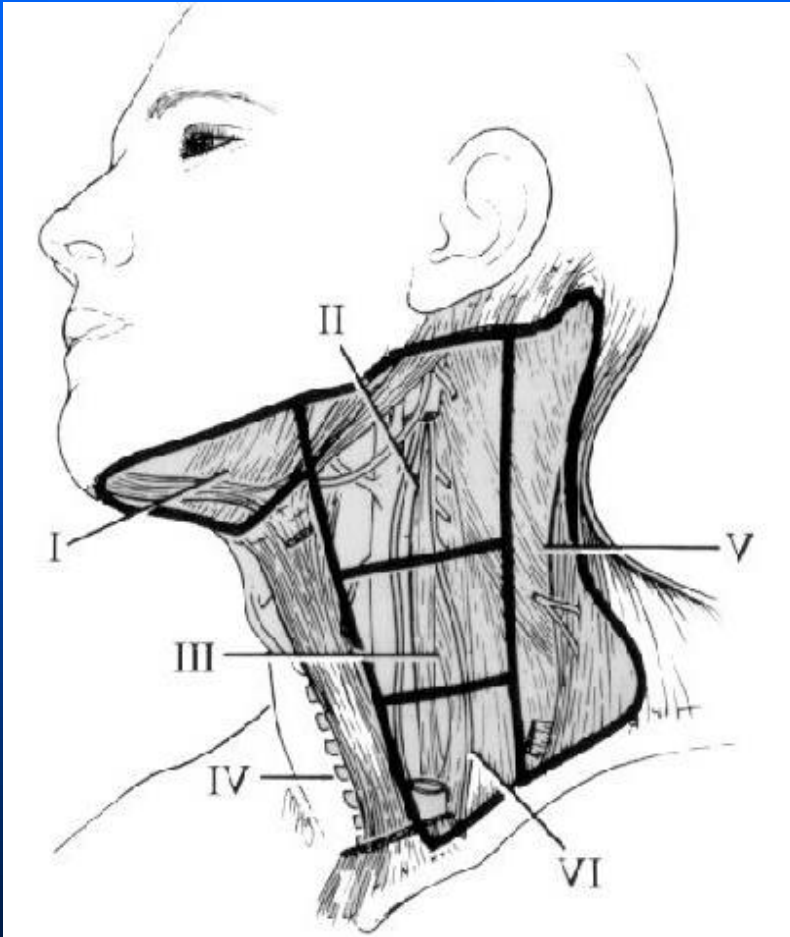


Neck Lymph nodes



- **I**--Submental and submandibular nodes
 - 1A medial to the **anterior belly of the digastric**
 - 1B Lateral to the **anterior belly of the digastric**
- **II**--Upper jugulodigastric group Hyoid separates 2 and 3
 - **2B posterior to Jugular with fat plane** between the node and IJV, everything else is 2A
- **III**--Middle jugular nodes draining the naso- and oropharynx, oral cavity, hypopharynx, larynx. Cricoid cartilage separates 3 and 4
- **IV**--Inferior jugular nodes draining the hypopharynx, subglottic larynx, thyroid, and esophagus.
- **V**-- Posterior triangle group, posterior to the SCM muscle
- **VI**--Anterior compartment group
- **VII**--Mediastinal compartment group

Stations

Lymph Node Classification

- **Level I**

- Submental (IA)
- Submandibular (IB) Anterior and lat to submadibular

- **Level II - IJV chain above hyoid**

- IIA - anteromedial to IJV
- IIB - posterior to IJV with fat plane

- **Level III - IJ chain b/w hyoid & cricoid**

I : I 9

Stations

Lymph Node Classification

- **Level IV** – lower jugular nodes below cricoid arch to clavicle
- **Level V** - Spinal accessory chain: nodes behind SCM from skull base to cricoid
- **Level VI** – Upper visceral nodes between carotid arteries b/w hyoid & manubrium

