WELCOME TO THE NILE WEBINAR FOR APRIL 2021!

Immunize Nevada is a nonprofit 501c3 coalition that is widely recognized as Nevada's trusted resource for immunization information and community health outreach for all ages. We accomplish this by fostering education and statewide collaboration with a variety of health partners and collaborators.

You may view upcoming web trainings at ImmunizeNevada.org/NILE-webinars

Thank you for joining us today!

PROMOTING HEALTH
immunize nevada
& PREVENTING DISEASE
ImmunizeNevada.org • CELEBRATING 25 YEARS

HOUSEKEEPING ITEMS

Connectivity Issues	Please log back in and we'll continue where we left off.	
Have a Question?	Locate the **Q & A box** and type them there. We will address questions throughout the presentation.	
CEU Claiming	**Nursing/Pharmacy/CHW CEUs:** Complete the post-event survey. Certificates will be emailed within one week of the live presentation.	
Recording & Slides	The recorded webinar and slides will be posted to ImmunizeNevada.org/NILE-webinars.	

DISCLAMER

Immunize Nevada's NILE webinars are made possible by the generosity of speakers who donate their time and expertise to benefit the coalition. The expectation and goal is for community partners to gain knowledge on immunization/infectious disease-related topics through a non-branded, unbiased presentation.

The opinions expressed are those of today's presenter and do not necessarily reflect those shared by Immunize Nevada or its partners.

Lancette VanGuilder, RDH, BS

Founder
Hygienist for Health

The Role of the Dental Hygienist: Head and neck cancer education, screening and vaccination

A Panel Discussion for Health Professionals

Lancette VanGuilder, RDH,BS

Hygienist for Health

April 2021

Key Opportunities

Inside and Outside the Dental Setting

Dental Professionals can rise to meet the needs of our communities.

- Interdisciplinary Collaborative Care
- Education/Awareness
- Prevention Efforts
- Screening
- Assessments/Referrals
- Quality of Life management

Continuing Education
Patient Management
Roles, Scope of Practice, Policymaking
Outreach

Medical-Dental Integration

Education and Awareness

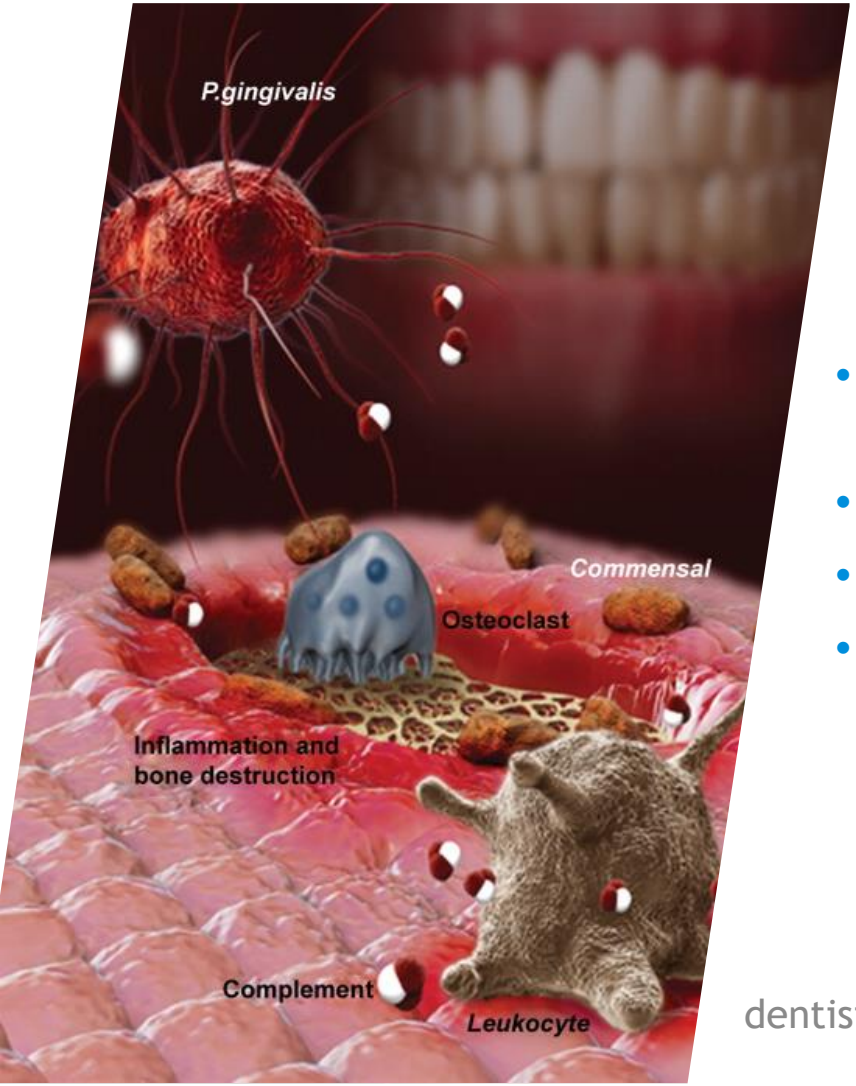
Implement strategies to raise awareness, offer evidenced- based information and promote opportunities for patient and community engagement.

- Indirect Patient Care
  - Social media platforms
  - Websites
  - Advertising
- Direct Patient Care
  - Medical/Social History Forms
  - Dental Appointment Services

- Brochures, Posters
- Offer Resources
- Videos, Training
- Community Events

Risk Factors

- New:
  - Viral (HPV), Bacterial, Fungal
- Existing:
  - UV Exposure
  - Radiographs
  - Tobacco
  - Alcohol
  - Poor diet/nutrition
  - Chronic tissue irritation



Oral Bacteria Linked to Esophageal Cancer

- P. Gingivalis
  - Biomarker for esophageal cancer
- Red, Swollen or Bleeding gums
- Deep pockets/ bone loss
- Tooth loss
  - Each mm bone loss=4X greater risk for head and neck cancer
  - Each mm bone loss=5.25X greater risk for tongue cancer

dentistrytoday.com March 2016

HPV Related Oral Cancer

Each year, more than 30,000 new cases of oral cancer are diagnosed and over 8,000 deaths occur.

HPV
79 Million US Citizens Infected

65% Of Oral Cancers Are Linked to HPV

Most sexually active adults will acquire some form of HPV at one point in their lifetime.

Oral Cancer
is an age related disease

95% of Oral Cancers are found in People ages 40 and up.

2:1 Male to female ratio

8,000 Deaths Occur From Oral Cancer Per Year

Health Fact!
Each Year About 21,000 Could Be Prevented by Getting the HPV Vaccine

5200 Men

2800 Women

- EDUCATE
  - GAP YEARS: Between HPV infection and cancer (about 20+ years)
- WARN
  - May be no precancerous changes or warning signs (such as warts)
- Address EFFECTIVENESS!
  - It is expected that vaccination will prevent more than 90% of oropharyngeal cancers caused by HPV (more than 10,000 cancers per year).
  - Vaccination is extremely effective at preventing the types of HPV that cause oropharyngeal cancers
- Ensure Safety
  - FDA Approval, Tracking and Reporting, Years of safety data
  - Know side effects (fainting and dizziness)
- Make a Strong Recommendation
  - Share information, build trust and answer questions
- Administer Vaccines
  - Policy making
  - Volunteer
  - Dental Setting
  - Public Health Setting

https://dentistrytoday.com/news/todays-dental-news/item/1155-dentists-may-play-a-greater-role-in-hpv-vaccination

Prevention Efforts

- Educate about Risk Factors
- Encourage routine dental visits
- Vaccines
  - Ask about vaccines on medical history forms
  - Educate about GAP years
  - Reassure Safety
  - Make a strong recommendation
  - Administer

Ask and Educate About Vaccinations

HPV Vaccination has been approved to help prevent head and neck cancers related to the HPV virus.

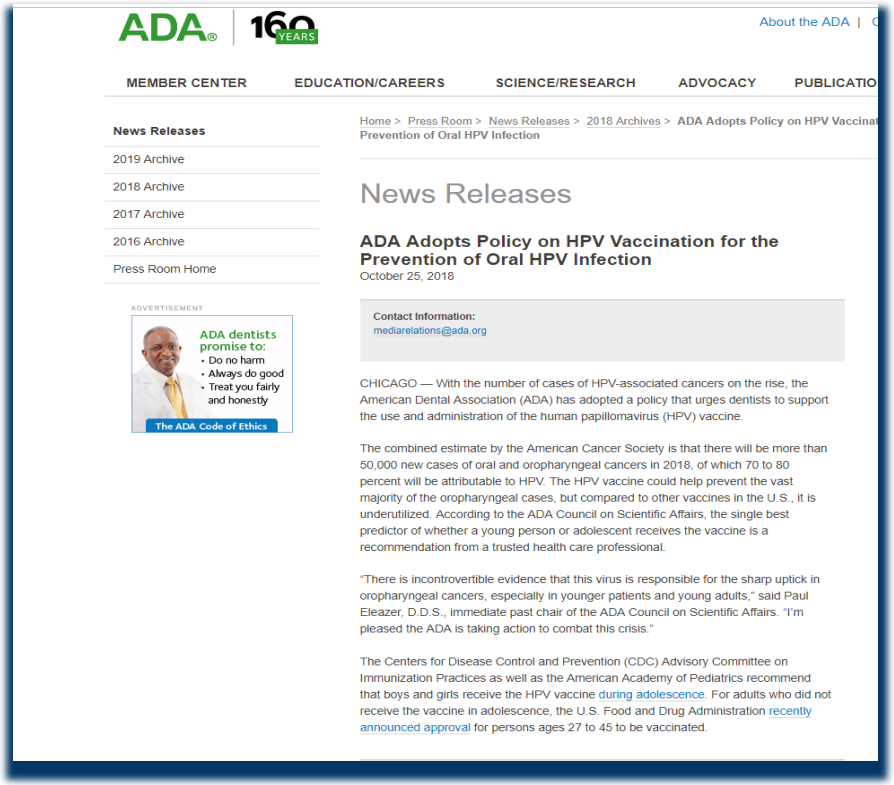
Gardasil, the HPV vaccine, approved to prevent head-and-neck cancer (statnews.com)

Patterns of Primary Care Visits for Adolescents

- Less than 50% of adolescents receive preventive care, and many have no PCP.
- Reinforces need for outreach to improve vaccination rates

http://doi.org/10.1016/j.acap.2018.01.002

American Dental Association 2017,2018,2019



ADA 160 YEARS

About the ADA | C

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Prevention of Oral HPV Infection

ADVERTISEMENT

News Releases

ADA Adopts Policy on HPV Vaccination for the Prevention of Oral HPV Infection

October 25, 2018

Contact Information:
mediarelations@ada.org

CHICAGO — With the number of cases of HPV-associated cancers on the rise, the American Dental Association (ADA) has adopted a policy that urges dentists to support the use and administration of the human papillomavirus (HPV) vaccine.

The combined estimate by the American Cancer Society is that there will be more than 50,000 new cases of oral and oropharyngeal cancers in 2018, of which 70 to 80 percent will be attributable to HPV. The HPV vaccine could help prevent the vast majority of the oropharyngeal cases, but compared to other vaccines in the U.S., it is underutilized. According to the ADA Council on Scientific Affairs, the single best predictor of whether a young person or adolescent receives the vaccine is a recommendation from a trusted health care professional.

"There is incontrovertible evidence that this virus is responsible for the sharp uptick in oropharyngeal cancers, especially in younger patients and young adults," said Paul Eleazer, D.D.S., immediate past chair of the ADA Council on Scientific Affairs. "I'm pleased the ADA is taking action to combat this crisis."

The Centers for Disease Control and Prevention (CDC) Advisory Committee on Immunization Practices as well as the American Academy of Pediatrics recommend that boys and girls receive the HPV vaccine during adolescence. For adults who did not receive the vaccine in adolescence, the U.S. Food and Drug Administration recently announced approval for persons ages 27 to 45 to be vaccinated.

Policy on Human Papilloma Virus Vaccinations

Originating Council
Council on Clinical Affairs

Adopted
2017

Purpose

The American Academy of Pediatric Dentistry (**AAPD**) recognizes there is a link between human papilloma virus (**HPV**) and development of oral pharyngeal cancers. The purpose of this policy is to provide a perspective on dental provider's role in discussing oral cancers and their associations with HPV.

Methods

This policy is based on a review of current dental and medical literature. An electronic search was conducted using the PubMed®/MEDLINE database using the terms: HPV vaccines, HPV and oral cancer, HPV and cancer, Gardasil® and prevention of cancer; fields: all; limits: within the last 10 years, humans, English, birth through age 99. The search returned over 865 articles. Papers for review were chosen from this list and from the references within selected articles.

Background

HPV is associated with anogenital, skin, and oral and oropharyngeal cancers (**OOPC**)[1,2]. It also is observed in oral squamous cell carcinoma, the most common type of OOPC.[2] Based on epidemiological trends, 48,330 new cases and 9,570 deaths due to OOPC were expected to occur in 2016.[3] HPV is a critical factor, with the HPV 16 strain being the most prevalent.[4] The association between HPV infection and OOPC may be responsible for the recent epidemiologic change with OOPC affecting younger population groups.

