Head and Neck

Multidisciplinary Review

Agenda

Review current practices for Head and Neck Cancers

- Locally Advanced Oropharyngeal Cancer
- Metastatic Oral Cavity Cancer

Explore the multidisciplinary care of Head and Neck Patients

- Medical Oncology
- Radiation Oncology
- Oral Medicine
- Nutritional Services

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Learning Objectives

- **Multidisciplinary Head & Neck**

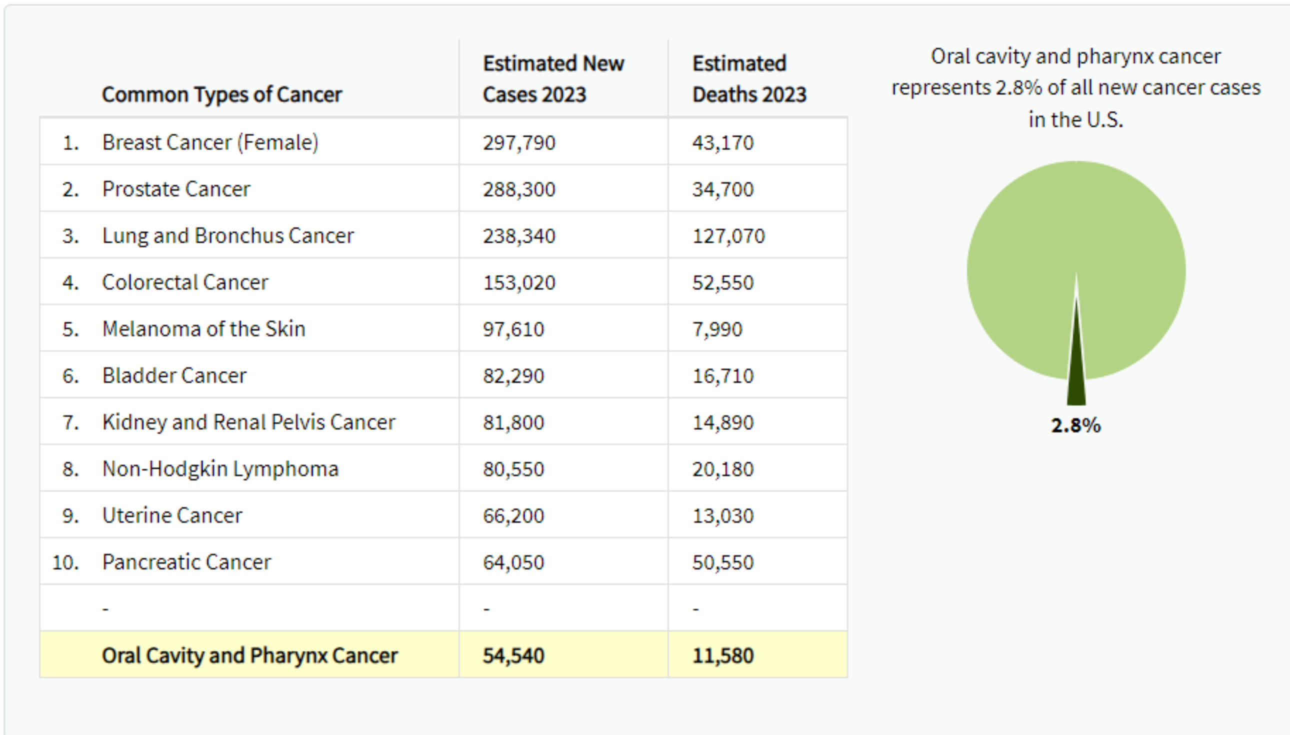
- Understand current options and staging differences for oropharyngeal cancer
- Explore radiation sensitizers for definitive chemoradiation in oropharyngeal cancer
- Review therapeutic options for metastatic head and neck cancer
- Discuss vital care from oral medicine in head and neck cancer
- Refine the options for nutritional support in head and neck cancer patients

Head and Neck Cancer

Our esteemed panel:

- Dan Carrizosa, MD, MS, FACP – medical oncology
- Sayyad Zia, MD – radiation oncology
- Mike Brennan, DDS, MHS – oral medicine
- Michele Szafranski, MS, RD, CSO, LDN - nutrition

