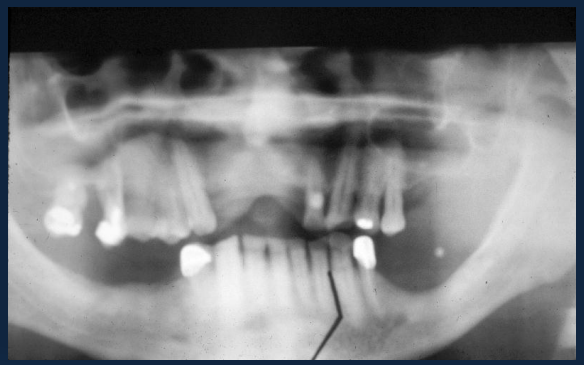


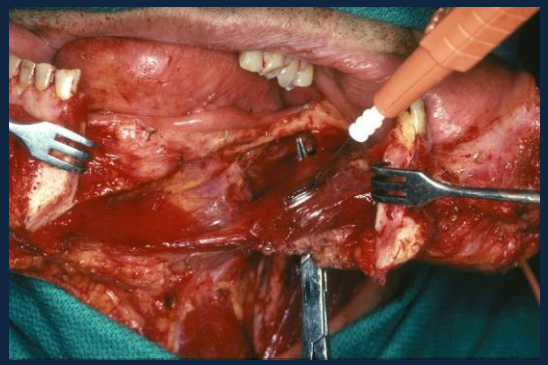





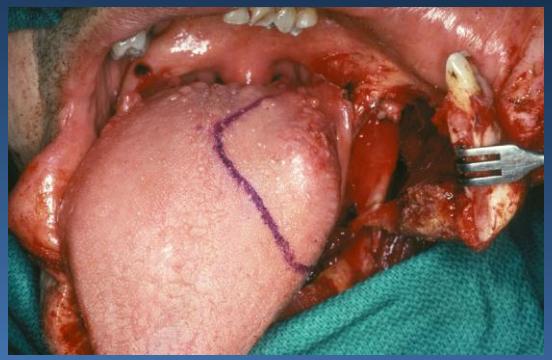
Paramedian Mandibulotomy

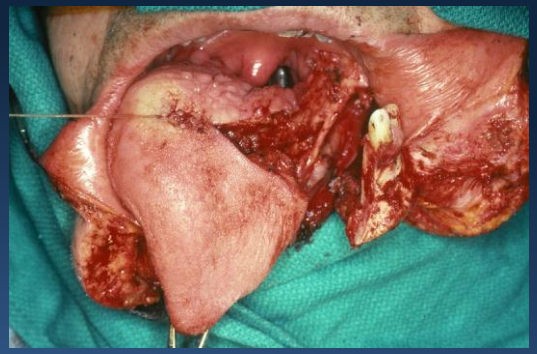
- Wide exposure
- Preserves hyomandibular complex
- No denervation of skin
- No devascularization
- Easy fixation
- Out of radiation portals