Vaccines for prevention of HPV infections via subtypes 16 and 18 have been available since 2006.[5] The Centers for Disease Control and Prevention (**CDC**) found that the prevalence of HPV infection decreased 56 percent among female teenagers since the vaccine was introduced.[6] HPV vaccine efficacy against anal and oral infection is high, and similar to that against cervical infection.[7] Because the same viral strains are strongly associated with OOPC, it is reasonable to assume that HPV vaccines play an important role in oral pharyngeal cancer prevention. Although there are no studies showing that the HPV vaccine prevents the development of OOPC, it is reasonable to postulate the vaccine's potential since the vaccine has been shown to prevent HPV infection.[6]

The American Academy of Pediatrics (**AAP**) recommends HPV vaccination for all 11 to 12 year old children, and includes females up to age 26 and males up to age 21 who have not been vaccinated previously.[8] The vaccinations can be administered as early as nine years of age.[9] Initially, the AAP recommended a series of three vaccines over a six month period, with the second dose occurring 1–2 months following the first, and the third dose at six months.[8] Low compliance rates for completion of the vaccination series are due to access, willingness of physicians to discuss with parents, and cost.[10-13] In 2016, the CDC Advisory Committee on Immunization Practices recommended a two-dose schedule for children younger than 15 years of age with both doses 6–12 months apart.[9] For children older than 15 years and immunocompromised persons, the three-dose schedule is still recommended.[9]

Adolescent patients have unique needs related to oral healthcare. Anticipatory guidance for adolescent patients includes tobacco and nutritional counseling.[14] Given that dental professionals are already involved in secondary and tertiary prevention and, to a limited extent, in the treatment of OOPC, offering primary prevention in dental clinics seems a logical and clinically-appropriate approach. As adolescent patients tend to see the dentist twice yearly and more often than their medical doctor, this is a window of opportunity for the dental professional to provide counseling to the patient and parent about HPV's link to oral cancer and potential benefits of the HPV vaccine.[15]

Policy statement

The AAPD supports measures that prevent OOPC, including the prevention of HPV infection, a critical factor in the development of oral squamous cell carcinoma.

The AAPD encourages oral health care providers to:

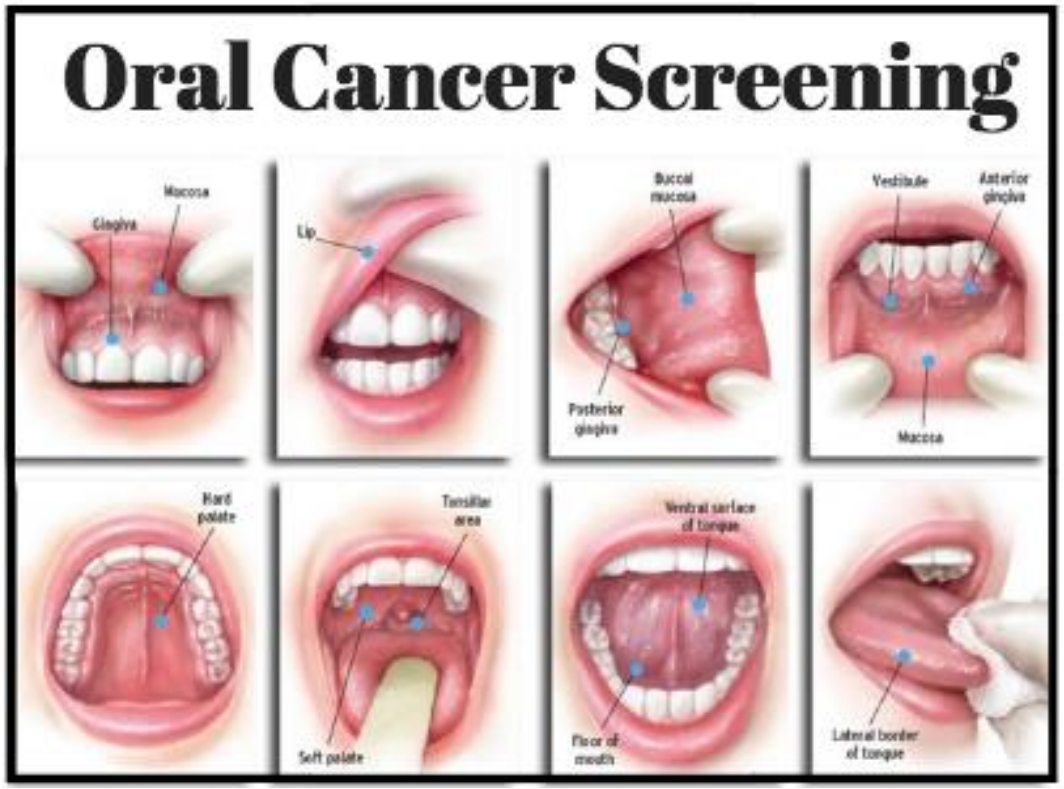
- educate patients, parents, and guardians on the serious health consequences of OOPC and the relationship of HPV to OOPC.

ABBREVIATIONS
AAP: American Academy of Pediatrics. **AAPD:** American Academy of Pediatric Dentistry. **CDC:** Centers for Disease Control and

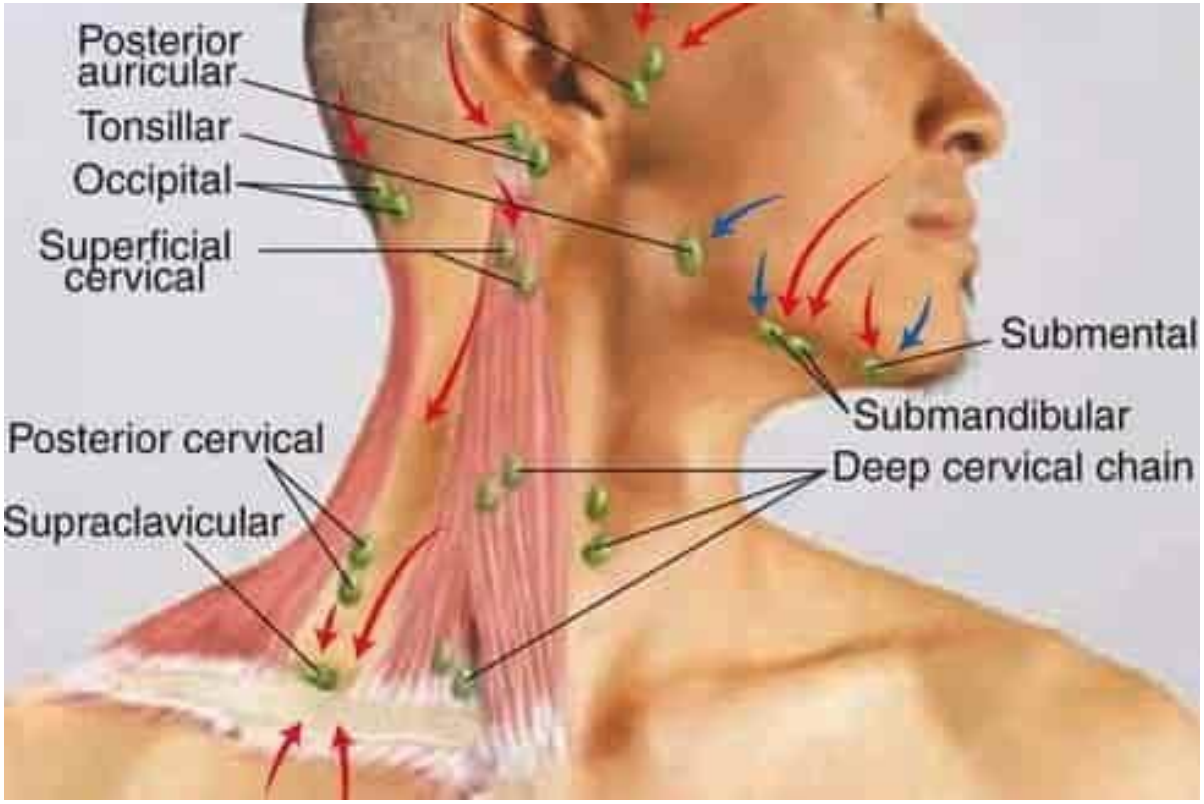
https://www.ada.org/en/publications/ada-news/2019-archive/april/ada-brochure-educates-about-hpv-vaccine?fbclid=IwAR0oKQE-xemqUE0g2vj-x9yXi8jeOjbXBHhQJlcDyJnJv9HSpwcT6Ws2MJQ

15 states

Professionals Screenings (dental office)



Tactile and Visual Examination



Self Screenings(at home)

- Remove any appliances
- Look and feel inside of lips and look at gums
- Pull cheeks back
- Tilt head back and look at the roof of the mouth, look down and look at floor of the mouth
- Pull out the tongue and look at all surfaces, especially the back and the sides and underneath
- Use fingertips and light, but firm pressure to feel for any lumps and bumps in lips, checks, tongue and under chin and along the neck

Look for any lumps/bumps, red/white patches/sores that don't heal, sores that bleed easily, sore throat, horse voice, cleaning throat often, delayed healing

https://www.sixstepscreening.org/self-exam/

Self Assessment

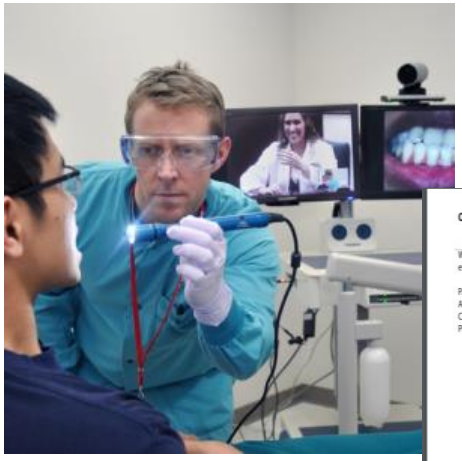
- Need good lighting and a mirror
- Take a picture
- Schedule an appointment-follow up

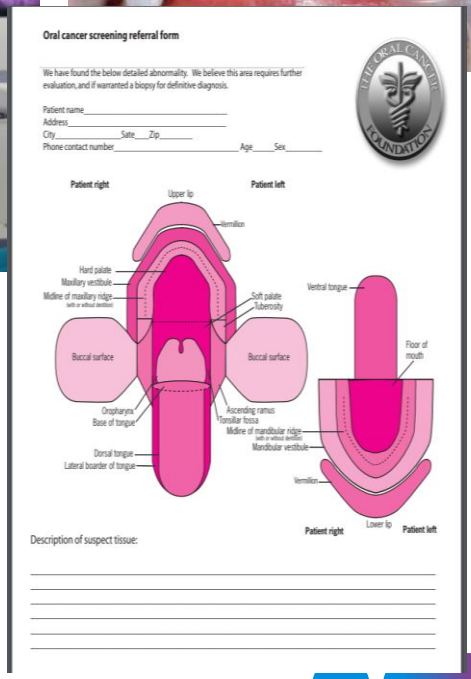
Screening/Assessment and Referrals

- Dental Practicioners are trained to know
  - Signs and Symptoms
  - High Risk Factors
  - Common areas/sites
- Dental Practicioners are encouraged to perform routine tactile and visual examinations
- Dental Practicioners are now promoting patients to self screen at home
- Dental Practicioners should build a robust partnership with other healthcare providers and advocates to improve public health outcomes

Assessment and Referral Telehealth/Imaging/Documentation

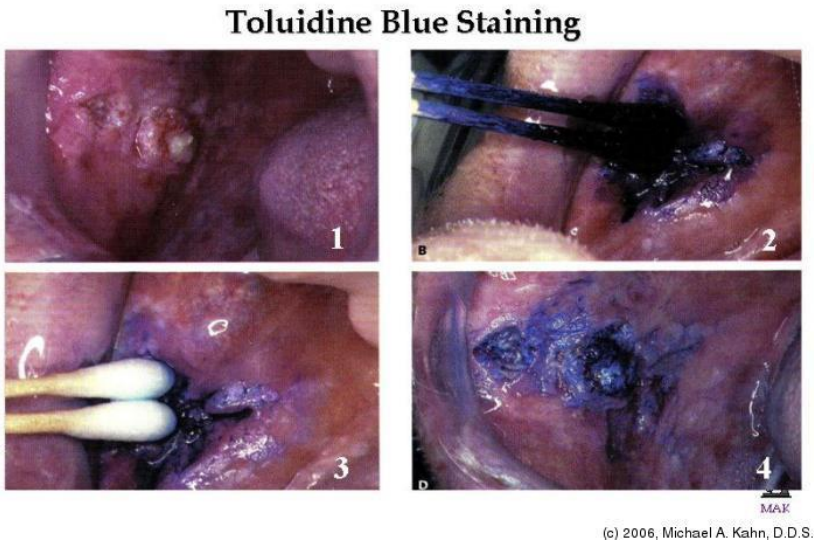
For patients seeking care for suspicious lesions, immediate performance of a biopsy or referral to a specialist remains the single most important recommendation for clinical practice

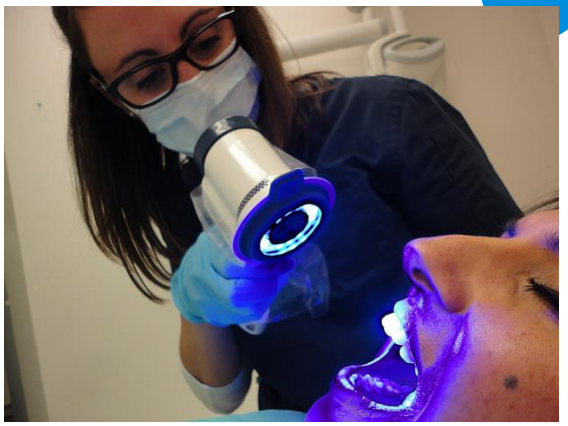


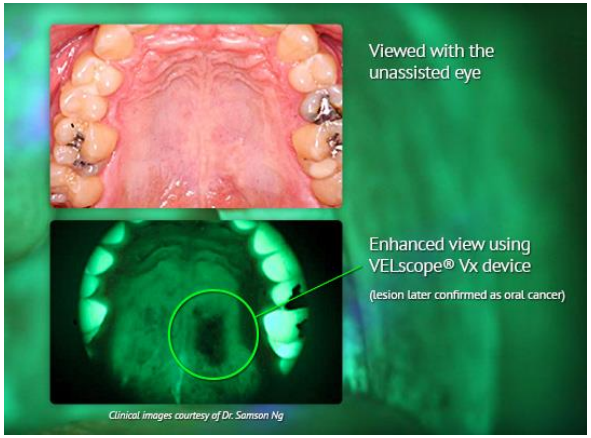


Evidence-based clinical practice guideline for the evaluation of potentially malignant disorders in the oral cavity - The Journal of the American Dental Association (ada.org)

Adjuncts: Education and Screenings







Education, awareness and screenings

PAP Smears- Cervical

Breast- Mammograms

Prostate

Skin

- simple, opportunistic screenings and exams have all had their death rates reduced through programs promoting early discovery.