Head and Neck Cancer

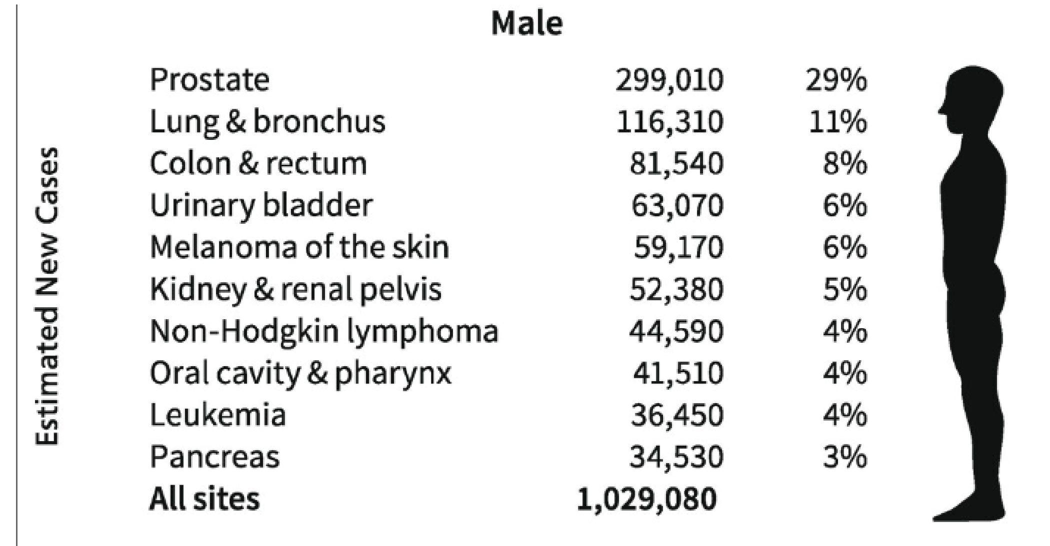


How Common Is This Cancer?

	Common Types of Cancer	Estimated New Cases 2023	Estimated Deaths 2023
1.	Breast Cancer (Female)	297,790	43,170
2.	Prostate Cancer	288,300	34,700
3.	Lung and Bronchus Cancer	238,340	127,070
4.	Colorectal Cancer	153,020	52,550
5.	Melanoma of the Skin	97,610	7,990
6.	Bladder Cancer	82,290	16,710
7.	Kidney and Renal Pelvis Cancer	81,800	14,890
8.	Non-Hodgkin Lymphoma	80,550	20,180
9.	Uterine Cancer	66,200	13,030
10.	Pancreatic Cancer	64,050	50,550
	-	-	-
	Oral Cavity and Pharynx Cancer	**54,540**	**11,580**

In 2023, it is estimated that there will be 54,540 new cases of oral cavity and pharynx cancer and an estimated 11,580 people will die of this disease.

2023 NCI SEER Cancer Facts: https://seer.cancer.gov/statfacts/html/oralcav.html



Male (Estimated New Cases)

Site	Cases	%
Prostate	299,010	29%
Lung & bronchus	116,310	11%
Colon & rectum	81,540	8%
Urinary bladder	63,070	6%
Melanoma of the skin	59,170	6%
Kidney & renal pelvis	52,380	5%
Non-Hodgkin lymphoma	44,590	4%
Oral cavity & pharynx	41,510	4%
Leukemia	36,450	4%
Pancreas	34,530	3%
All sites	**1,029,080**	

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https://acsjournals.onlinelibrary.wiley.com/doi/10.3322/caac.21820

Head and Neck

Locally Advanced Oropharynx Cancer

69 yo male p/w voice change over 1 month with worsening ear pain and sore throat

- No history of fever or trauma
- No weight loss
- Plays golf on a regular basis
- PMHx:
  - Atrial Fibrillation
  - Chronic Diarrhea from pancreatic insufficiency
  - HTN
  - Dyslipidemia
  - Infrarenal Abdominal Aortic Aneurysm

Head and Neck

Locally Advanced Oropharynx Cancer

Labs: Cr 1.23, LFT and CBCwdiff WNL

Flex Fiberoptic Nasolaryngoscopy:

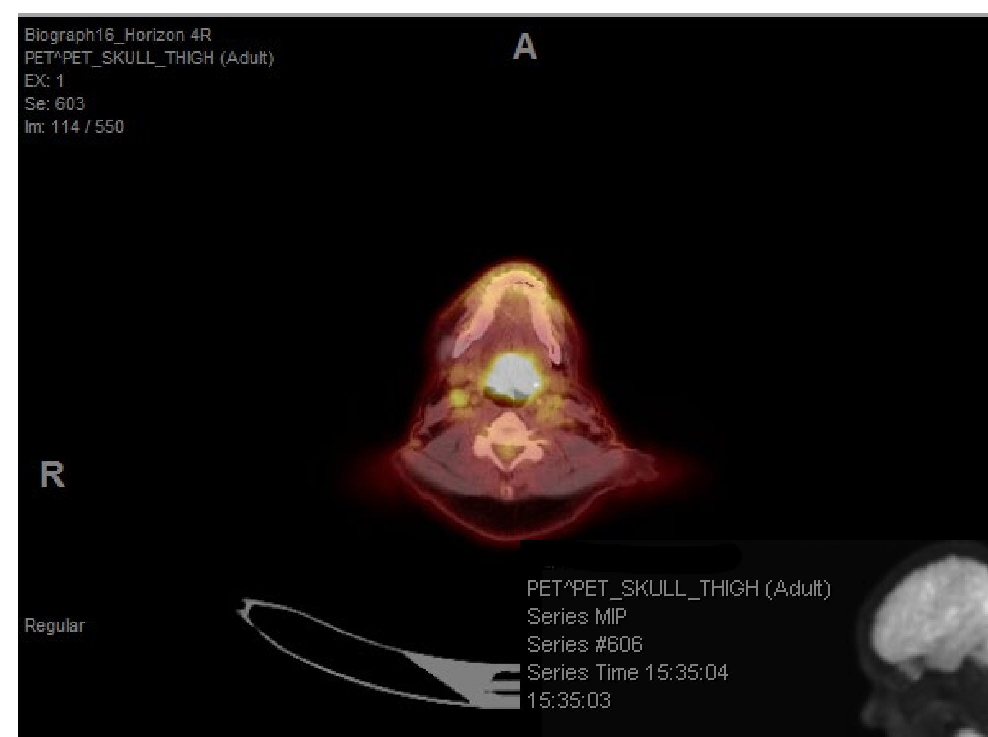
Endophytic Left Base of tongue mass

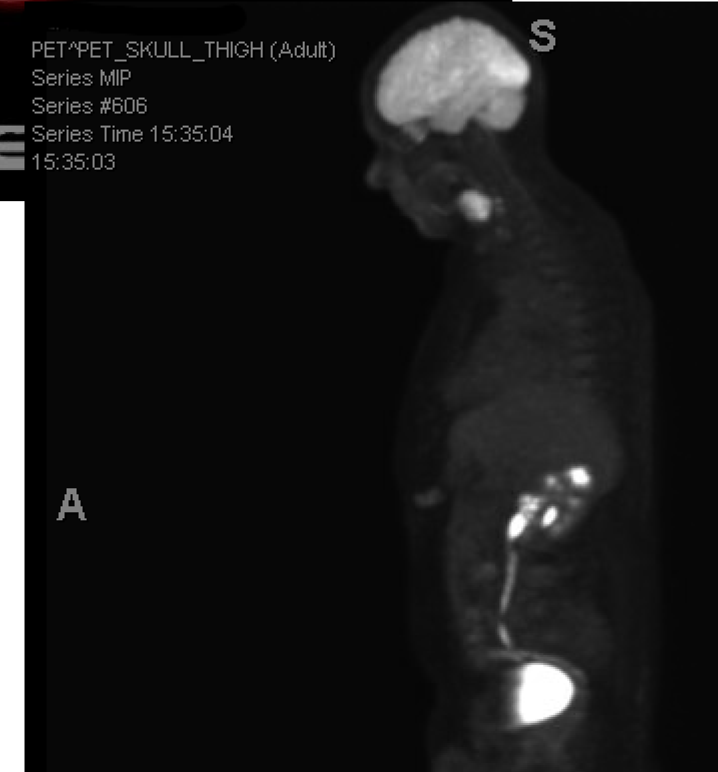
Pathology: Base of Tongue Biopsy

HPV-Associated Squamous Cell Carcinoma

p16 positive

PET: midline hypermetabolic mass involving posterior tongue = 3.8*4cm with avid hypermetabolic activity w/ involvement of extrinsic tongue musculature. Bilateral hypermetabolic cervical chain lymph nodes. No distant disease





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Head and Neck

Locally Advanced Oropharynx Cancer

Staging:

Stage III: (T4N2M0)

What are our options?

Need Multidisciplinary Team!

National Comprehensive Cancer Network®

NCCN Guidelines Version 2.2024
Head and Neck Cancers

NCCN Guidelines Index
Table of Contents
Discussion

Table 4
American Joint Committee on Cancer (AJCC)
TNM Staging System for HPV-Mediated (p16+) Oropharyngeal Cancer (8th ed., 2017)
(Not including: P16-negative (p16-) cancers of the oropharynx)

Primary Tumor (T)
T0 No primary identified
T1 Tumor 2 cm or smaller in greatest dimension
T2 Tumor larger than 2 cm but not larger than 4 cm in greatest dimension
T3 Tumor larger than 4 cm in greatest dimension or extension to lingual surface of epiglottis
T4 Moderately advanced local disease
Tumor invades the larynx, extrinsic muscle of tongue, medial pterygoid, hard palate, or mandible or beyond*
Mucosal extension to lingual surface of epiglottis from primary tumors of the base of the tongue and vallecula does not constitute invasion of the larynx.