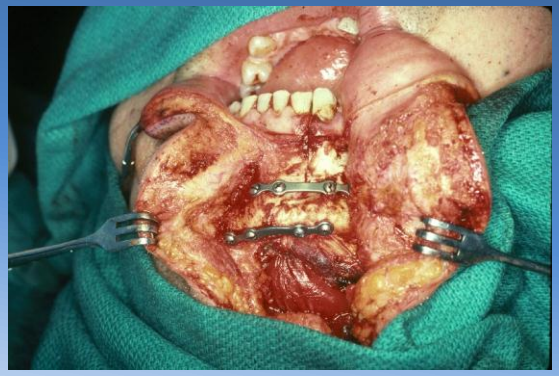
Mandibulotomy

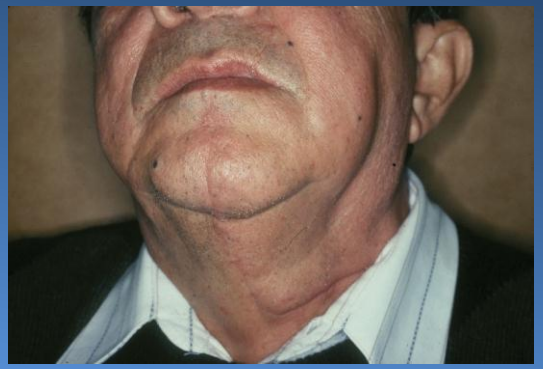








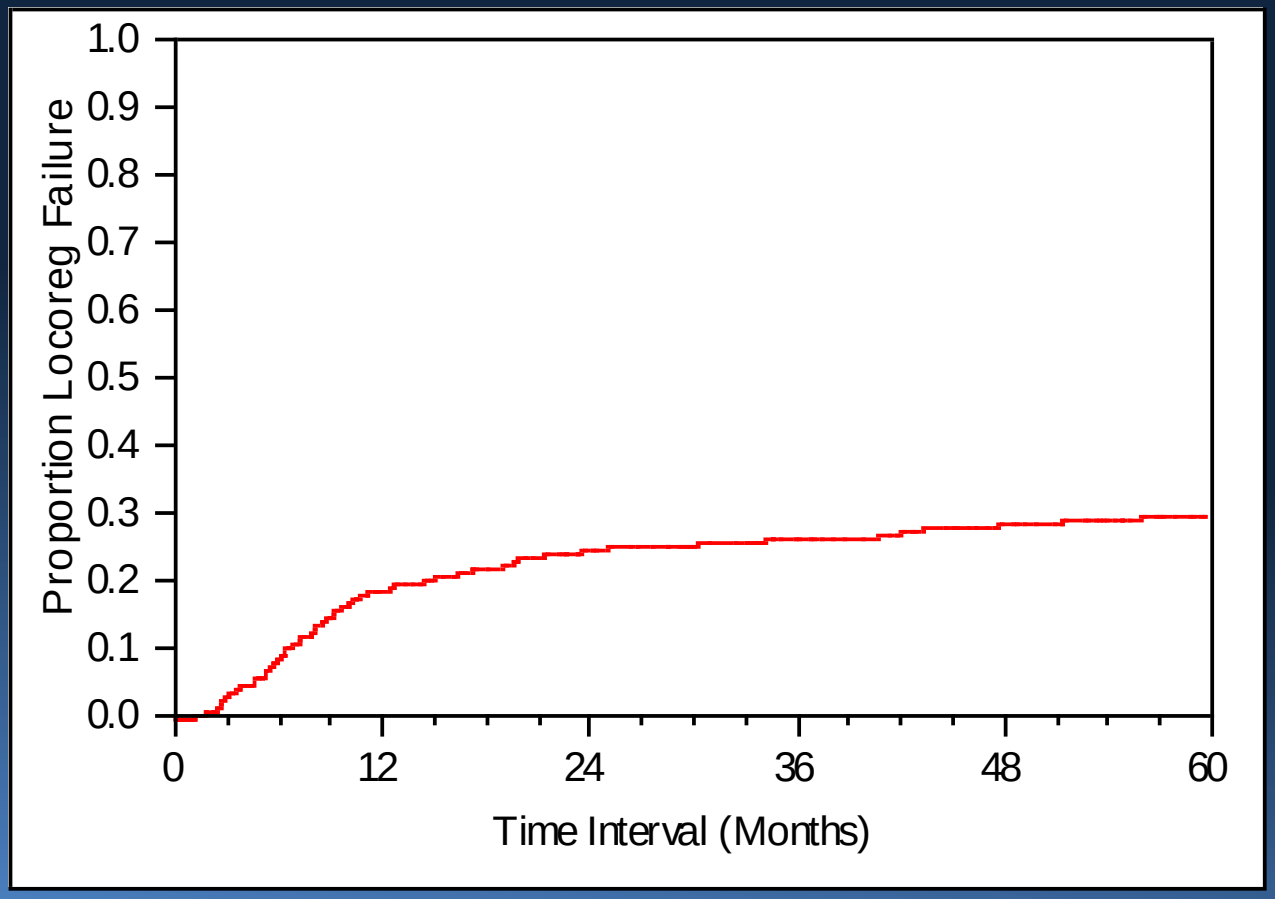




Oncologic Outcomes
MSKCC Data

- n = 1,866