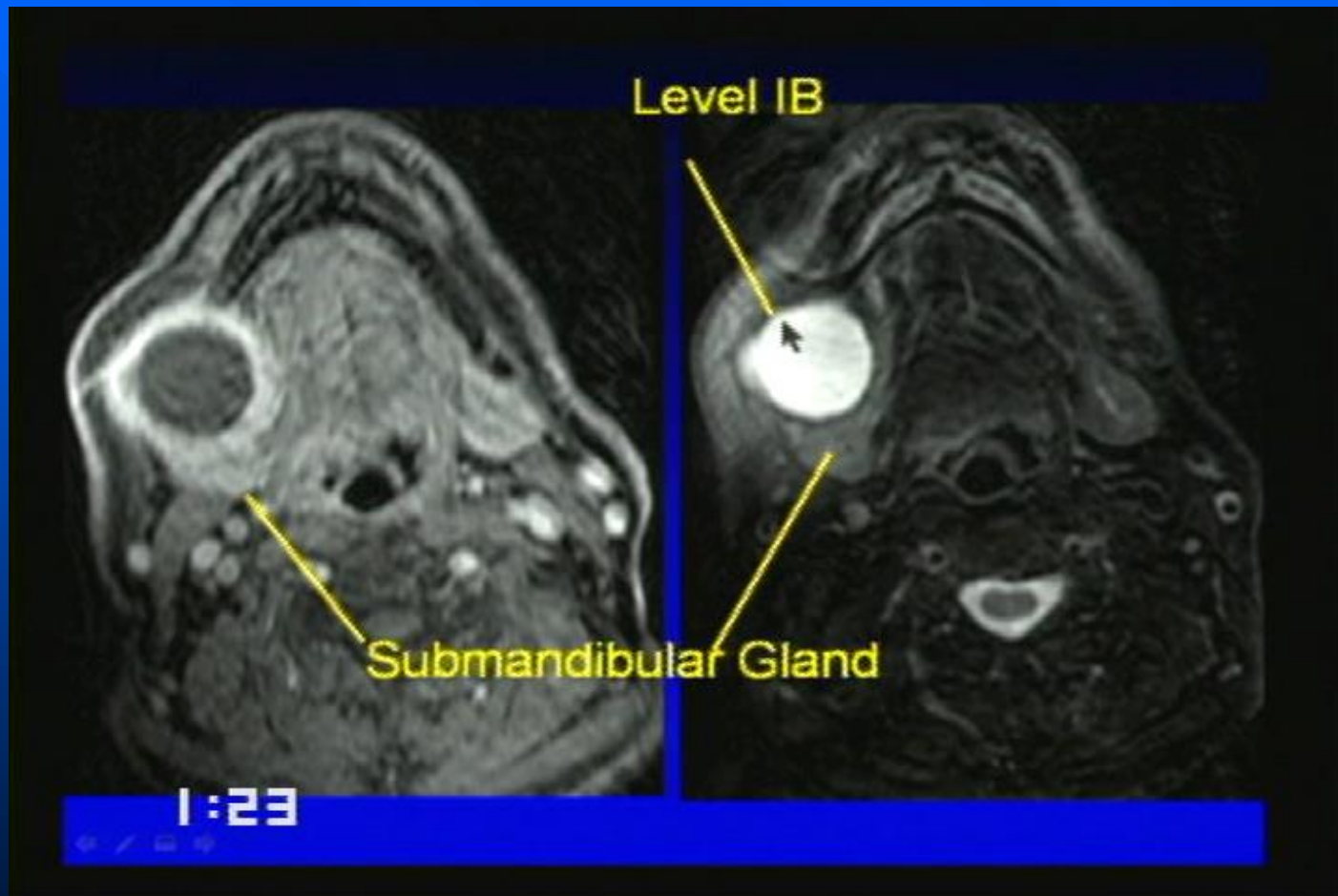
1:21

Important for recurrent
laryngeal and thyroid ca

Nodes

- Ct best
- Need contrast to see necrosis in small nodes
- Extracapsular spread – minimum of modified radical.
- Size criteria: (arbitrary).
 - 1.5 cm - for level 1 and 2.
 - Retropharyngeal Nodes - if cancer > (8- 6) mm should be worried.
 - 1 cm for rest