Quality of Life

Before, During and After Cancer Treatment

- Eating
- Chewing
- Swallowing

- Senses
- Appetite loss
- Fatigue, Pain, Physical limitations
- Emotional distress

Høxbroe Michaelsen S, Grønhøj C, Høxbroe Michaelsen J, Friborg J, von Buchwald C. Quality of life in survivors of oropharyngeal cancer: A systematic review and meta-analysis of 1366 patients. Eur J Cancer. 2017 Jun;78:91-102. doi: 10.1016/j.ejca.2017.03.006. Epub 2017 Apr 18. PMID: 284313

ADA Accepted
American Dental Association

The Role of the Dental Hygienist Head and Neck Cancer

- Medical-Dental Integration
- Awareness
- Education
- Screenings
- Vaccinations
- Quality of Life

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Hygienist for Health

www.hygienistforhealth.com

Abhinand V Peddada, MD

Radiation Oncologist
Renown Health

Head and Neck Cancer

Nursing Perspective for Radiation Patients

Objectives

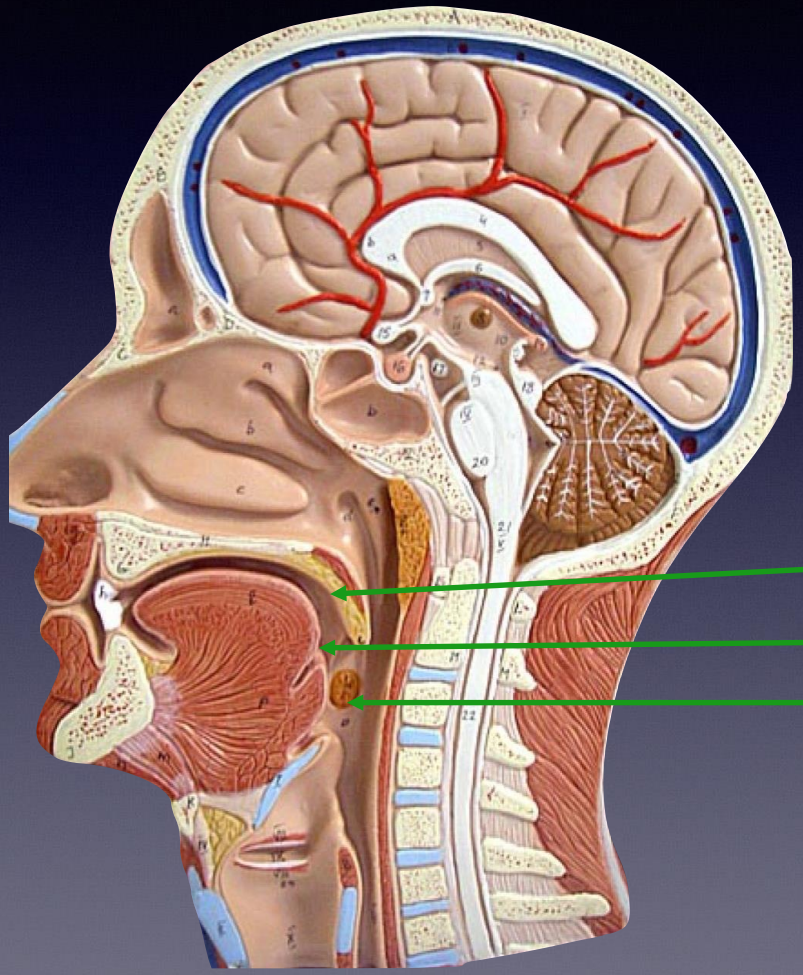
- Anatomy
- Epidemiology
- Therapy
- Radiation Effects & Management

Disclosure

- Stock Ownership - Galera Therapeutics

Anatomy

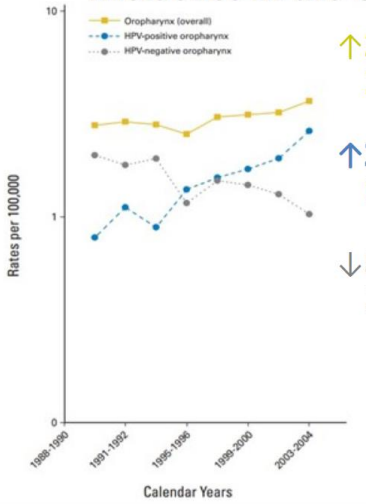
Anatomy



Oropharynx

Soft Palate
Base of Tongue
Tonsils

Human Papillomavirus and Rising Oropharyngeal Cancer Incidence in the United States



↑28% in all OPSCC
2.6→3.6 cases/100k

↑225% in HPV+ OPSCC
0.8→2.6 cases/100k

↓50% in HPV- OPSSC
2.0→1.0 cases/100k

Chatruvedi *et al*, J Clin Oncol, 29(32), 2011

Annual Number and Rate[a] of HPV-Associated Cancers[b] by Cancer Site, Sex, and Race and Ethnicity[c], United States, 2013–2017

		Race								Ethnicity					
		All Races Combined		White		Black		American Indian/Alaska Native		Asian/Pacific Islander		Non-Hispanic		Hispanic	
Cancer Site	Sex	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases
Cervix	Female	7.2	12,143	7.1	9,313	8.2	1,844	6.0	121	5.9	637	7.0	10,021	9.0	2,121
Vagina	Female	0.4	867	0.4	696	0.6	132	0.3	5	0.3	25	0.4	778	0.5	90
Vulva	Female	2.1	4,114	2.2	3,659	1.5	349	1.2	23	0.5	48	2.2	3,886	1.2	229
Penis	Male	0.8	1,348	0.8	1,154	0.8	133	0.6	10	0.4	31	0.8	1,133	1.3	215
Anus	Overall	1.9	7,084	2.0	6,179	1.8	741	1.0	39	0.3	58	2.0	6,594	1.3	490
	Female	2.3	4,751	2.5	4,247	1.7	400	1.2	25	0.4	39	2.4	4,426	1.6	325
	Male	1.3	2,332	1.3	1,932	1.8	341	0.8	14	0.2	19	1.4	2,168	0.9	165
Oropharynx	Overall	5.1	19,775	5.5	17,635	3.6	1,608	3.0	119	1.3	259	5.4	18,775	2.5	1,000
	Female	1.7	3,530	1.8	3,085	1.4	335	1.0	20	0.6	63	1.8	3,347	0.9	183
	Male	8.7	16,245	9.4	14,550	6.6	1,273	5.3	98	2.2	196	9.3	15,428	4.4	817
All HPV-associated cancers	**Overall**	**12.3**	**45,331**	**12.8**	**38,637**	**11.4**	**4,808**	**8.1**	**317**	**5.4**	**1,058**	**12.7**	**41,186**	**9.8**	**4,143**
	Female	**13.8**	**25,405**	**14.2**	**21,000**	**13.4**	**3,061**	**9.7**	**194**	**7.6**	**813**	**13.9**	**22,457**	**13.1**	**2,947**
	Male	10.9	19,926	11.5	17,637	9.2	1,747	6.7	123	2.8	246	11.5	18,729	6.6	1,197

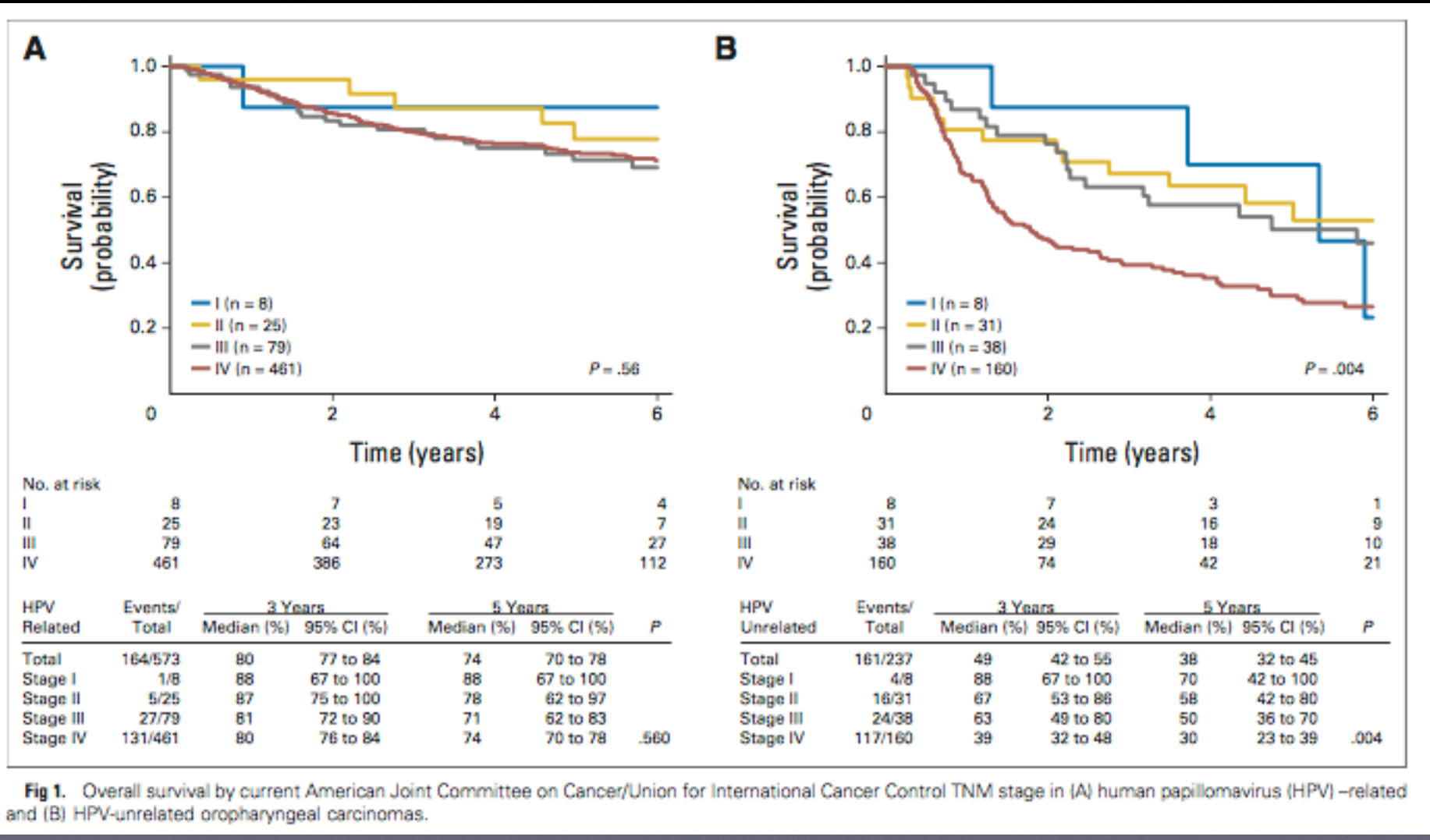
Data are from population-based cancer registries participating in CDC's National Program of Cancer Registries (NPCR) and/or the National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) Program for 2013 to 2017, covering 100% of the U.S. population.

[a]Rates are per 100,000 persons, age-adjusted to the 2000 U.S. standard population.