- Previously untreated patients
- 1985 - 2012

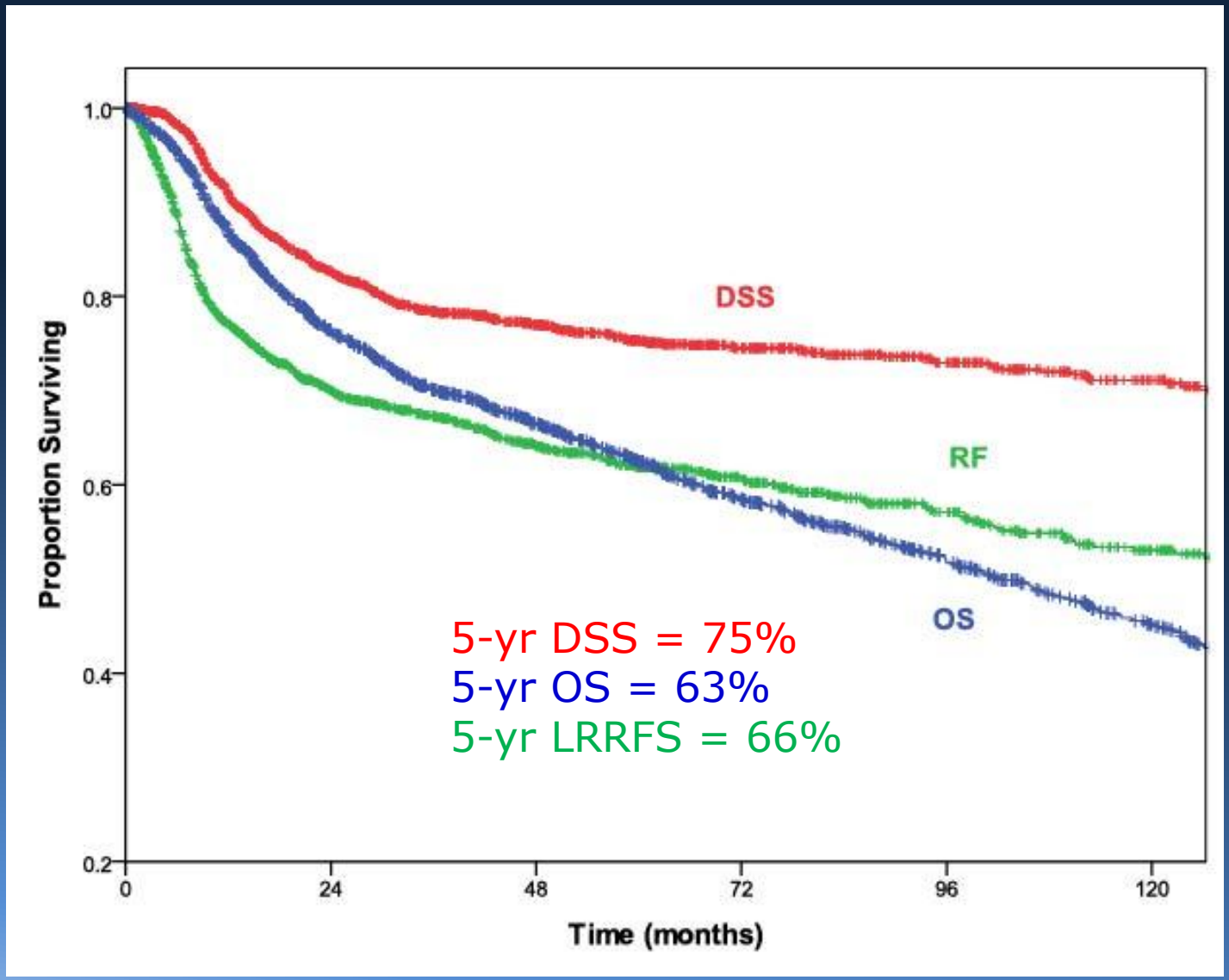
5-yr Locoregional Recurrence Rate = 30%



Median time to recurrence 9 months (Range 1 – 141)