Regional Lymph Nodes (N)
Clinical N (cN)
NX Regional lymph nodes cannot be assessed
N0 No regional lymph node metastasis
N1 One or more ipsilateral lymph nodes, none larger than 6 cm
N2 Contralateral or bilateral lymph nodes, none larger than 6 cm
N3 Lymph node(s) larger than 6 cm

Prognostic Stage Groups
Clinical

Stage I	T0,T1,T2	N0,N1	M0
Stage II	T0,T1,T2	N2	M0
	T3	N0,N1,N2	M0
Stage III	T0,T1,T2,T3	N3	M0
	T4	N0,N1,N2,N3	M0
Stage IV	Any T	Any N	M1

Pathological

Stage I	T0,T1,T2	N0,N1	M0
Stage II	T0,T1,T2	N2	M0
	T3,T4	N0,N1	M0
Stage III	T3,T4	N2	M0
Stage IV	Any T	Any N	M1

Head and Neck

Locally Advanced Oropharynx Cancer

Multidisciplinary Team:

- Surgery
- Radiation
- Medical Oncology
- Oral Medicine
- Nutrition
- Speech Pathology
- Social Work
- Pathology
- Radiologist

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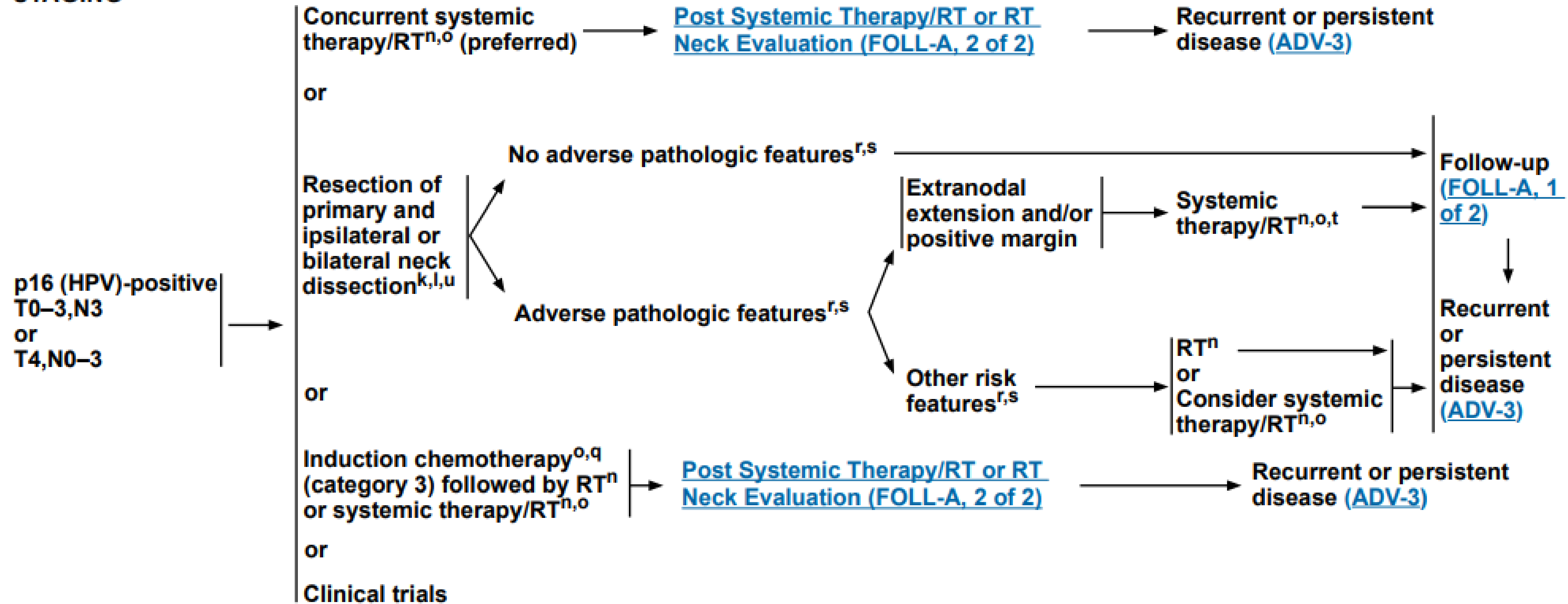

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Locally Advanced Oropharynx Cancer

Chemoradiation:

1) High-dose Cisplatin (100mg/m2 q3wks * 2-3)
2) Weekly Cisplatin (40mg/m2 weekly)
3) Cetuximab (400mg/m2 followed by 250mg/m2 weekly)
4) Docetaxel (15mg/m2 weekly)