Workup

- History
- Exam including fiberoptic endoscopic or mirror
- Imaging
  - CT, MRI, PET/CT (Neck & Soft Tissue)
- Biopsy
  - Histology
  - HPV by ISH or P16 (tumor suppressor gene) by IHC

Need for New Staging System



No. at risk				
I	8	7	5	4
II	25	23	19	7
III	79	64	47	27
IV	461	386	273	112

HPV Related	Events/ Total	3 Years Median (%)	3 Years 95% CI (%)	5 Years Median (%)	5 Years 95% CI (%)	P
Total	164/573	80	77 to 84	74	70 to 78	
Stage I	1/8	88	67 to 100	88	67 to 100	
Stage II	5/25	87	75 to 100	78	62 to 97	
Stage III	27/79	81	72 to 90	71	62 to 83	
Stage IV	131/461	80	76 to 84	74	70 to 78	.560

No. at risk				
I	8	7	3	1
II	31	24	16	9
III	38	29	18	10
IV	160	74	42	21

HPV Unrelated	Events/ Total	3 Years Median (%)	3 Years 95% CI (%)	5 Years Median (%)	5 Years 95% CI (%)	P
Total	161/237	49	42 to 55	38	32 to 45	
Stage I	4/8	88	67 to 100	70	42 to 100	
Stage II	16/31	67	53 to 86	58	42 to 80	
Stage III	24/38	63	49 to 80	50	36 to 70	
Stage IV	117/160	39	32 to 48	30	23 to 39	.004

Fig 1. Overall survival by current American Joint Committee on Cancer/Union for International Cancer Control TNM stage in (A) human papillomavirus (HPV) –related and (B) HPV-unrelated oropharyngeal carcinomas.

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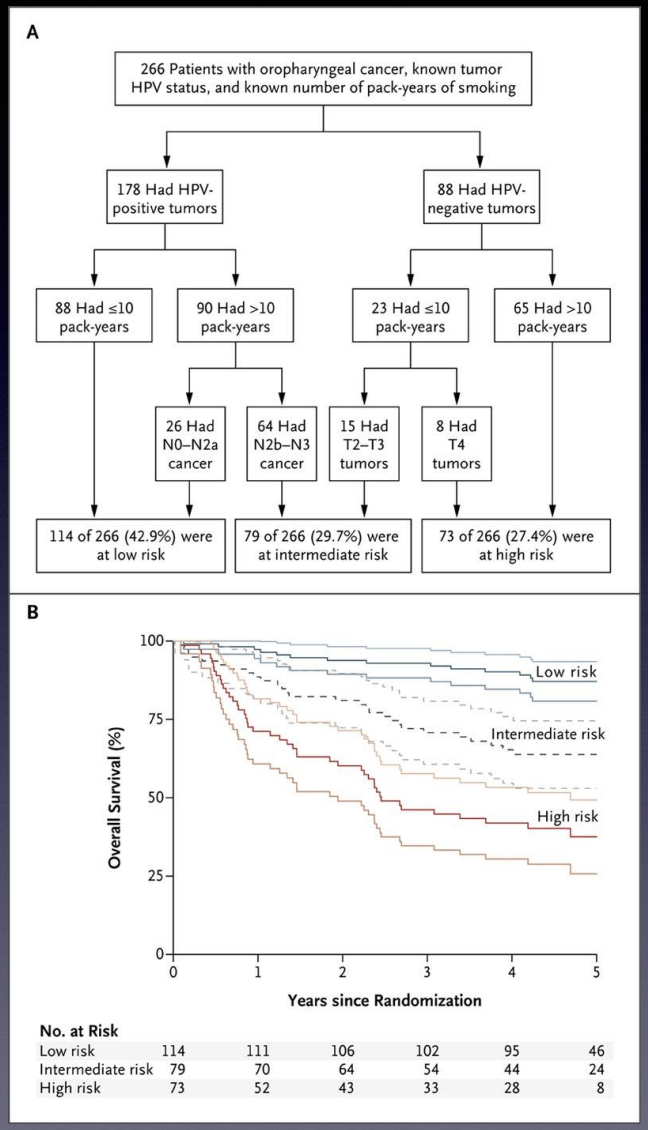
ORIGINAL REPORT

RTOG 0129



N Engl J Med **363**:1, 24-35

Staging

Table 3. AJCC (8th Edition) Prognostic Stage Groups for HPV-Associated (p16+) OPSCC (Pathologic)

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

AJCC = American Joint Committee on Cancer; HPV = human papillomavirus; OPSCC = oropharyngeal squamous cell carcinoma.

Table 5. AJCC (8th Edition) Prognostic Stage Groups for Non–HPV-Associated (p16–) OPSCC

T Category	N Category	M Category	Stage Group
Tis	N0	M0	0
T1	N0	M0	I
T2	N0	M0	II
T3	N0	M0	III
T1, T2, T3	N1	M0	III
T4a	N0, N1	M0	IVA
T1, T2, T3, T4a	N2	M0	IVA
Any T	N3	M0	IVB
T4b	Any N	M0	IVB
Any T	Any N	M1	IVC

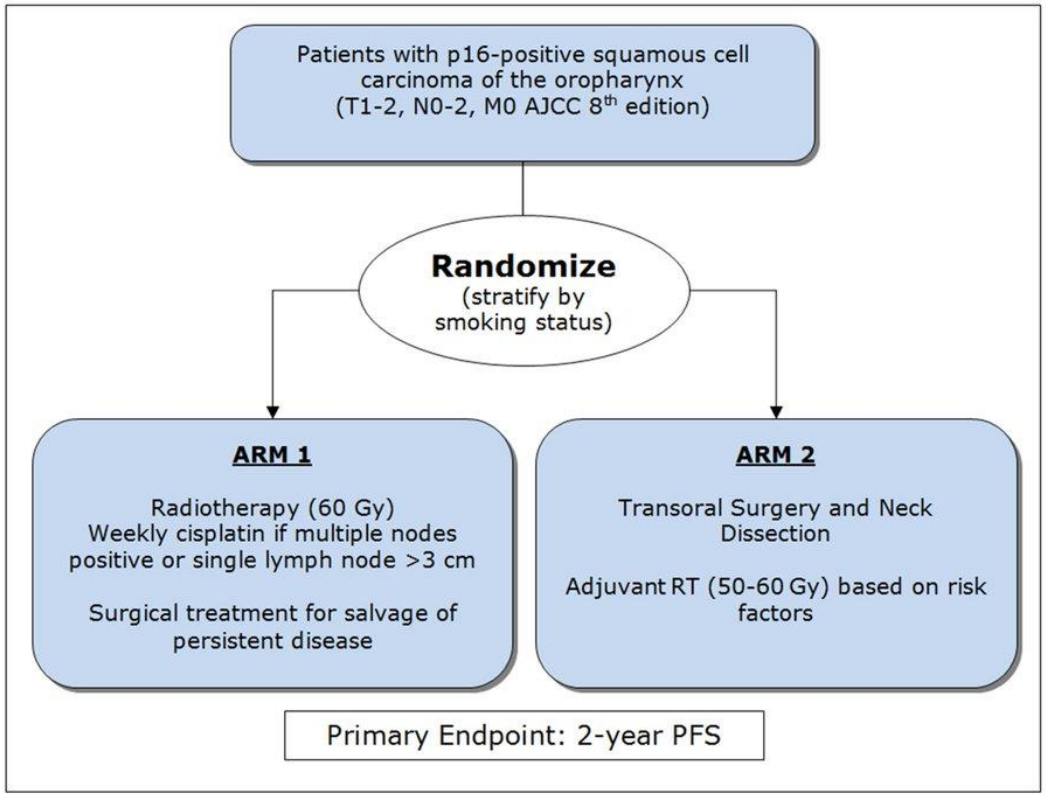
AJCC = American Joint Committee on Cancer; HPV = human papillomavirus; OPSCC = oropharyngeal squamous cell carcinoma.

Therapy

- Surgery
- Surgery + Radiotherapy +/- Chemotherapy
- Radiotherapy +/- Chemotherapy
  - 7000 cGy over 6-7 weeks
  - 100mg/m2 cisplatin every 3 weeks
  - 40mg/m2 cisplatin weekly
  - Erbitux loading 400mg/m2 followed by weekly 250mg/m2
  - Induction chemotherapy followed by chemoradiotherapy

Orator II

A Phase II Randomized Trial of Treatment De-Escalation for HPV-Associated Oropharyngeal Squamous Cell Carcinoma: Radiotherapy vs. Trans-Oral Surgery (ORATOR II)



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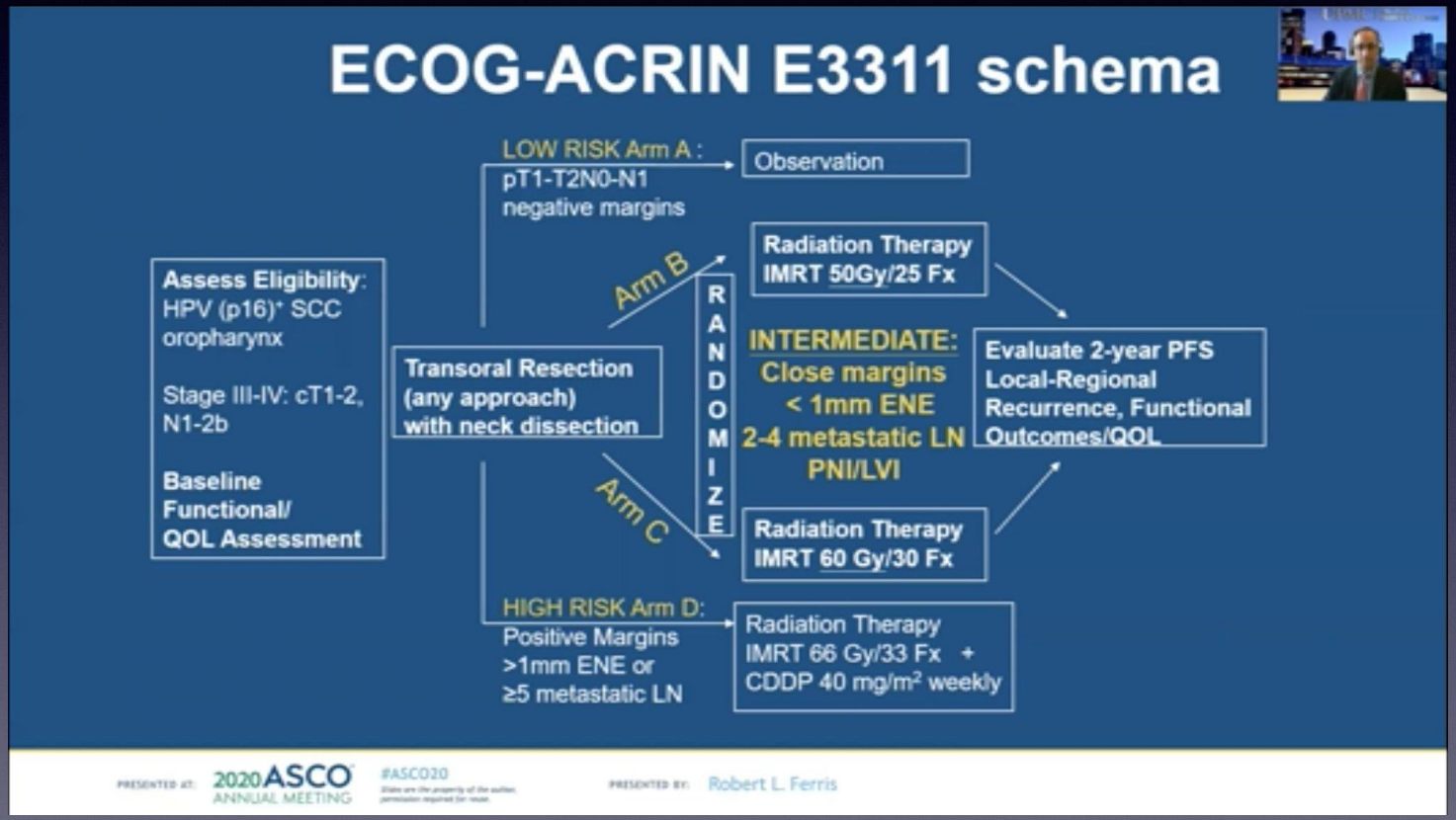

ECOG-ACRIN E3311 schema
LOW RISK Arm A :
pT1-T2N0-N1
negative margins
Observation
Assess Eligibility:
HPV (p16)+ SCC
oropharynx
Stage III-IV: cT1-2,
N1-2b
Baseline
Functional/
QOL Assessment
Transoral Resection
(any approach)
with neck dissection
Arm B
Arm C
RANDOMIZE
Radiation Therapy
IMRT 50Gy/25 Fx
INTERMEDIATE:
Close margins
< 1mm ENE
2-4 metastatic LN
PNI/LVI
Radiation Therapy
IMRT 60 Gy/30 Fx
Evaluate 2-year PFS
Local-Regional
Recurrence, Functional
Outcomes/QOL
HIGH RISK Arm D:
Positive Margins
>1mm ENE or
≥5 metastatic LN
Radiation Therapy
IMRT 66 Gy/33 Fx +
CDDP 40 mg/m2 weekly
PRESENTED AT:
2020 ASCO ANNUAL MEETING
#ASCO20
PRESENTED BY:
Robert L. Ferris