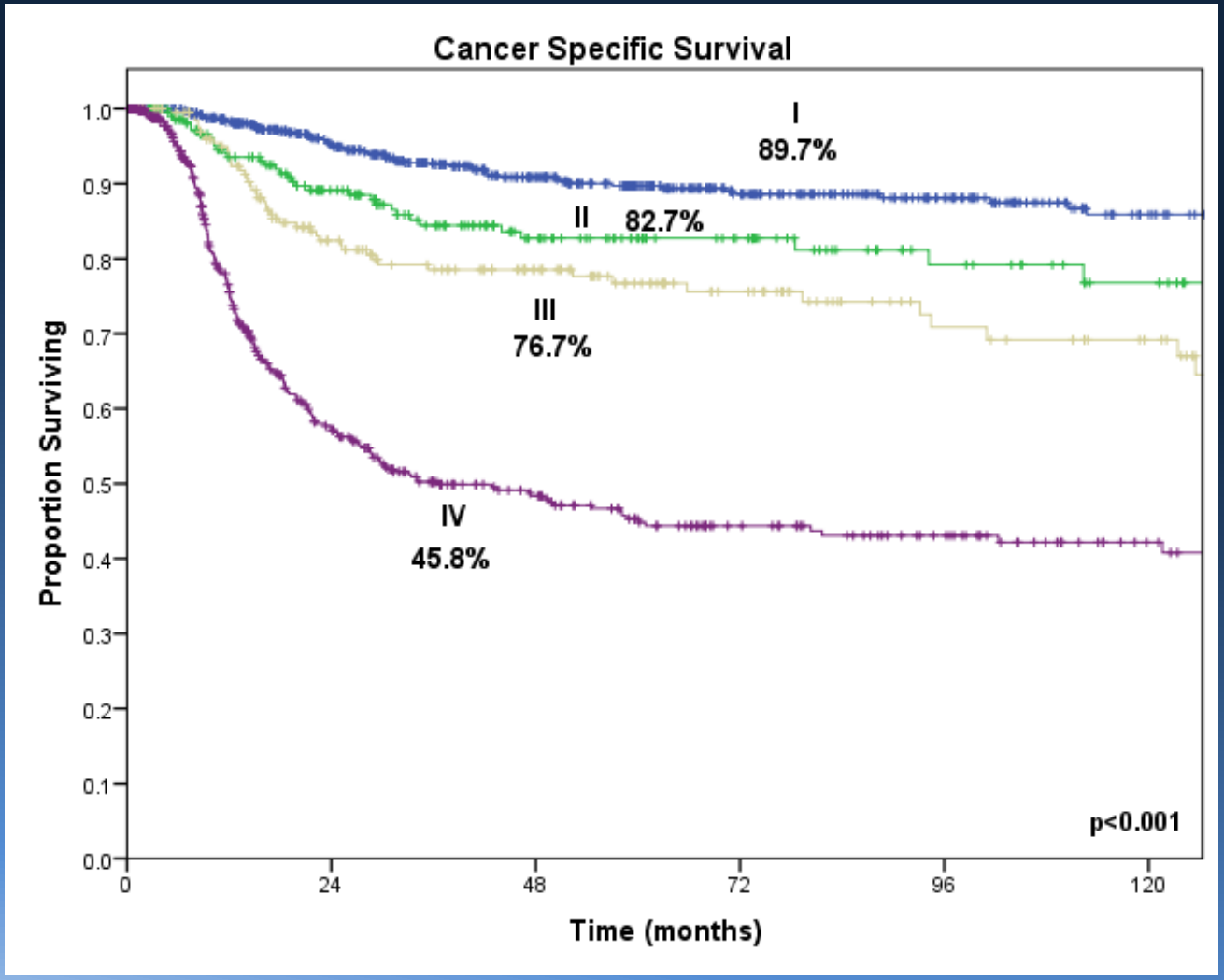
75% quartile 19.6 m

Survival

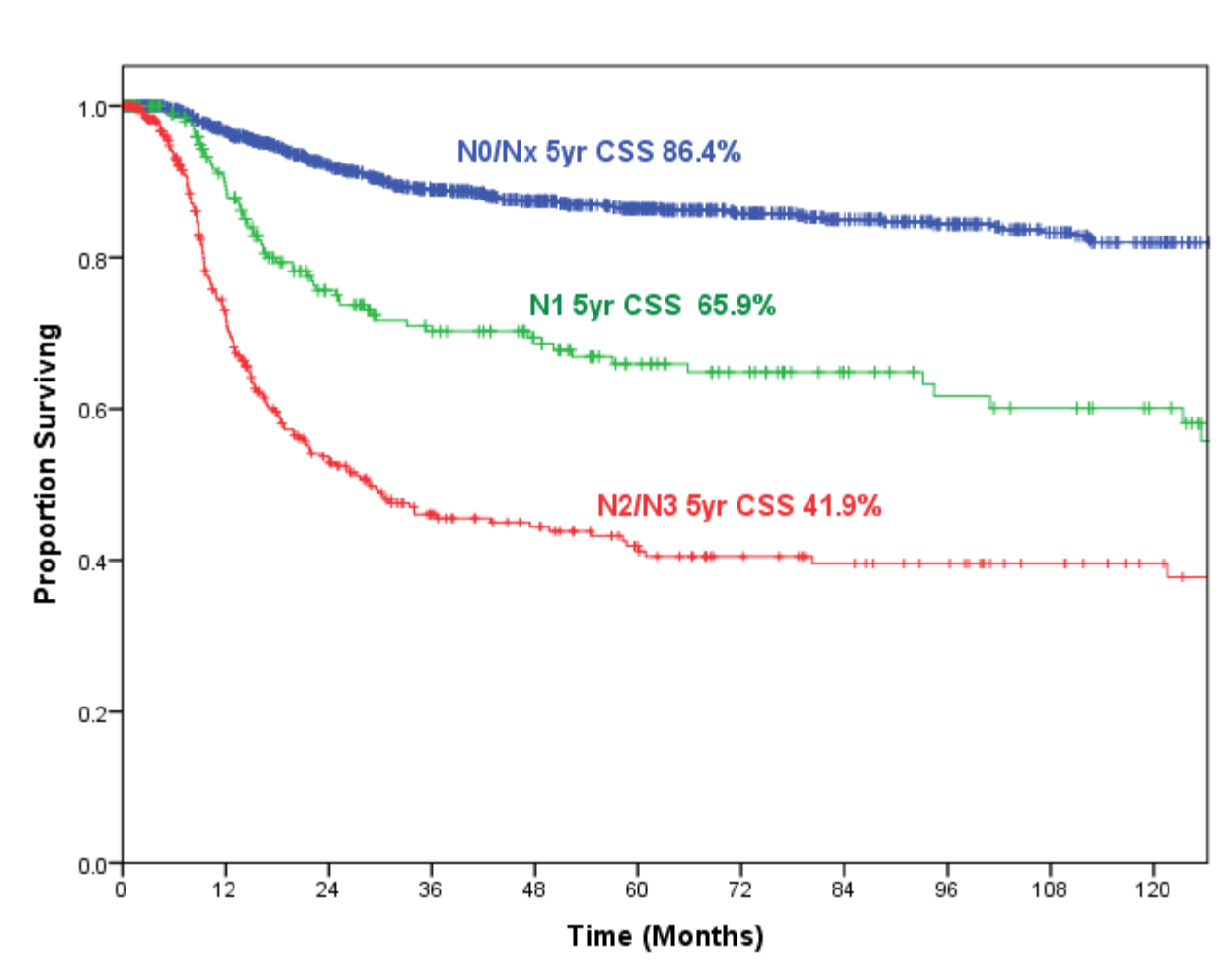


Median follow-up of 56 months (Range 1 – 343)