    Patil VM et al DOI: 10.1200/JCO.22.00980 - Phase II/III compared to Placebo

    Improvement in 2yr DFS (30.3 vs 42% HR 0.673) and 2yr OS (41.7 vs 50.8% HR 0.747)

5) Carboplatin/Paclitaxel
6) Carboplatin/Infusional 5-FU

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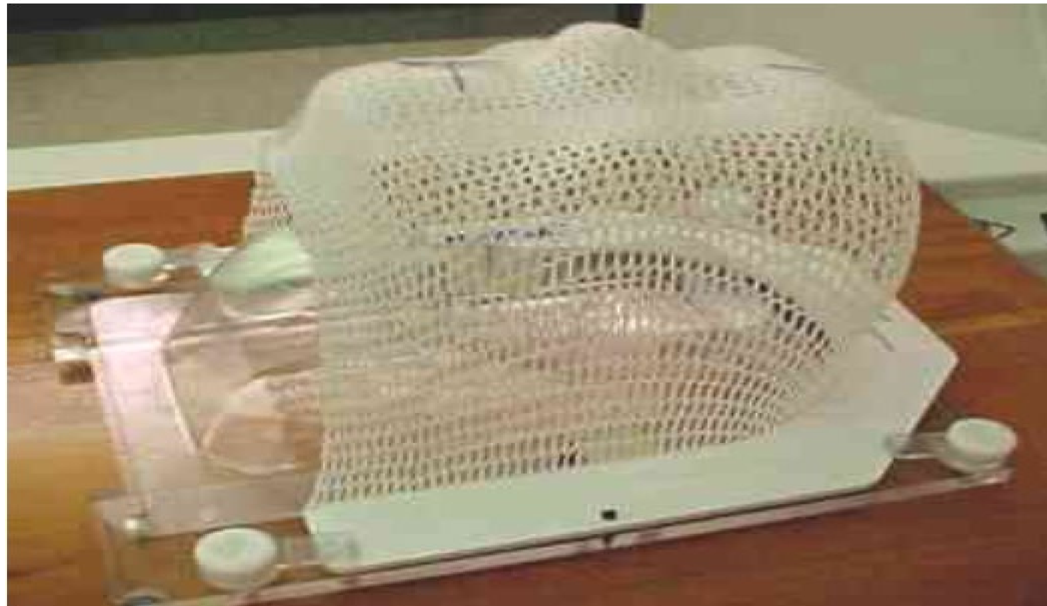
Locally Advanced Oropharynx Cancer

Radiation Treatment Algorithm and Treatment Timeline

- Consultation with Scope Examination
- Radiation Simulation(CT Scan) in the Treatment Planning Position with Immobilization



https://www.aboutcancer.com/neck_simulation.htm

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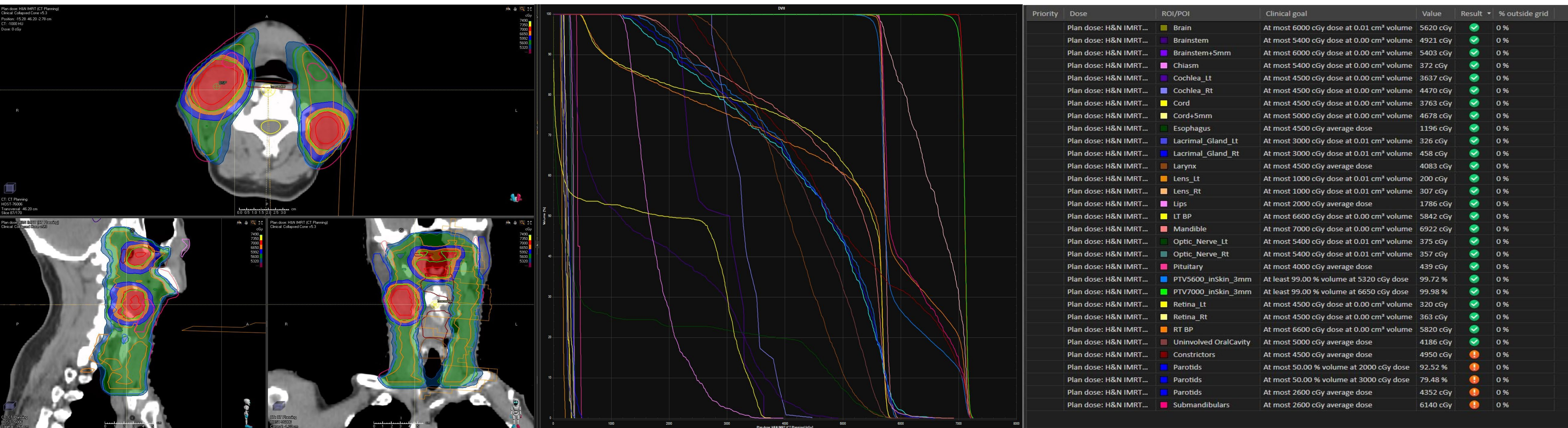
Locally Advanced Oropharynx Cancer