XRT vs Biologic+XRT

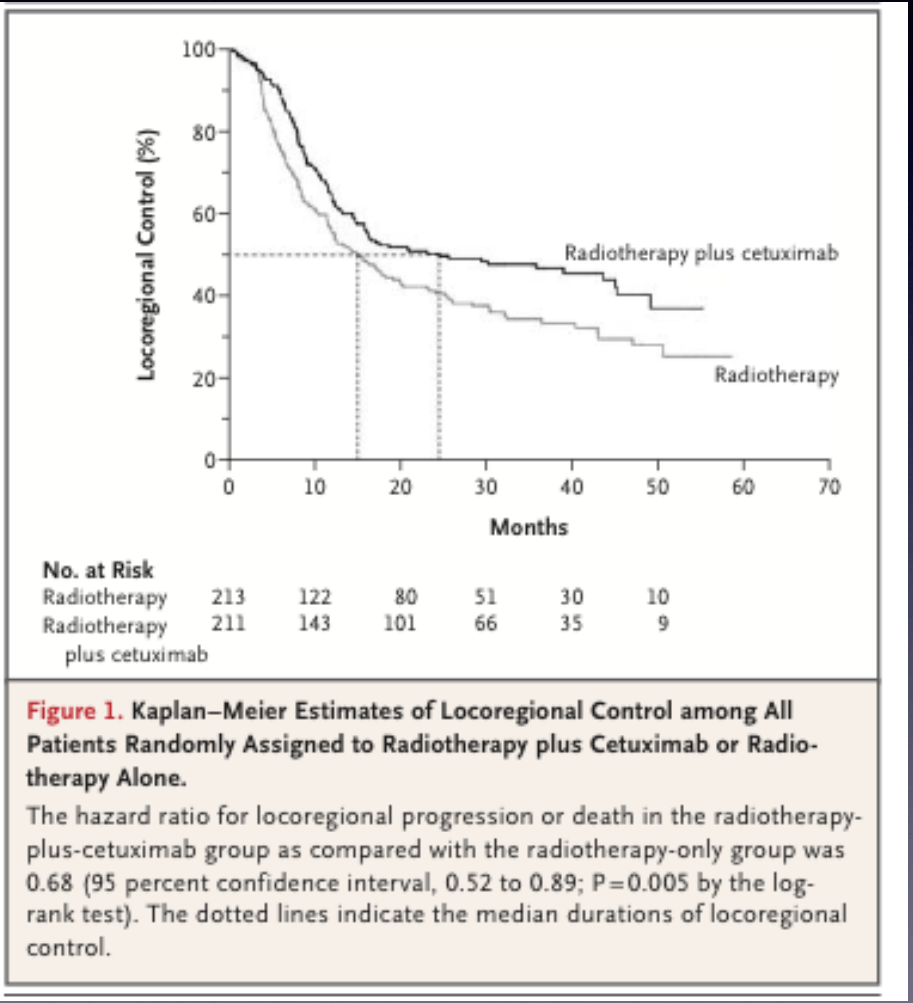


Figure 1. Kaplan–Meier Estimates of Locoregional Control among All Patients Randomly Assigned to Radiotherapy plus Cetuximab or Radiotherapy Alone.

The hazard ratio for locoregional progression or death in the radiotherapy-plus-cetuximab group as compared with the radiotherapy-only group was 0.68 (95 percent confidence interval, 0.52 to 0.89; P=0.005 by the log-rank test). The dotted lines indicate the median durations of locoregional control.

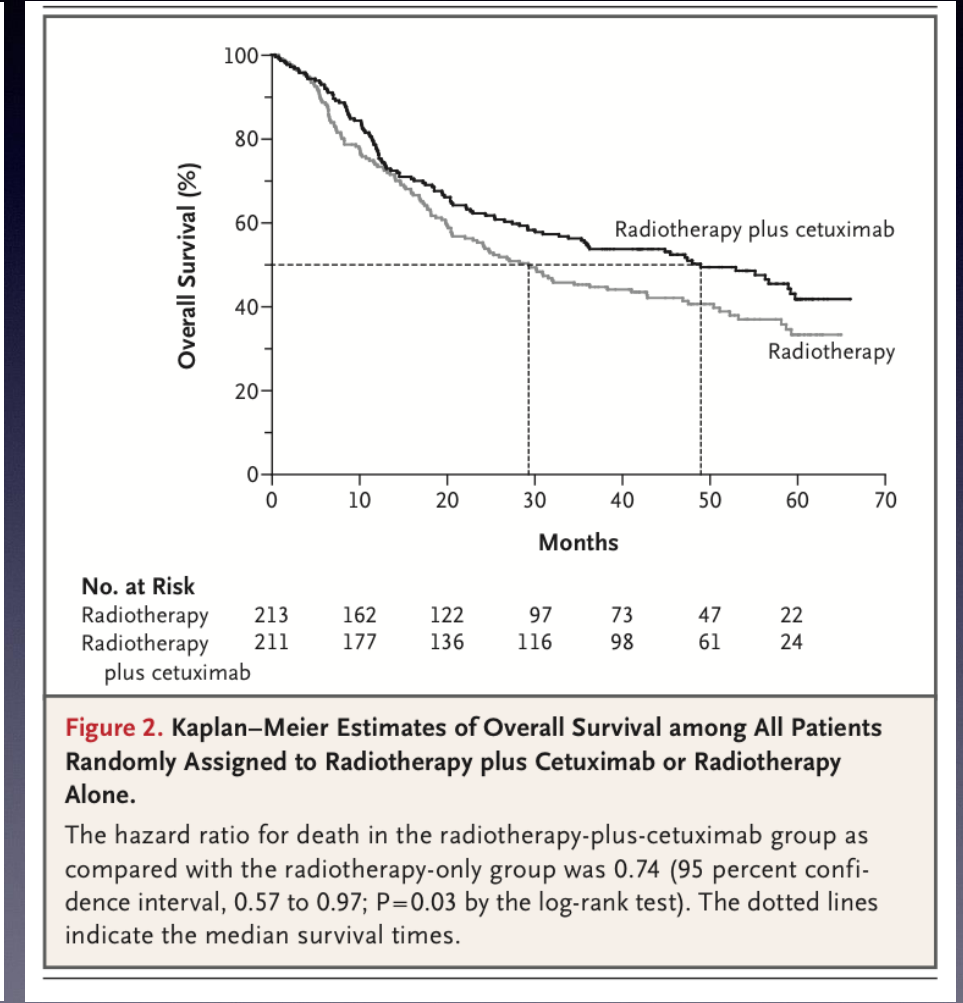


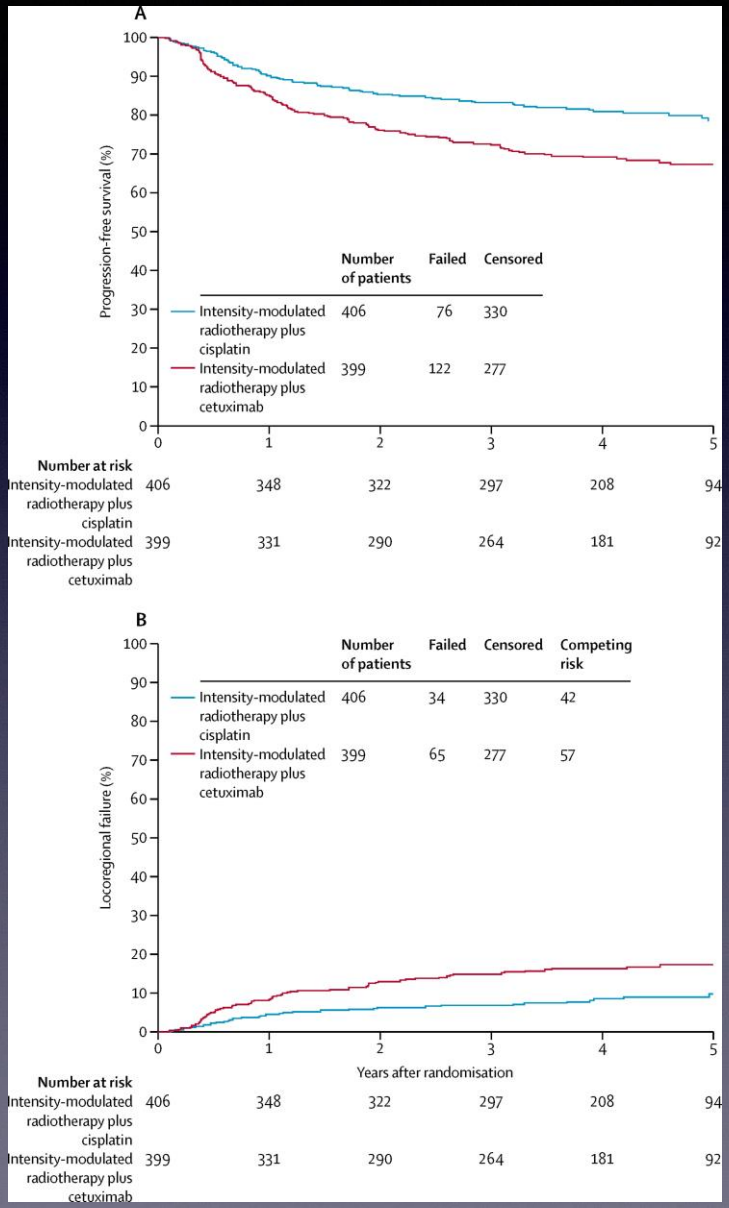
Figure 2. Kaplan–Meier Estimates of Overall Survival among All Patients Randomly Assigned to Radiotherapy plus Cetuximab or Radiotherapy Alone.

The hazard ratio for death in the radiotherapy-plus-cetuximab group as compared with the radiotherapy-only group was 0.74 (95 percent confidence interval, 0.57 to 0.97; P=0.03 by the log-rank test). The dotted lines indicate the median survival times.