Cancer Specific Survival Stage Groups

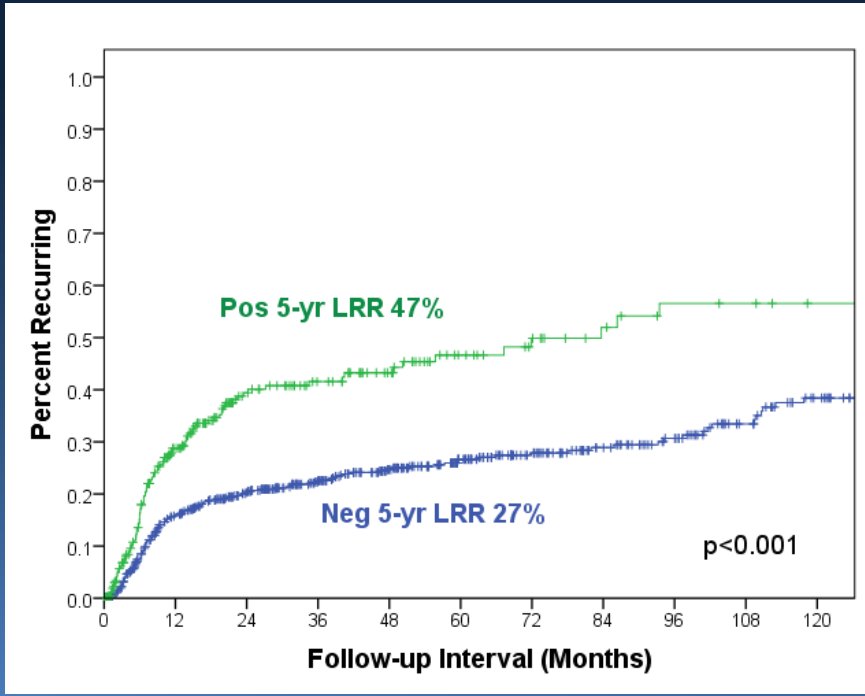


Cancer Specific Survival: N Stage

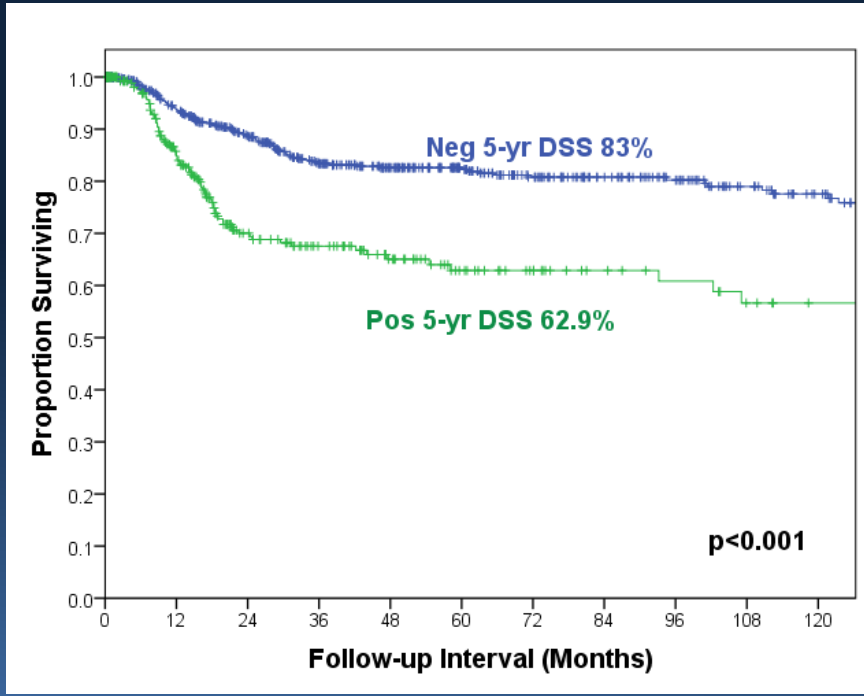


Margins of Resection

Margin Status in Tongue Cancer



LR Recurrence