Radiation Treatment Planning



Priority	Dose	ROI/POI	Clinical goal	Value	Result	% outside grid
	Plan dose: H&N IMRT...	Brain	At most 6000 cGy dose at 0.01 cm^3 volume	5620 cGy	✓	0 %
	Plan dose: H&N IMRT...	Brainstem	At most 5400 cGy dose at 0.00 cm^3 volume	4921 cGy	✓	0 %
	Plan dose: H&N IMRT...	Brainstem+5mm	At most 6000 cGy dose at 0.00 cm^3 volume	5403 cGy	✓	0 %
	Plan dose: H&N IMRT...	Chiasm	At most 5400 cGy dose at 0.00 cm^3 volume	372 cGy	✓	0 %
	Plan dose: H&N IMRT...	Cochlea_Lt	At most 4500 cGy dose at 0.00 cm^3 volume	3637 cGy	✓	0 %
	Plan dose: H&N IMRT...	Cochlea_Rt	At most 4500 cGy dose at 0.00 cm^3 volume	4470 cGy	✓	0 %
	Plan dose: H&N IMRT...	Cord	At most 4500 cGy dose at 0.00 cm^3 volume	3763 cGy	✓	0 %
	Plan dose: H&N IMRT...	Cord+5mm	At most 5000 cGy dose at 0.00 cm^3 volume	4678 cGy	✓	0 %
	Plan dose: H&N IMRT...	Esophagus	At most 4500 cGy average dose	1196 cGy	✓	0 %
	Plan dose: H&N IMRT...	Lacrimal_Gland_Lt	At most 3000 cGy dose at 0.01 cm^3 volume	326 cGy	✓	0 %
	Plan dose: H&N IMRT...	Lacrimal_Gland_Rt	At most 3000 cGy dose at 0.01 cm^3 volume	458 cGy	✓	0 %
	Plan dose: H&N IMRT...	Larynx	At most 4500 cGy average dose	4083 cGy	✓	0 %
	Plan dose: H&N IMRT...	Lens_Lt	At most 1000 cGy dose at 0.01 cm^3 volume	200 cGy	✓	0 %
	Plan dose: H&N IMRT...	Lens_Rt	At most 1000 cGy dose at 0.01 cm^3 volume	307 cGy	✓	0 %
	Plan dose: H&N IMRT...	Lips	At most 2000 cGy average dose	1786 cGy	✓	0 %
	Plan dose: H&N IMRT...	LT BP	At most 6600 cGy dose at 0.00 cm^3 volume	5842 cGy	✓	0 %
	Plan dose: H&N IMRT...	Mandible	At most 7000 cGy dose at 0.00 cm^3 volume	6922 cGy	✓	0 %
	Plan dose: H&N IMRT...	Optic_Nerve_Lt	At most 5400 cGy dose at 0.01 cm^3 volume	375 cGy	✓	0 %
	Plan dose: H&N IMRT...	Optic_Nerve_Rt	At most 5400 cGy dose at 0.01 cm^3 volume	357 cGy	✓	0 %
	Plan dose: H&N IMRT...	Pituitary	At most 4000 cGy average dose	439 cGy	✓	0 %
	Plan dose: H&N IMRT...	PTV5600_inSkin_3mm	At least 99.00 % volume at 5320 cGy dose	99.72 %	✓	0 %
	Plan dose: H&N IMRT...	PTV7000_inSkin_3mm	At least 99.00 % volume at 6650 cGy dose	99.98 %	✓	0 %
	Plan dose: H&N IMRT...	Retina_Lt	At most 4500 cGy dose at 0.00 cm^3 volume	320 cGy	✓	0 %
	Plan dose: H&N IMRT...	Retina_Rt	At most 4500 cGy dose at 0.00 cm^3 volume	363 cGy	✓	0 %
	Plan dose: H&N IMRT...	RT BP	At most 6600 cGy dose at 0.00 cm^3 volume	5820 cGy	✓	0 %
	Plan dose: H&N IMRT...	Uninvolved OralCavity	At most 5000 cGy average dose	4186 cGy	✓	0 %
	Plan dose: H&N IMRT...	Constrictors	At most 4500 cGy average dose	4950 cGy	!	0 %
	Plan dose: H&N IMRT...	Parotids	At most 50.00 % volume at 2000 cGy dose	92.52 %	!	0 %
	Plan dose: H&N IMRT...	Parotids	At most 50.00 % volume at 3000 cGy dose	79.48 %	!	0 %
	Plan dose: H&N IMRT...	Parotids	At most 2600 cGy average dose	4352 cGy	!	0 %
	Plan dose: H&N IMRT...	Submandibulars	At most 2600 cGy average dose	6140 cGy	!	0 %