N ENGL J MED 354;6 WWW.NEJM.ORG FEBRUARY 9, 2006

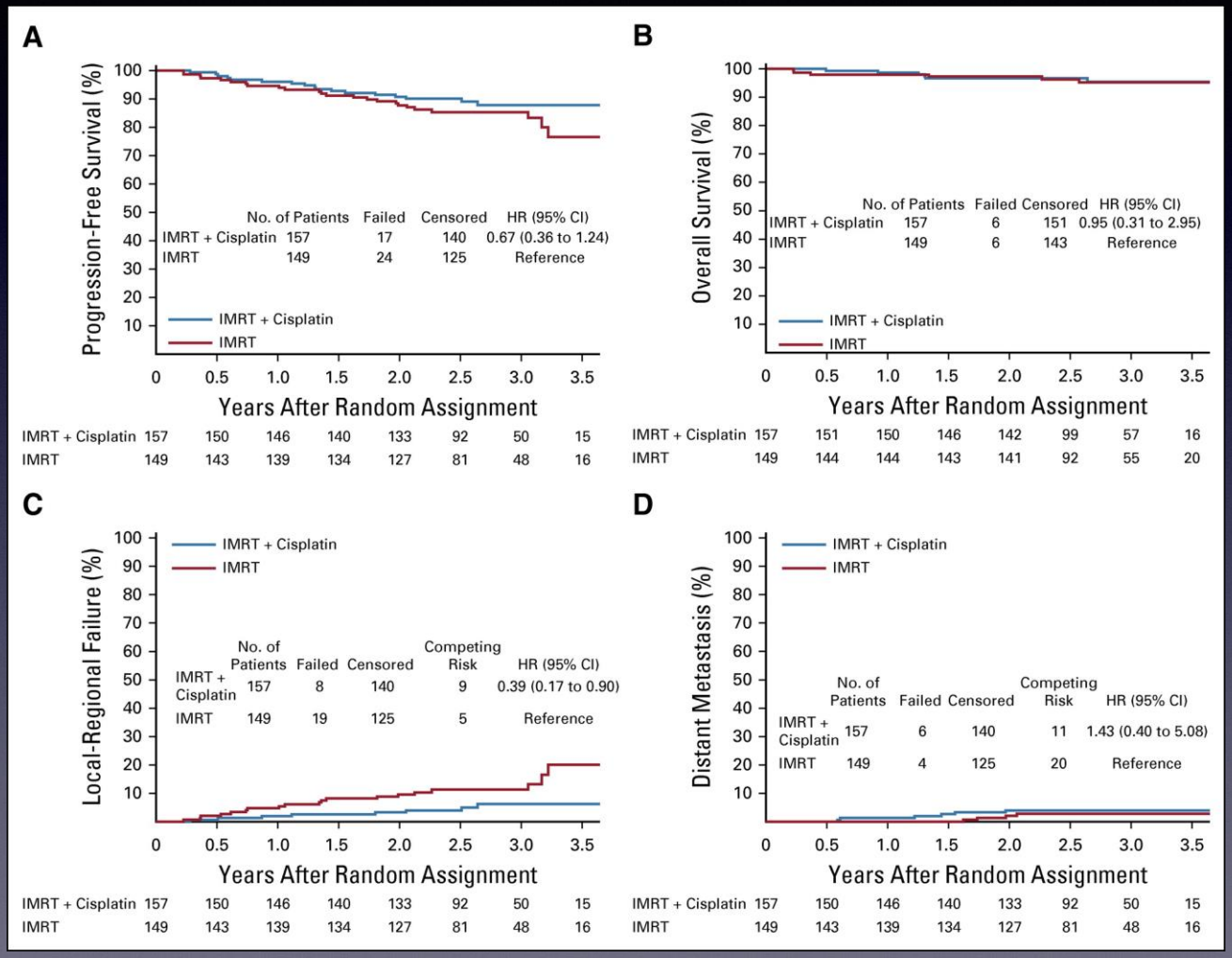
ChemoXRT vs BiologicXRT

RTOG 1016

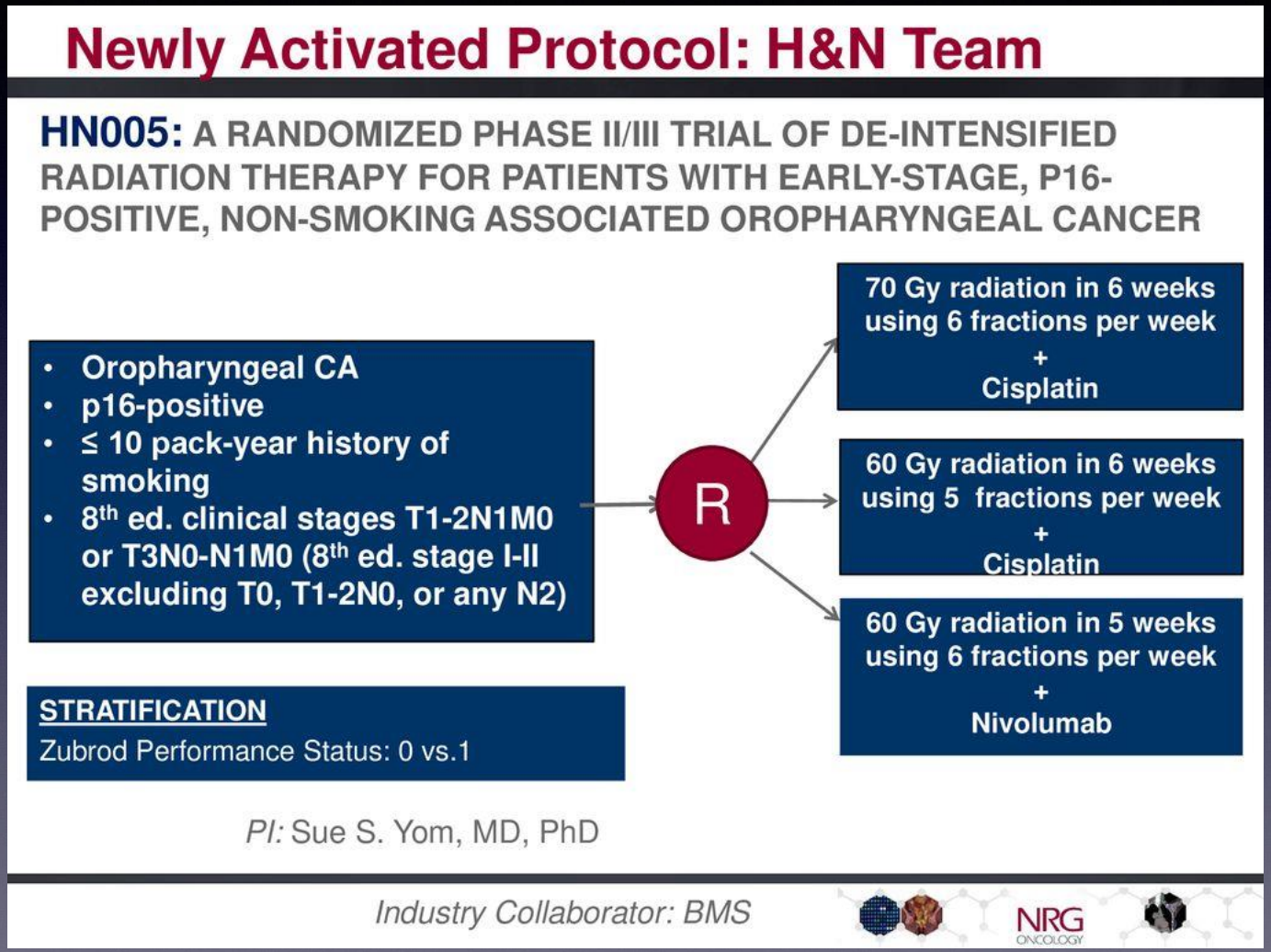


Lancet 1/5/2019

NRG HN002 Dose Reduction



NRG HN005

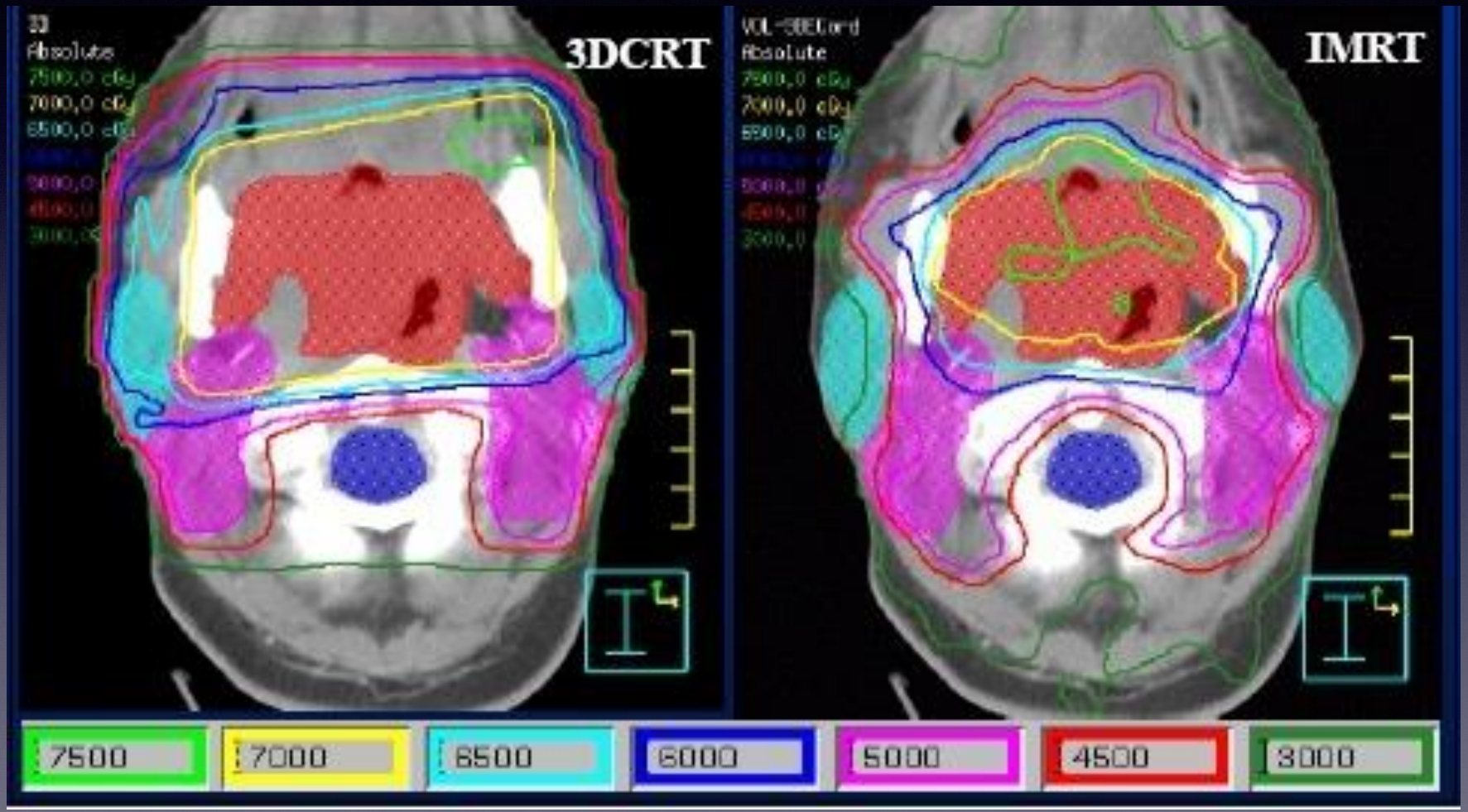

Newly Activated Protocol: H&N Team
HN005: A RANDOMIZED PHASE II/III TRIAL OF DE-INTENSIFIED RADIATION THERAPY FOR PATIENTS WITH EARLY-STAGE, P16-POSITIVE, NON-SMOKING ASSOCIATED OROPHARYNGEAL CANCER
Oropharyngeal CA
p16-positive
≤ 10 pack-year history of smoking
8th ed. clinical stages T1-2N1M0 or T3N0-N1M0 (8th ed. stage I-II excluding T0, T1-2N0, or any N2)
R
70 Gy radiation in 6 weeks using 6 fractions per week + Cisplatin
60 Gy radiation in 6 weeks using 5 fractions per week + Cisplatin
60 Gy radiation in 5 weeks using 6 fractions per week + Nivolumab
STRATIFICATION
Zubrod Performance Status: 0 vs.1
PI: Sue S. Yom, MD, PhD
Industry Collaborator: BMS
NRG ONCOLOGY

Radiotherapy Planning

- PRE
  - Dental
  - Nutrition
  - Airway
- SIMULATION
- TREATMENT PLAN

Simulation

Treatment Planning



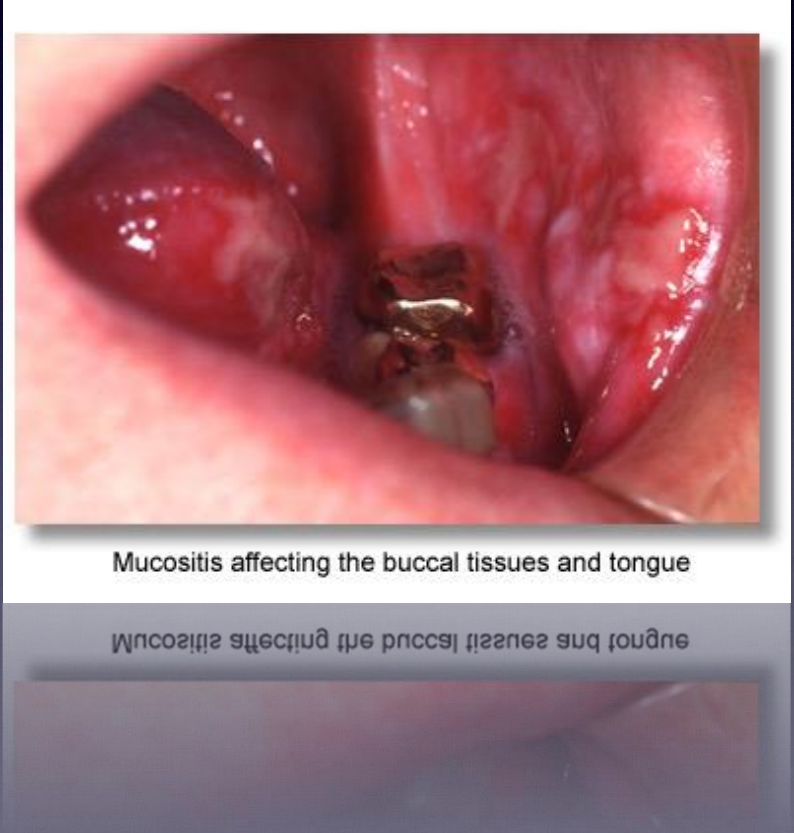
Treatment

- Daily treatments with BID once per week
- Weekly MD visits or more as needed
- Weeks 1-3 “Honeymoon period”
- Adverse effects dealt by team (physicians, nurses, therapists, nutritionists, wound care)

Dermatits

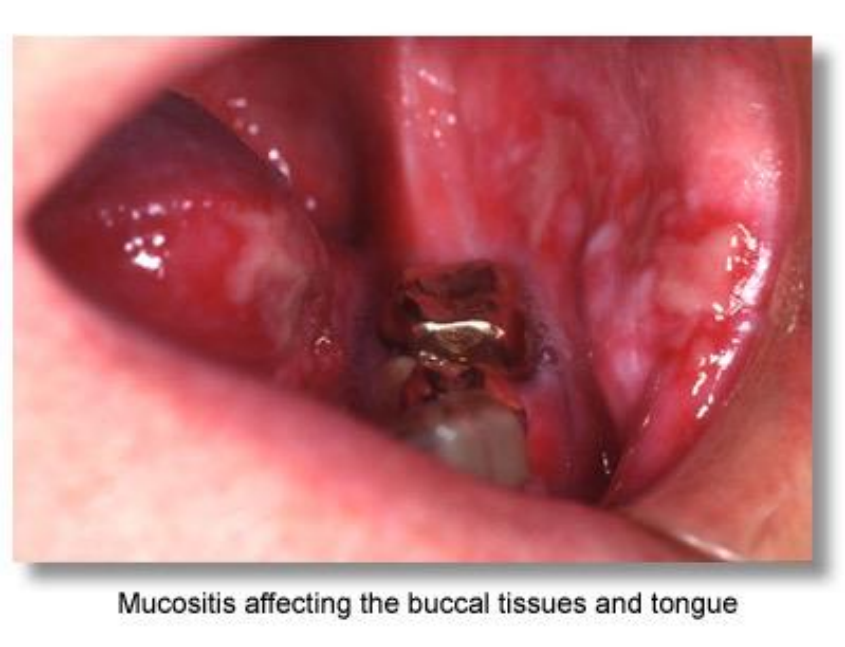
- Virtually all H&N cancer patients
- 2-3 weeks into therapy
- Grades 1-3 resolve by 6 weeks
- Secondary infection risk with Grade 3 & 4

Mucositis


Mucositis affecting the buccal tissues and tongue

- Occurs in majority of patients
- 2-3 weeks from onset of therapy
- Incidence and Severity increases:
  - Volume
  - Dose/fractionation
  - Use of chemotherapy
  - Presence of dental fillings