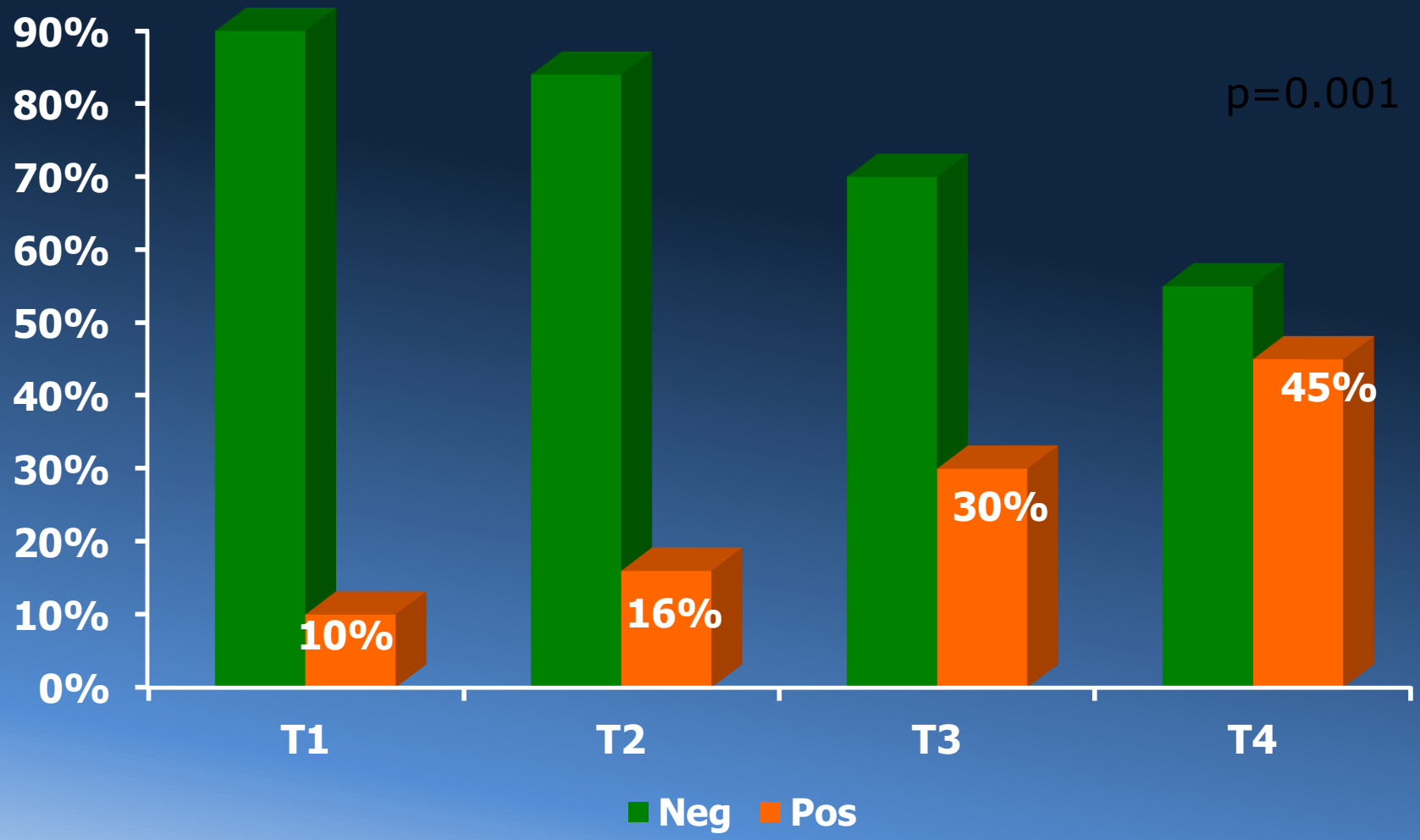


DSS

Patients with positive surgical margins have significantly worse outcome

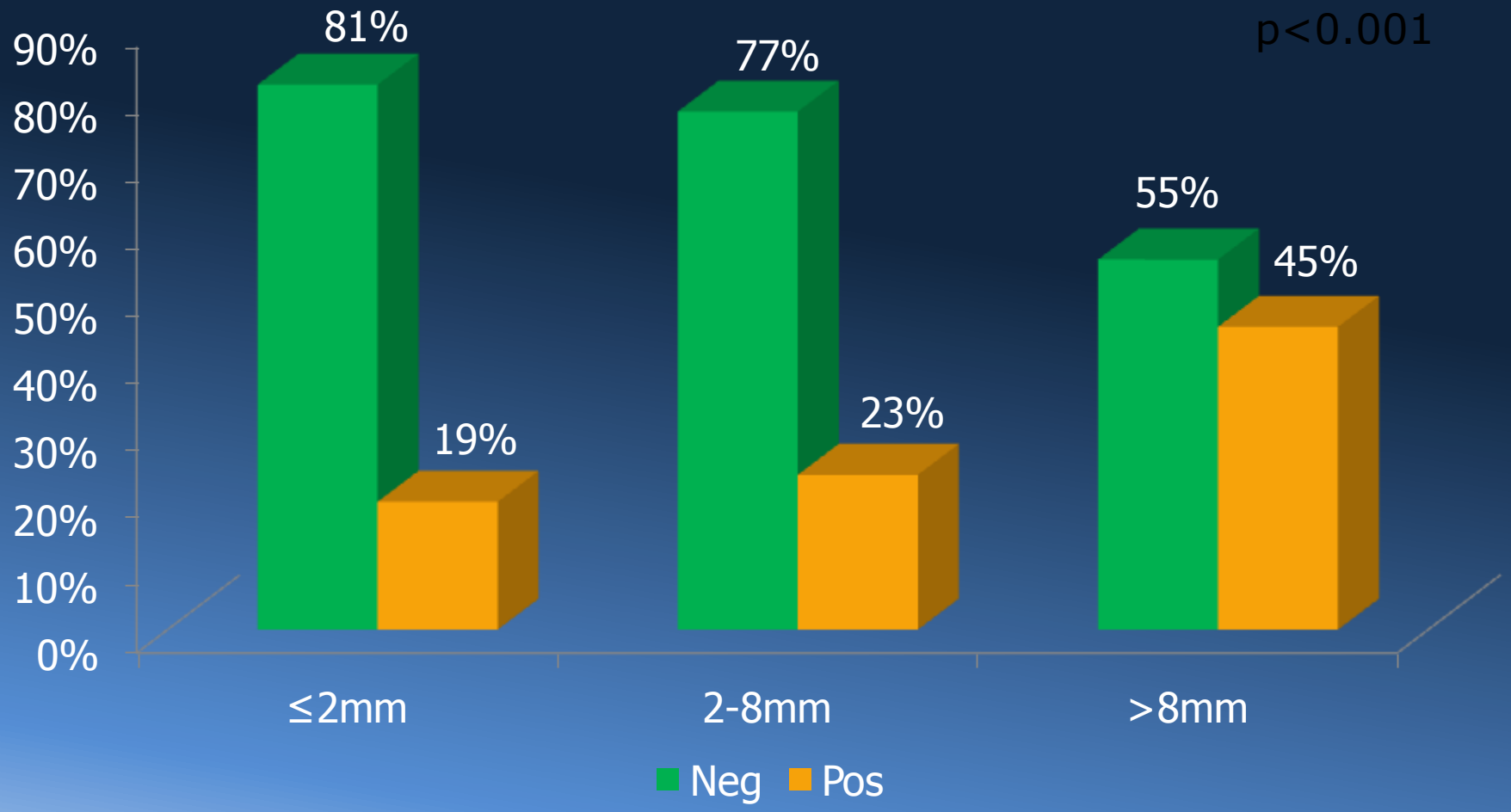
MSKCC Outcomes; 1985-2012

Risk for positive margins: T Stage