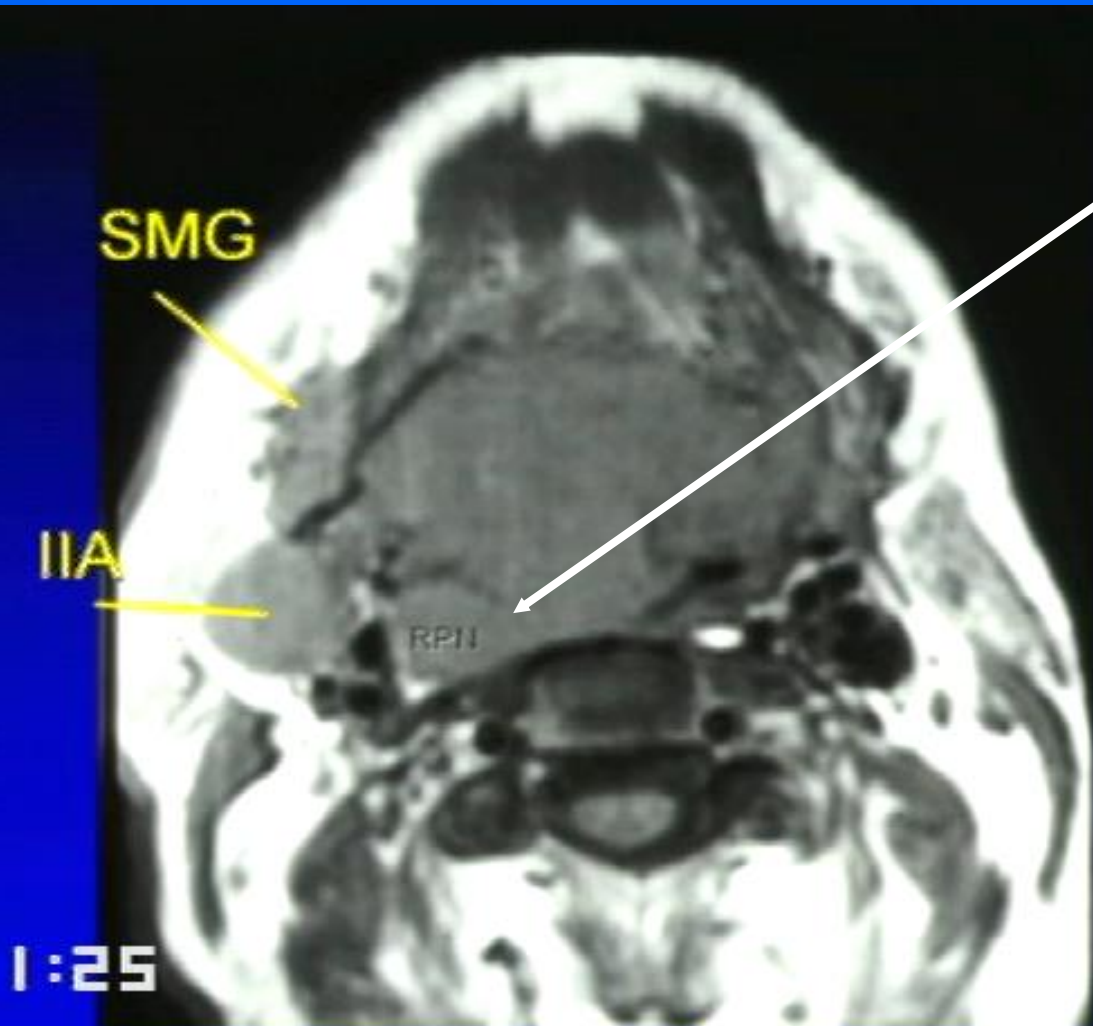
Necrotic 1B



Level 2A behind gland



More Nodes



- Retropharyngeal Nodes
 - Between prevertebral musculature and medial to carotids.

MRI

IMAGING TECHNIQUE **MAGNETIC RESONANCE**

- **Sagittal & axial T1W**
- **Axial T2W-FSE with Fat saturation**
- **Post - gadolinium T1W with Fat saturation**

1:18

Low density Nodes

LOW DENSITY NODES

- **Metastases – SCCA**
 - Necrosis
 - Cystic
- **Thyroid CA Pappilary**
- **Inflammatory - TB**
- **Rarely NHL**