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Locally Advanced Oropharynx Cancer

Radiation Treatment Algorithm and Treatment Timeline

-IMRT plan development takes 1-2 weeks

-Physics Q/A

-Daily Monday-Friday Treatments for 35 fractions to a total delivered dose of 7000cGy to the areas of gross disease and lower dose to at risk areas with concurrent chemotherapy

-Weekly On-Treatment Visits to assess treatment toxicity and management

-Follow q3 months with scope examination alternating with ENT if following

-PET/CT at 3 months and further imaging dictated by clinical findings

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Head and Neck - Audience Response

Locally Advanced Oropharynx Cancer

Chemoradiation:

1) High-dose Cisplatin (100mg/m2 q3wks * 2-3)
2) Weekly Cisplatin (40mg/m2 weekly)
3) Cetuximab (400mg/m2 followed by 250mg/m2 weekly)
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Head and Neck – Audience Response

Locally Advanced Oropharynx Cancer

Chemoradiation but now he is 78 with moderate hearing loss.

1) High-dose Cisplatin (100mg/m2 q3wks * 2-3)
2) Weekly Cisplatin (40mg/m2 weekly)
3) Cetuximab (400mg/m2 followed by 250mg/m2 weekly)
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Locally Advanced Oropharynx Cancer

Oral Medicine:

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Nutrition:

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Locally Advanced Oropharynx Cancer

Outcome:

3-month PET post-chemoradiation shows Complete Response

Survivorship:

Watch for Thyroid Dysfunction

Watch for Carotid Atherosclerosis

Watch for recurrence/secondary malignancy

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Head and Neck

Metastatic Oral Cavity Cancer

58 yo with history of a Stage IVa (T4aN0M0) tongue cancer presents with several month history of cough.

Treated with Antibiotics * 2 without improvement

Past Hx:

5 years prior to presentation, partial glossectomy with neck dissection and radial forearm free flap (T1N0M0)

2 years prior to presentation, hemimandibulectomy and partial glossectomy w/ left tonsil/soft palate resection and partial pharyngectomy with fibular free flap (T4aN0M0)

Adjuvant XRT alone (60 Gy)

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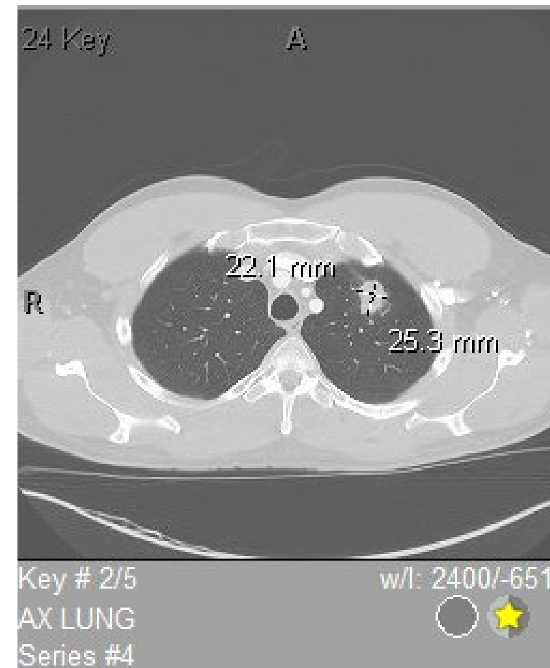
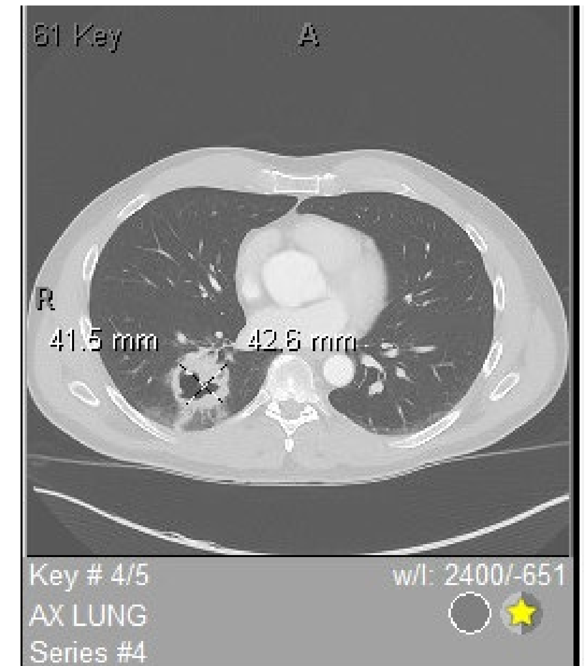
Metastatic Oral Cavity Cancer

CT: No evidence of recurrence in Neck; numerous bilateral pulmonary nodules with largest measuring 4.3cm

Pathology: Robotic bronchoscopy – positive for keratinizing squamous cell carcinoma. CPS 7





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Head and Neck

Metastatic Oral Cavity Cancer

Staging: Stage IVc (T0N0M1)

What are our options?