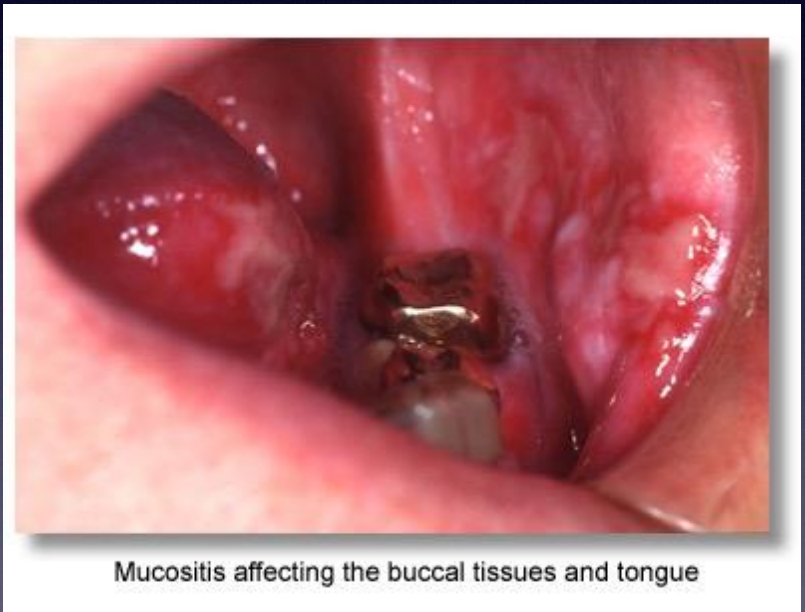
Mucositis Grading



Mucositis affecting the buccal tissues and tongue

- Grade 1: asymptomatic-mild
- Grade 2: Moderate not interfere with oral intake
- Grade 3: Severe, interferes with oral intake. Diet modification
- Grade 4: Life threatening, Tube or TPN
- Grade 5: Death

Mucositis Management



Mucositis affecting the buccal tissues and tongue

- Change diet
  - avoid acidic and spicy foods
- 1 tsp. salt or baking soda in 1 quart of water swish and spit. 10-12x/day
- Analgesics, long acting opioids
- Treat secondary infections
  - Candida, Herpes Simplex
- Multidrug Mouthwashes
  - antacid+benadryl+antifungal+antibacterial+steroid
- Doxepin solution (25mg/5ml) swish and spit

Xerostomia

- Dose Dependent (parotid) <26Gy mean dose recovery
- Onset 2 weeks
- Up to 2 years for recovery
- Can be permanent (very debilitating)

Lisa Morris, MS CCC-SLP

Speech Language Pathologist
Renown Health

THE ROLE OF SPEECH THERAPY IN HEAD AND NECK CANCER TREATMENT

"SWALLOWING IS A HUGE QUALITY OF LIFE ISSUE. THE KEY TO IMPROVING SWALLOWING FUNCTION IS EARLY AND INDIVIDUALIZED THERAPY," DR. KATE HUTCHESON, M.S. PH.D., SPEECH-LANGUAGE PATHOLOGIST

THE PRIMARY GOALS OF SPEECH THERAPY FOR INDIVIDUALS WITH HEAD AND NECK CANCER

- Swallowing is the top functional priority rated by head and neck cancer patients before and after treatment, [9] and is a driver of quality of life in head and neck cancer survivors[10] [1]
- Proactive swallowing therapy promotes ongoing use of the swallowing mechanism during radiotherapy and/ or a combination of chemo and radiotherapy through 2 goals [1]:
    - Eat
    - Exercise

THE ROLE OF THE SLP

- Education and Pre-treatment counseling
  - Referral PRIOR TO starting treatment (or before surgical intervention if appropriate)
  - Poorly prepared patients may become frustrated when attempting to eat resulting in changes to nutrition and hydration [2].
  - Prevent malnutrition and dehydration and reduce the risk of aspiration through consistent evaluation of safety in swallow [2]
  - Assist patients in understanding the importance to *maintain* function versus trying to *regain* a lost function[13]

THE ROLE OF THE SLP

- Assess safety in swallow and provide education on diet texture modifications
  - 6-67% of head and neck cancer patients report some form of dysphagia prior to starting treatment [12]
- Provide education and support in oral and pharyngeal hygiene
- Provide education in prophylactic swallow exercise
- Assist patients in return to safe and efficient oral intake following completion of treatment

RADIATION THERAPY AND THE SWALLOW[11]

- Potential immediate side effects
  - Disuse atrophy
  - Xerostomia (immediate and long term effects to dentition and mastication)
  - Mucositis
  - Dysgeusia

- Potential long term side effects
  - Reduced jaw opening (Trismus)
  - Fibrosis
  - Lymphedema
  - Cranial neuropathies
  - Physiological dysfunction increasing risk of penetration and/or aspiration

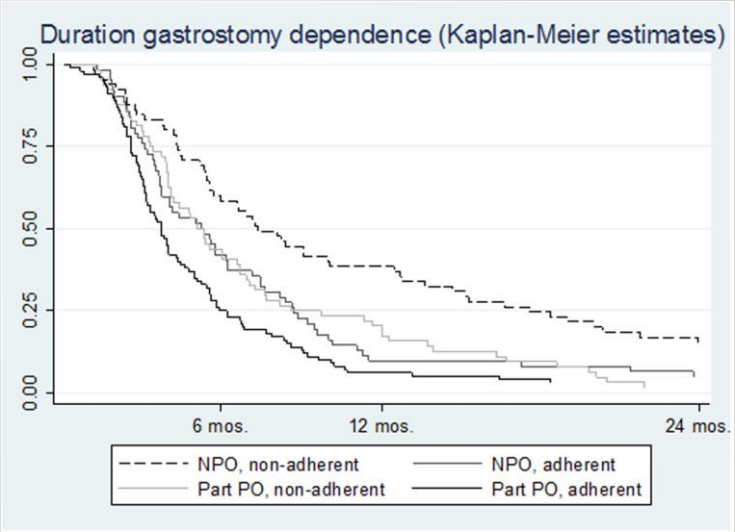
THE RESULT OF SPEECH THERAPY

- Swallowing exercise during RT or CRT is associated with favorable functional outcomes [1]
  - Superior swallowing-related Quality of Life
  - Better tongue base and epiglottic movement
  - Lower rates of PEG tube placement
  - Shorter gastrostomy dependence
  - Higher diet levels after therapy

WHEN IT COMES TO SWALLOWING AND RADIOTHERAPY "USE IT OR LOSE IT"[1]

- **Table 3**
- Outcomes (long-term diet & gastrostomy duration) by Swallowing Subgroups

"Eat"	"Exercise"	
(PO end RT)	Non-adherent	Adherent
NPO	43 (65%)	51 (79%)
	222 (33–1781)	151 (37–1530)
Partial PO	49 (77%)	83 (81%)
	157 (38–760)	111 (0–2029)
Full PO	68 (84%)	108 (92%)
	0	0



LATE ACQUIRED DYSPHAGIA A POTENTIAL LONG TERM SIDE EFFECT OF RADIATION THERAPY

- It is estimated 70% of oropharyngeal cancers in the US may be linked to HPV [13]
- Given rise in HPV cancers, cancer survivors are living longer increasing probability of experiencing long term side effects[13]
- Given this, yearly instrumental evaluations of swallow are recommended to address the potential long term side effects of radiotherapy on swallow
  - Modified Barium Swallow Study (MBS)
  - Fiberoptic Endoscopic Evaluation of Swallow (FEES)
- Referrals to Speech Therapy with any reports of changes to swallow

REFERENCES

- [1] Hutcheson, KA, Bhayani, MK, Beadle, BM, et al. Use It Or Lose It: Eat and Exercise During Radiotherapy or Chemotherapy for Pharyngeal Cancers. JAMA Orolaryngol Head Neck Surg, 2013 Nov: 139(11): 1127-1134. http://www.Medscape.comp/viewarticle/442598
- [2] Gaziano, J. Evaluation and Management of Oropharyngeal Dysphagia in Head and Neck Cancer. Cancer Control 9(5): 400-409, 2002. http://www.medscape.com/viewarticle/442598 (as cited in Hutcheson, KA, et al, 2013).
- [3] Bhayani MK, Hutcheson KA, Barringer DB, et al. Gastrostomy tube placement in patients with oropharyngeal carcinoma treated with radiotherapy or chemoradiotherapy: Factors affecting placement and dependence. Head Neck. In Press (as cited in Hutcheson, KA, et al, 2013).
- [4] Kulbersh BD, Rosenthal EL, McGrew BM, et al. Pretreatment, preoperative swallowing exercises may improve dysphagia quality of life. Laryngoscope. 2006;116(6):883–886 (as cited in Hutcheson, KA, et al, 2013).
- [5] Carroll WR, Locher JL, Canon CL, Bohannon IA, McColloch NL, Magnuson JS. Pretreatment swallowing exercises improve swallow function after chemoradiation. Laryngoscope. 2008;118(1):39–43. (as cited in Hutcheson, KA, et al, 2013).
- [6] Shinn EH, Basen-Engquist KM, Guam G, et al. Observation of adherence patterns to preventative swallowing exercises in oropharynx cancer survivors. Head Neck. In Press (as cited in Hutcheson, KA, et al, 2013).
- [7] Bhayani MK, Hutcheson KA, Barringer DA, et al. Gastrostomy tube placement in patients treated with hypopharyngeal cancer treated with radiotherapy or chemoradiotherapy: Factors affecting placement and dependence. Head Neck. In Press. [PubMed] [Google Scholar]
- [8] Kotz T, Federman AD, Kao J, et al. Prophylactic swallowing exercises in patients with head and neck cancer undergoing chemoradiation: a randomized trial. Arch Otolaryngol Head Neck Surg. 2012;138(4):376–382. [PubMed] [Google Scholar]
- [9] Wilson JA, Carding PN, Patterson JM. Dysphagia after nonsurgical head and neck cancer treatment: patients' perspectives. Otolaryngol Head Neck Surg. 2011;145(5):767–771 (as cited in Hutcheson, KA, et al, 2013).
- [10] Hunter KU, Schipper M, Feng FY, et al. Toxicities affecting quality of life after chemo-IMRT of oropharyngeal cancer: Prospective study of patient-reported, observer-rated, and objective outcomes [published online ahead of print October 2 2012] Int J Radiat Oncol Biol Phys. 2012 http://www.sciencedirect.com/science/article/pii/S0360301612034505 (as cited in Hutcheson, KA, et al, 2013).
- [11] Starmer, Heather. Swallowing Exercises in Head and Neck Cancer. Retrieved 4/9/2021 https://pubs.asha.org/doi/full/10.1044/persp2.SIG13.21
- [12] Logeman, J.A., Pauloski, B.R., Rademaker, A.W, et al. Swallowing Disorders in the First Year After Radiation and Chemoradiation. Head Neck. 2008 Feb: 30 (2): 148-158. Retrieved 4/9/2021 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2903205
- [13] Blair, Julie. Strategies For a New Generation of Oral Cancer Patients. Retrieved 4/9/2021 https://leader.pubs.asha.org/doi/10.1044/leader.otp.23102018.42

Michael West

Survivor of HPV-attributed Stage IV Throat Cancer
Head & Neck Cancer Alliance

Breanne Van Dyne

Program Director,
Immunize Nevada

IMMUNIZE NEVADA PRESENTS

HPV Vaccine Resources for Nevada

Breanne Van Dyne
Program Director

HPV VACCINATION COVERAGE: WHERE NEVADA STANDS

HPV 1 MALE/FEMALE 13-17 YEARS:
68.9% (+2.9%)

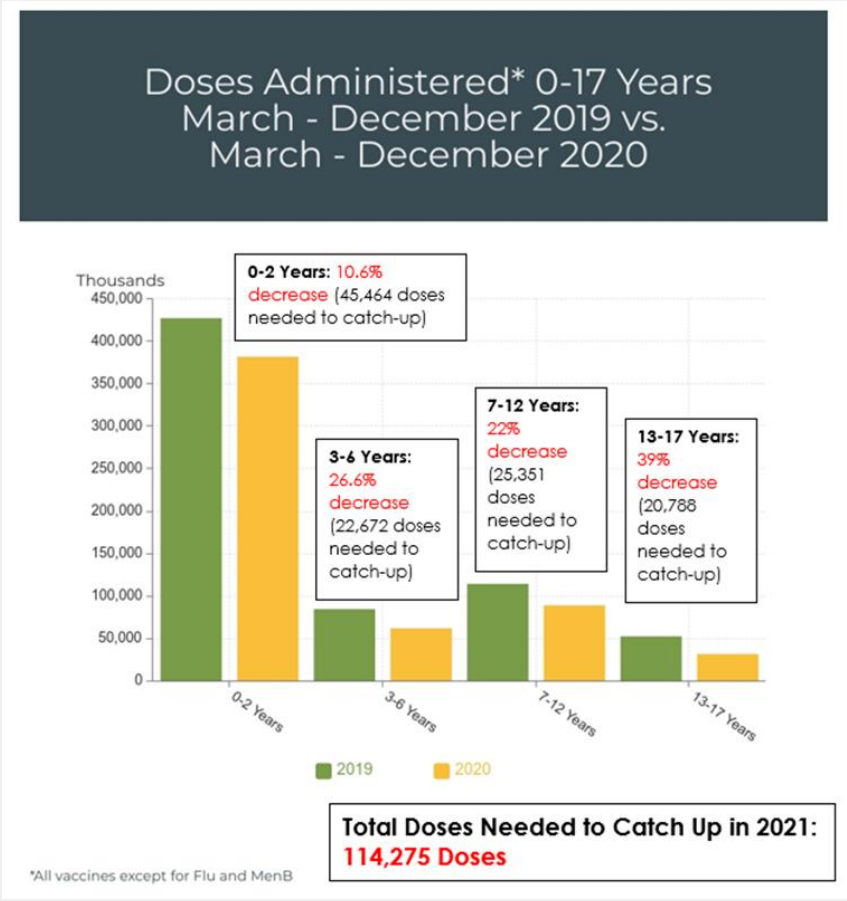
UTD FEMALE, 13-17 YEARS:
55.6% (+6.2%)

