



# ORAL CANCER in the USAPI: *A rising epidemic*

## Why is it important to raise the awareness of Oral Cancer?

- ❑ The incidence of oral cancer has increased in the USAPI due to betel nut chewing primarily associated with tobacco additives
- ❑ There has been a rise in children as young as 6-8 years old chewing betel nut with tobacco, which increases the risks.
- ❑ Because betel nut chewing is considered part of the cultural norm,
- ❑ Lack of regular dental or health visits make it difficult to detect early stages of an aggressive cancer.



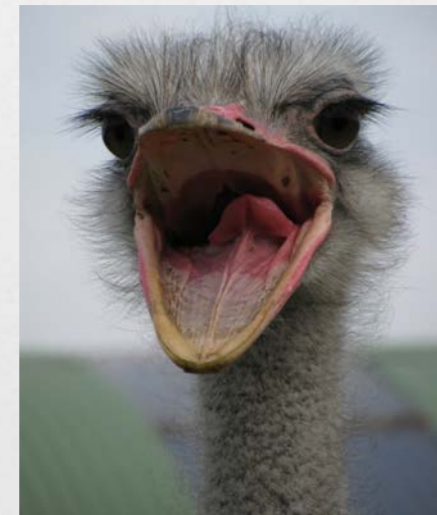
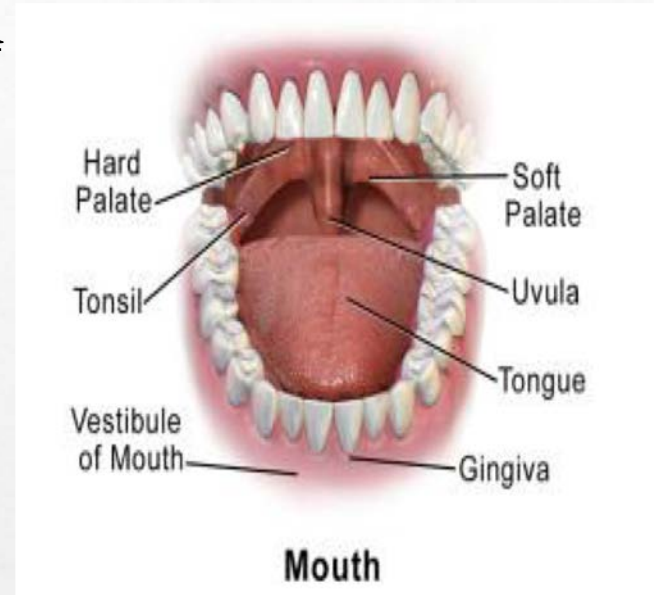


Chewing betel nut with additives such as lime and tobacco increases incidence of oral cancer