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Metastatic Oral Cavity Cancer

Immunotherapy:

Pembrolizumab 200mg IV q3wks or 400mg IV q6wks

Chemoimmunotherapy:

Platinum (Cis or Carbo)/Infusional 5-FU/pembrolizumab

Clinical Trial: ?

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Head and Neck – Audience Response

Metastatic Oral Cavity Cancer

1) Immunotherapy:

Pembrolizumab 200mg IV q3wks or 400mg IV q6wks

2) Chemoimmunotherapy:

Platinum (Cis or Carbo)/Infusional 5-FU/Pembrolizumab

3) Chemoimmunotherapy (not approved):

Platinum/Pembrolizumab

4) Chemoimmunotherapy (not approved):

Platinum/Paclitaxel/Pembrolizumab

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Metastatic Oral Cavity Cancer

He was able to join a clinical trial but came off trial due to travel

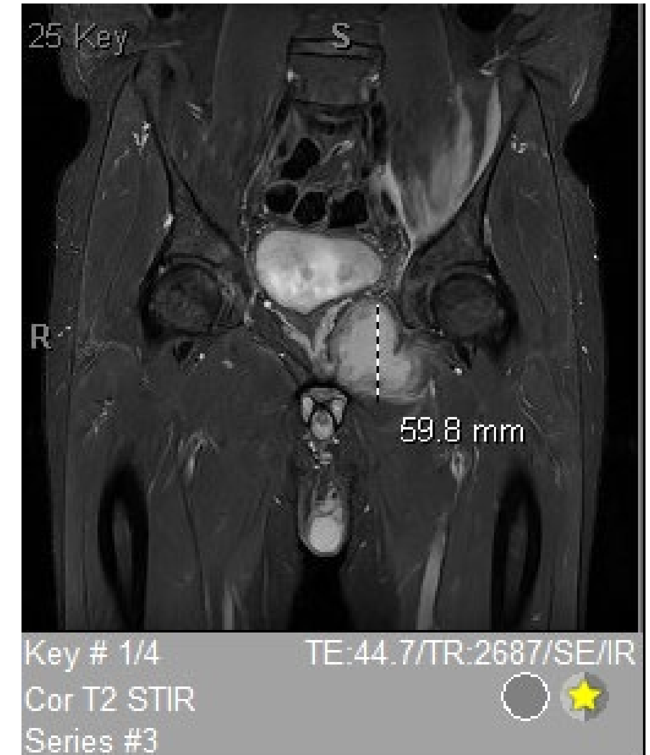
Trial had used pembrolizumab as a backbone so continued

Pembro.

6 months later, developed back/leg pain = sciatica

MRI: 6.2cm lytic lesion in left pubic ramus/pubis with large soft tissue necrotic mass.

Declines chemotherapy – continue pembrolizumab and started on Denosumab therapy



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Metastatic Oral Cavity Cancer

Risks of Osteoradionecrosis?

Other Supportive Care options (c/o anorexia)

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Head and Neck

Metastatic Oral Cavity Cancer

He completed radiation therapy to hip but slowly had a diminishing performance status and went on hospice.

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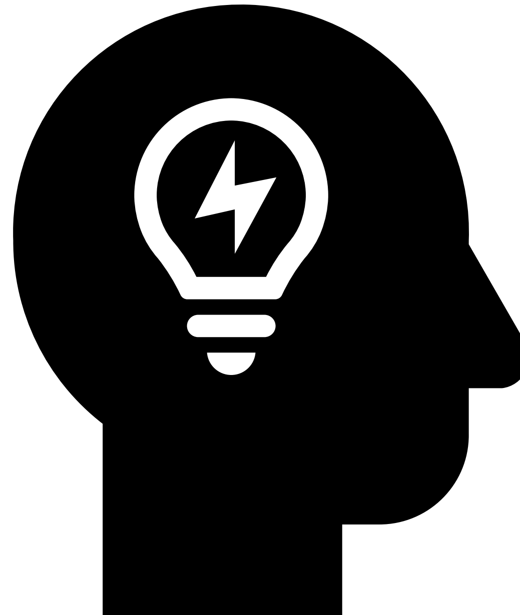
Head and Neck

- **Panel Pearls and Questions**



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