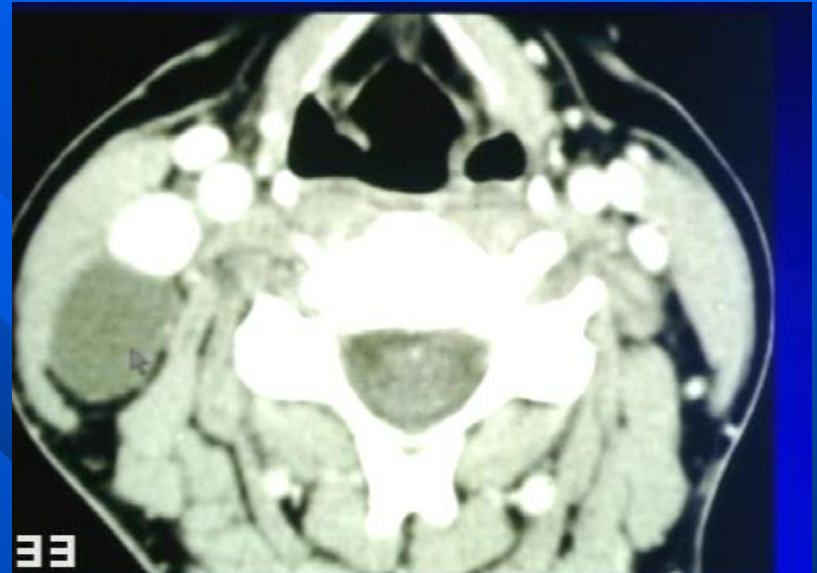
1:31

Cystic LN

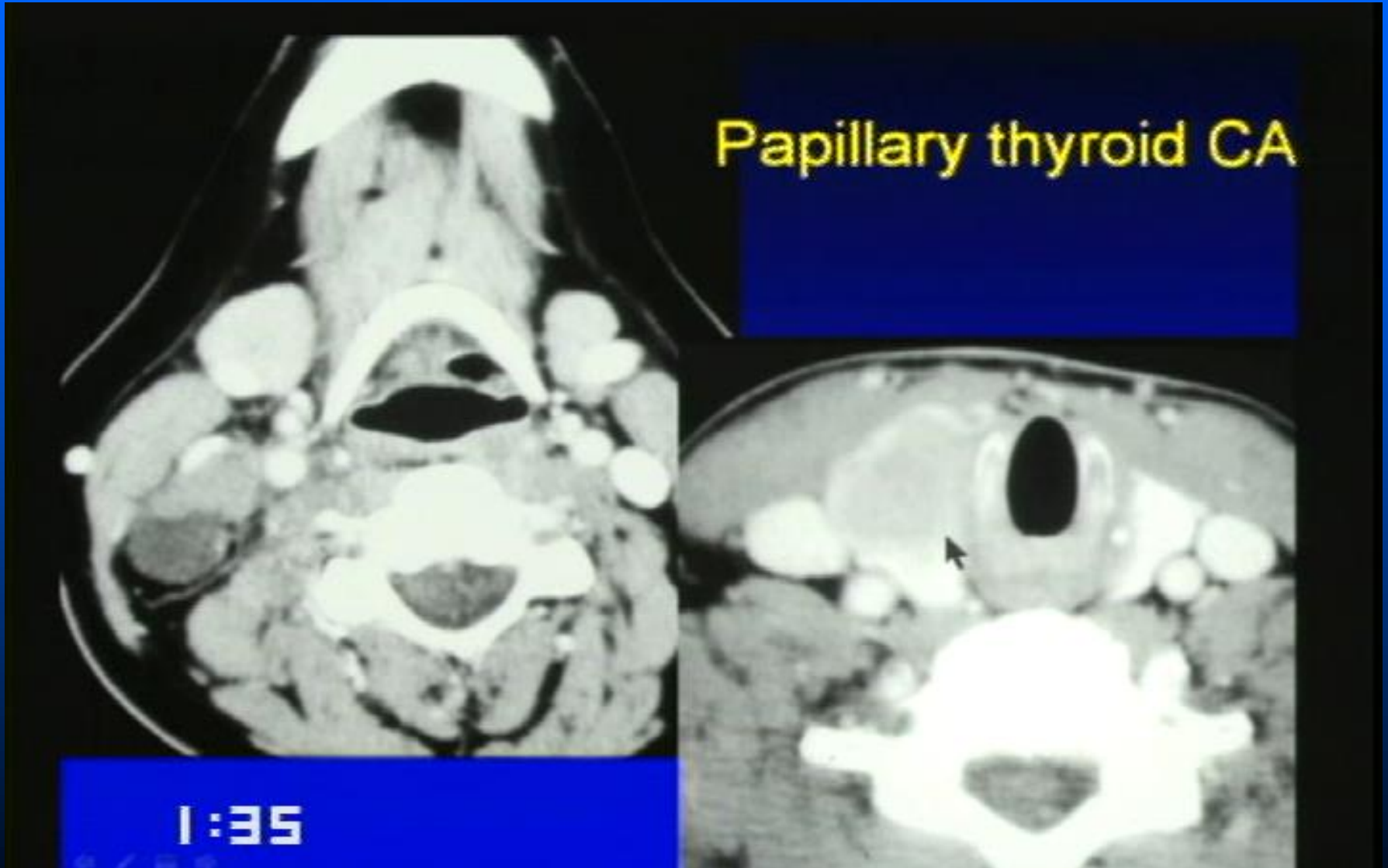
Cystic Lymph Nodes in SCCA

Oropharynx Carcinoma

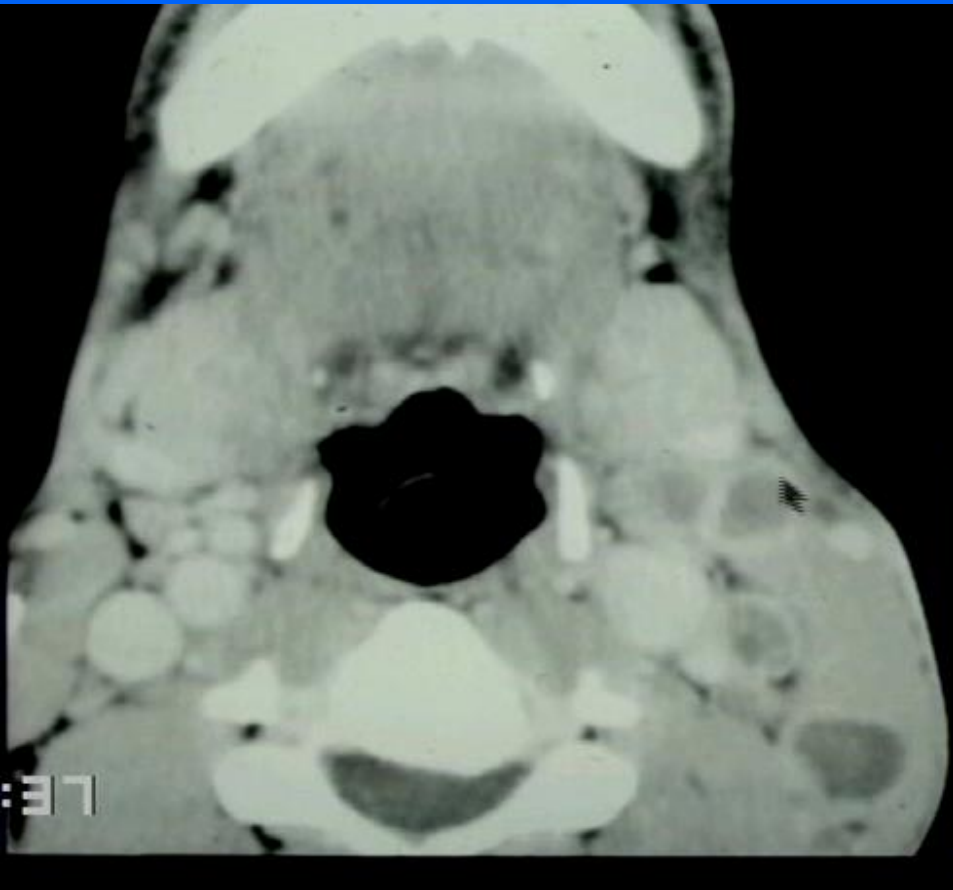
- Tonsillar cancer
- Base of tongue cancer



Papillary thyroid cancer



TB



Tend to be well demarcated with preserved fat planes; atypical in immunocompromised can be more infiltrative.

Retropharyngeal Nodes

Retropharyngeal Nodes

Pharyngeal Cancer

Nasopharynx and oro

1:40

Retropharyngeal Nodes



Clinicians cannot see or feel

Between prevertebral musculature and medial to carotids; if cancer > (8- 6) mm should be worried.
Need to look down to hyoid where space is rich in LN' s.

Staging

TNM STAGING

- **N0** = Negative
- **N1** = Single, IPSILAT LN - < 3 cm
- **N2a** = Single, IPSILAT LN - $> 3, \leq 6$ cm
- **N2b** = Multiple, IPSILAT LN - ≤ 6 cm
- **N2c** = BILAT or CONTRALAT LN - ≤ 6 cm
- **N3** = LN mets - > 6 cm

1:47

Malignant Nodes

MALIGNANT NODES

- Extracapsular extension
 - Poorly defined nodal margins
 - Infiltration adjacent tissues, fat
 - Size: 25% LN < 1 cm; 50% 2-3 cm; 75% > 3 cm
- Carotid invasion
 - < 180; 180-270; > 270 circumference; BOT
- Extension to skull base

Microscopic spread



1:49

Carotid Encasement

PATHOLOGIC NODES

Circumference:

- < 180 : no invasion
- > 270 : invasion
- 180 to 270 : gray zone

Carotid balloon occlusion test

0:00

Skull base

PATHOLOGIC NODES

- **Extension to the skull base**
- **Prevertebral muscle invasion**

□:□ |

Inoperable

Prognosis

MALIGNANT NODES

- **50% Decrease in patient prognosis**
- **50% Less if bilateral nodal disease**
- **50% Less when extracapsular spread**
- **50% Less when nodal fixation**

0:04