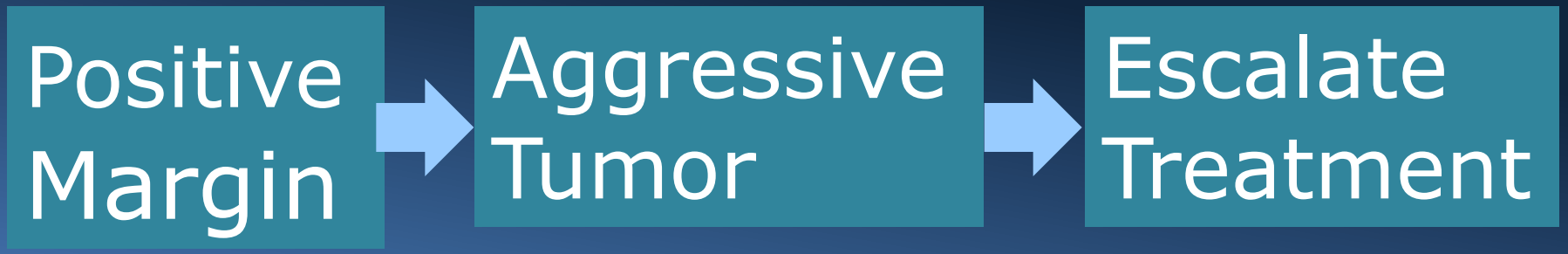
MSKCC Outcomes; 1985-2012

Thicker Tumors Are at Higher Risk for Positive Margins



MSKCC Outcomes; 1985-2012

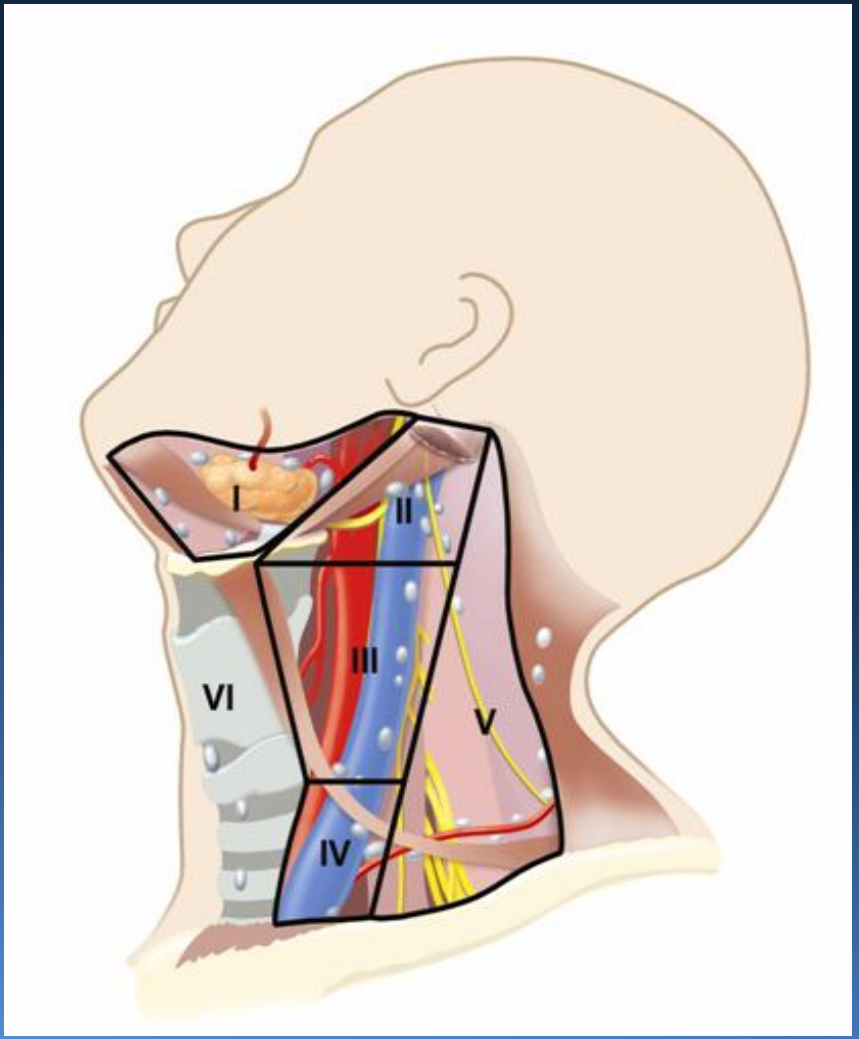
Margin status as surrogate for biological behavior of tumor