UTD MALE, 13-17 YEARS:
50.3% (-2.4%)

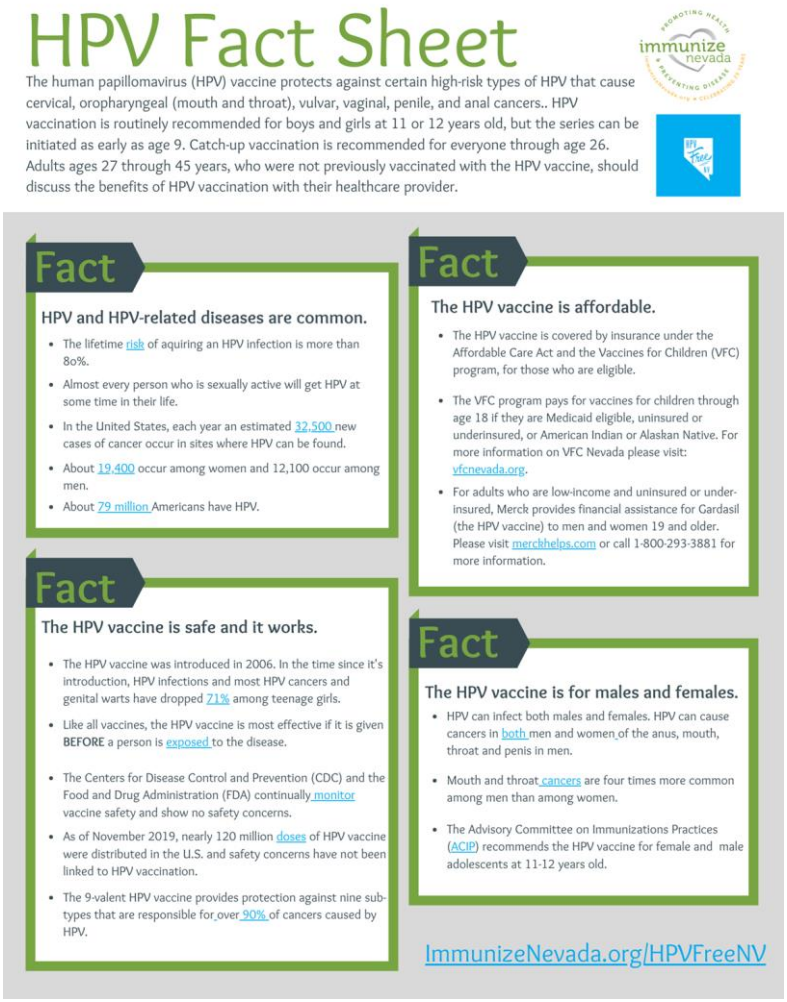
UTD MALE/FEMALE, 13-17 YEARS:
52.9% (+1.8%)

SOURCE: NIS-TEEN, 2019

THE CHALLENGE



RESOURCE HIGHLIGHT: HPV FACT SHEET



HPV Fact Sheet

The human papillomavirus (HPV) vaccine protects against certain high-risk types of HPV that cause cervical, oropharyngeal (mouth and throat), vulvar, vaginal, penile, and anal cancers.. HPV vaccination is routinely recommended for boys and girls at 11 or 12 years old, but the series can be initiated as early as age 9. Catch-up vaccination is recommended for everyone through age 26. Adults ages 27 through 45 years, who were not previously vaccinated with the HPV vaccine, should discuss the benefits of HPV vaccination with their healthcare provider.

Fact

HPV and HPV-related diseases are common.

- The lifetime risk of aquiring an HPV infection is more than 80%.
- Almost every person who is sexually active will get HPV at some time in their life.
- In the United States, each year an estimated 32,500 new cases of cancer occur in sites where HPV can be found.
- About 19,400 occur among women and 12,100 occur among men.
- About 79 million Americans have HPV.

Fact

The HPV vaccine is affordable.

- The HPV vaccine is covered by insurance under the Affordable Care Act and the Vaccines for Children (VFC) program, for those who are eligible.
- The VFC program pays for vaccines for children through age 18 if they are Medicaid eligible, uninsured or underinsured, or American Indian or Alaskan Native. For more information on VFC Nevada please visit: vfcnevada.org.
- For adults who are low-income and uninsured or under-insured, Merck provides financial assistance for Gardasil (the HPV vaccine) to men and women 19 and older. Please visit merckhelps.com or call 1-800-293-3881 for more information.

Fact

The HPV vaccine is safe and it works.

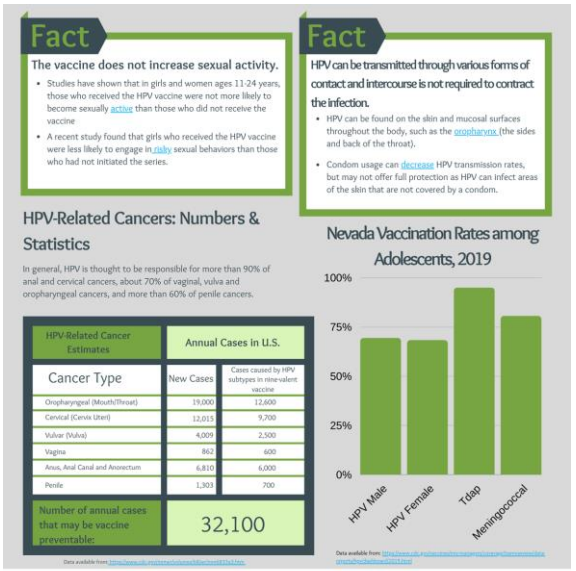
- The HPV vaccine was introduced in 2006. In the time since it's introduction, HPV infections and most HPV cancers and genital warts have dropped 71% among teenage girls.
- Like all vaccines, the HPV vaccine is most effective if it is given **BEFORE** a person is exposed to the disease.
- The Centers for Disease Control and Prevention (CDC) and the Food and Drug Administration (FDA) continually monitor vaccine safety and show no safety concerns.
- As of November 2019, nearly 120 million doses of HPV vaccine were distributed in the U.S. and safety concerns have not been linked to HPV vaccination.
- The 9-valent HPV vaccine provides protection against nine sub-types that are responsible for over 90% of cancers caused by HPV.

Fact

The HPV vaccine is for males and females.

- HPV can infect both males and females. HPV can cause cancers in both men and women of the anus, mouth, throat and penis in men.
- Mouth and throat cancers are four times more common among men than among women.
- The Advisory Committee on Immunizations Practices (ACIP) recommends the HPV vaccine for female and male adolescents at 11-12 years old.

ImmunizeNevada.org/HPVFreeNV



Fact

The vaccine does not increase sexual activity.

- Studies have shown that in girls and women ages 11-24 years, those who received the HPV vaccine were not more likely to become sexually active than those who did not receive the vaccine
- A recent study found that girls who received the HPV vaccine were less likely to engage in risky sexual behaviors than those who had not initiated the series.

Fact

HPV can be transmitted through various forms of contact and intercourse is not required to contract the infection.

- HPV can be found on the skin and mucosal surfaces throughout the body, such as the oropharynx (the sides and back of the throat).
- Condom usage can decrease HPV transmission rates, but may not offer full protection as HPV can infect areas of the skin that are not covered by a condom.

HPV-Related Cancers: Numbers & Statistics

In general, HPV is thought to be responsible for more than 90% of anal and cervical cancers, about 70% of vaginal, vulva and oropharyngeal cancers, and more than 60% of penile cancers.

HPV-Related Cancer Estimates	Annual Cases in U.S.	
Cancer Type	New Cases	Cases caused by HPV subtypes in nine-valent vaccine
Oropharyngeal (Mouth/Throat)	19,000	12,600
Cervical (Cervix Uteri)	12,015	9,700
Vulvar (Vulva)	4,009	2,500
Vagina	862	600
Anus, Anal Canal and Anorectum	6,810	6,000
Penile	1,303	700
Number of annual cases that may be vaccine preventable:		32,100

Nevada Vaccination Rates among Adolescents, 2019

What can be done?

- Use this fact sheet to help you address common misconceptions in converstaion and on social media. Social media can be a powerful tool. Speak up and be positive.
- Always be an advocate for the HPV vaccine!
- For more ideas check out our HPV toolkit here.

Immunize Nevada
ImmunizeNevada.org/HPVFreeNV
(775)624-7117
info@immunizenevada.org

This fact sheet is sole the responsibility of Immunize Nevada and does note necessarily represent the official views of the Nevada State Division of Public and Behavioral Health or the CDC

RESOURCE HIGHLIGHT: HPV PROVIDER TOOLKIT

HPV Toolkit

An HPV resource for healthcare professionals

Dosing Schedules

- The CDC recommends a two-dose schedule in adolescents younger than 15.
- The second dose should be given 6-12 months after the first dose.
- Three doses are recommended for adolescents and young adults, if they receive their first shot at age 15 or later.

Click here for more information

Social Media Prompts

We have compiled several socila media prompts for you to use on you social media platforms.

Here are a few examples:

If there were a vaccine to prevent cancer, would you get it for your children? Of course you would.

- The HPV vaccine IS cancer prevention.
- The HPV vaccine is very important because it PREVENTS cancer.
- No child dreams of being a cancer patient. The HPV vaccine is cancer prevention.

Check out the AAP social media prompts here

What Can We Do?

Some ideas for how to make HPV vaccinations a collaborative community effort.

Health Departments:

Offer in-service or feedback visit to every pediatric/FP practice in local area.

Medical Practices:

Use your practice EMR/EHR or use your state IIS (Nevada WebIZ) to run your HPV vaccine coverage rates.

Schools/School Systems:

Include the CDC recommendation of the HPV vaccine in your notices to parents of 11-12 year old students.

Click here for more!

Vaccine Information Statements (VIS)

VISs are required by law.

Click here for the latest CDC VIS for the HPV vaccine.

References:

Explore HPV immunization females in nevada | 2019 annual report. Retrieved from https://www.americashealthrankings.org/explore/annual/measure/immunize_hpv_female/state/NVWalker, T. Y. (2019).

National, regional, state, and selected local area vaccination coverage among adolescents aged 13-17 years — united states, 2018. MMWR. Morbidity and Mortality Weekly Report, 68 doi:10.15585/mmwr.mm6833a2

RESOURCE HIGHLIGHT: HPV VACCINE REMINDERS

PARENTS/GUARDIANS OF: | DATE OF BIRTH:

PADRES / TUTOR LEGAL DE: | FECHA DE NACIMIENTO:

DON'T MISS A DOSE.

Two or three doses of the HPV vaccine (depending on the age your adolescent started the series) provides the best protection against HPV-related cancers. Your adolescent may be due or past due for one or more doses of the vaccine.

RECOMMENDED HPV VACCINE SCHEDULE FOR MAXIMUM PROTECTION:

- ☐ **1st Dose** - Recommended for all adolescents ages 11-12
- ☐ **2nd Dose** - Last dose needed if adolescent began the series prior to age 15
- ☐ **3rd Dose** - Only required if the adolescent began the series at or after age 15

CALL

( ) -

TODAY TO MAKE AN APPOINTMENT

For more information about HPV related cancers and the HPV vaccine, please visit **ImmunizeNevada.org/hpvfreenv**

This campaign is supported by the American Cancer Society and is funded in part by an ACS Cancer Control Collaborative Project (CCCP) funding grant.

NO OLVIDE UNA SOLA DOSIS.

Dos o tres dosis de la vacuna contra el Virus del Papiloma Humano (VPH), dependiendo de la edad en que su adolescente comenzó la serie, proporcionará la mejor protección contra los canceres relacionados con el VPH. Si su hijo(a) adolescente aún no ha recibido una o mas dosis de esta vacuna, ahora es el momento de hacerlo.

CALENDARIO RECOMEDADO DE LA VACUNA VPH PARA MÁXIMA PROTECCIÓN:

- ☐ **1ra Dosis** - Se recomienda para niños y niñas de 11-12 años
- ☐ **2da Dosis** - Última dosis necesaria si el adolescente comenzó la serie antes de los 15 años
- ☐ **3r**

Para más in
vacuna con

Esta camp
en parte

Thanks!

Breanne Van Dyne
Program Director
Breanne@ImmunizeNevada.org

www.ImmunizeNevada.org

Photo credit: Heather Hazzan, SELF Magazine

LAST MINUTE QUESTIONS & HOUSEKEEPING ITEM REVIEW

Have a Question?	Locate the **Q & A box** and type them there. We will address as many questions as we can today.	
CEU Claiming	**Nursing/Pharmacy/CHW CEUs:** Complete the post-event survey. Certificates will be emailed within one week of the live presentation.	
Recording & Slides	The recorded webinar and slides will be posted to ImmunizeNevada.org/nile-webinars.	