Management of the Neck

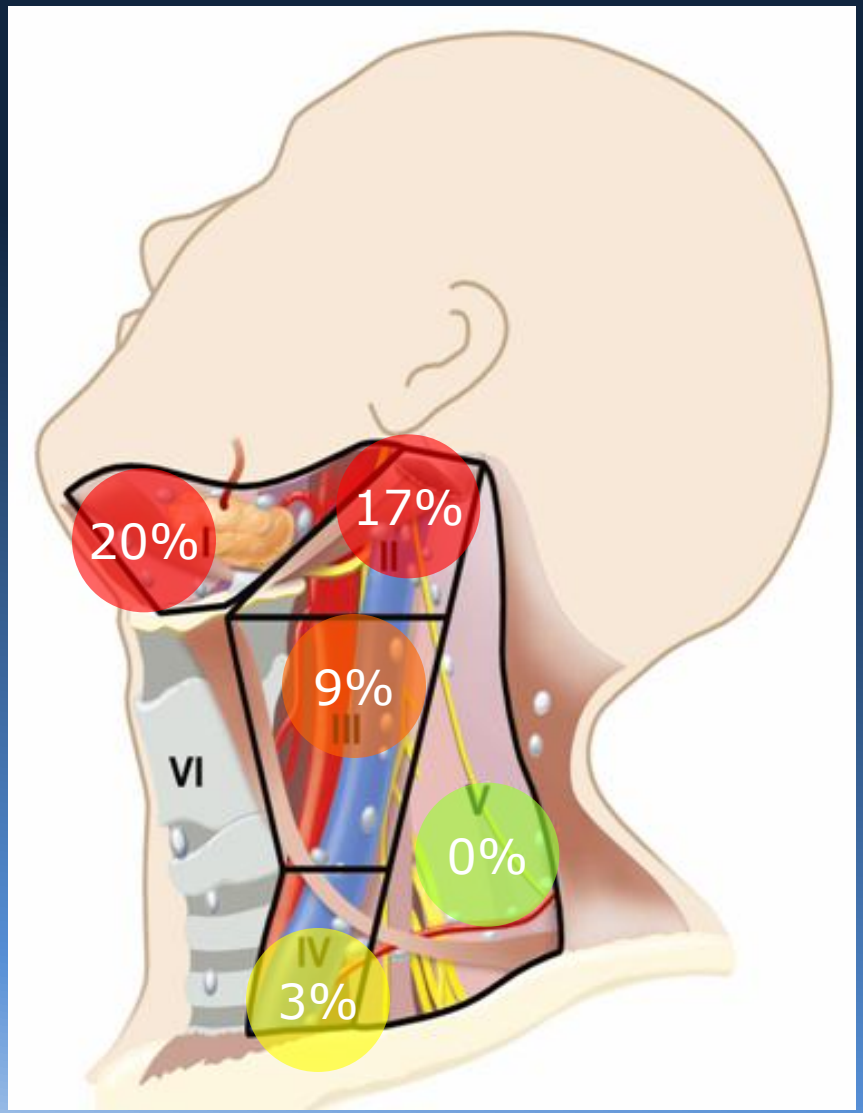
The Clinically Positive Neck

- Comprehensive neck dissection including levels I-V (sparing VA)
- Postop adjuvant treatment as indicated



Therapeutic Options for management of the cN0 Neck

Extent of Elective Neck Dissection



Levels I-III are at highest risk

- Level I = 20%
- Level II = 17%
- Level III = 9%
- Level IV = 3%
- Level V = 0%

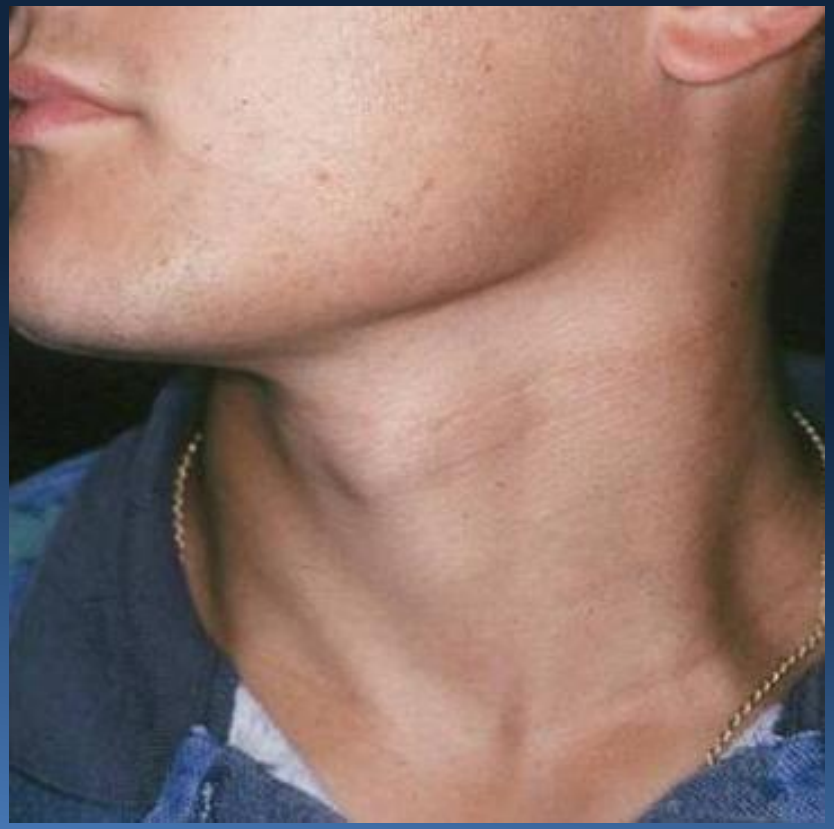
- Level IV involved in 2-6%
  RMT 6% > BM 4% > OT 2%

Shah JP et al. *Cancer* 1990; 66: 109-

Rationale for END

- Occult nodal disease is treated at early stage
- Low volume disease = higher chance for cure
- Provides accurate staging info for identifying patients for adjuvant treatment
- Morbidity of selective neck dissection is minimal

Supraomohyoid Neck Dissection



Thank You

Summary
Changing Trends in Outcome