# FACTS about ORAL CANCER

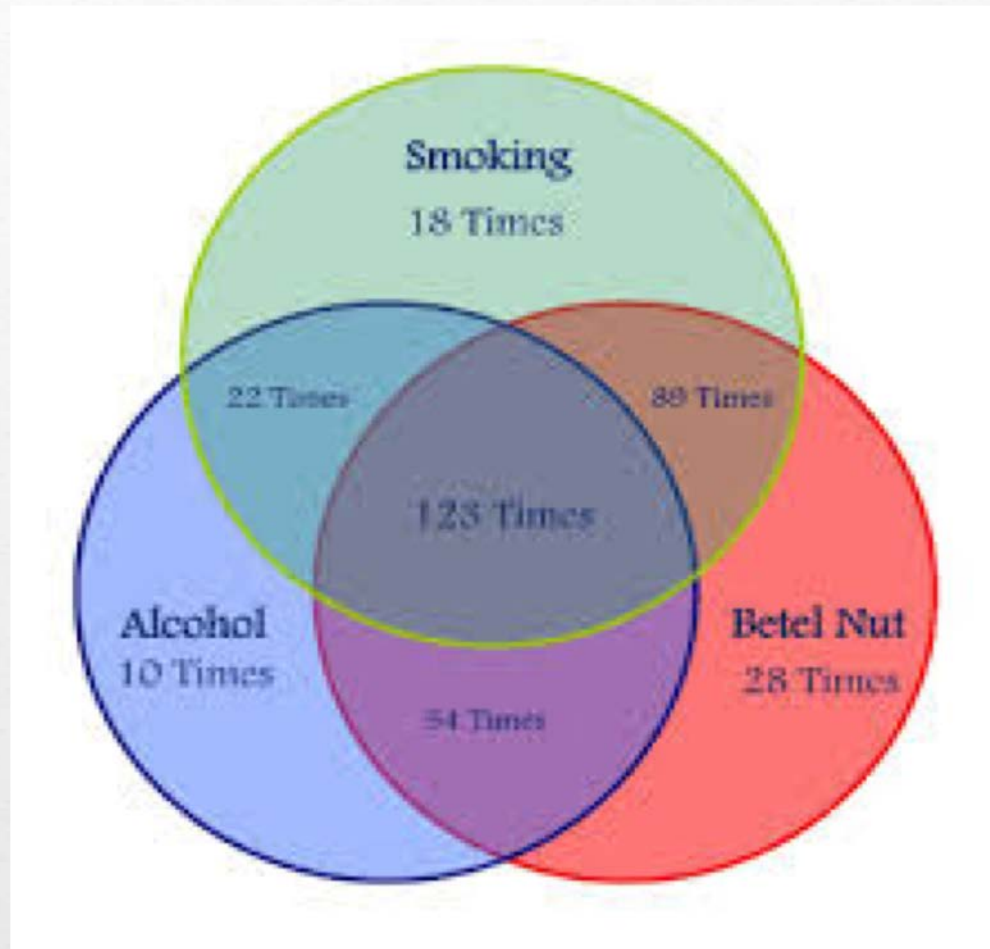
- It is listed as **TOP 13 of cancers in USAPI (2015 stats** from CCPI – pacific cancer)
- **As of November 2018, it has risen to TOP 8 of cancers in USAPI (not verified by CDC as of yet; information given by CCCP )**
- It has **TRIPLED** in ages under 40
- Major cause of morbidity (death in head & neck region) which is due to late identification and the spread of the cancer.





## WHAT CAUSES ORAL CANCER?

1. Betel Nut  
(leading cause of oral cancer in CNMI)
2. Tobacco
3. Alcohol
4. HPV – rising cause of oral cancer in United States



**Combinations of these habits increases the chance of getting oral cancer!**

# CNMI cancer data

Top 10 ADULT CANCERS CNMI	# of Cases	Crude rate	Incidence rate Adj to US Std population	Incidence Rate Adj to World Std population	US incidence rate
All Sites	<b>325</b>	<b>102.4</b>	<b>116.7</b>	<b>89.8</b>	<b>449.0</b>
Breast	54	33.7	27.6	22.3	124.7
Colon & Rectum	33	10.4	11.3	8.9	39.2
Lung & Bronchus	32	10.1	16.4	11.6	60.2
Uterus	28	18.2	18.5	15.9	26.2
Tobacco-related Oral Cavity & Pharynx	25	7.9	5.6	5.0	12.0
Prostate	21	12.9	15.8	12.7	109.5
Liver	16	5	6.1	4.8	8.1
Cervical Cancer, invasive	16	10.4	9.3	7.2	7.5
Leukemia	11	3.5	-	-	14.0
Stomach	10	3.2	-	-	7.0

As of Nov. 20, 2018



## Palau Cancer Data 2007-2015

Top 10 ADULT CANCERS Palau	# of Cases	Crude rate	Incidence rate Adj to US Std population	Incidence Rate Adj to World Std population	US incidence rate
<b>All Sites</b>	<b>250</b>	<b>192.8</b>	<b>185.2</b>	<b>143.5</b>	<b>456.7</b>
<b>Lung &amp; Bronchus</b>	<b>38</b>	<b>29.3</b>	<b>30.5</b>	<b>23.3</b>	<b>62.5</b>
<b>Liver</b>	<b>34</b>	<b>26.2</b>	<b>23.6</b>	<b>18.3</b>	<b>7.6</b>
<b>Prostate</b>	<b>22</b>	<b>31.0</b>	<b>41.8</b>	<b>30.2</b>	<b>123.2</b>
<b>Tobacco-related Oral Cavity &amp; Pharynx</b>	<b>20</b>	<b>15.4</b>	<b>14.0</b>	<b>10.5</b>	<b>10.9</b>
<b>Uterus</b>	<b>19</b>	<b>37.4</b>	<b>35.3</b>	<b>27.2</b>	<b>25.6</b>
<b>Colon &amp; Rectum</b>	<b>17</b>	<b>13.1</b>	<b>14.1</b>	<b>10.6</b>	<b>40.6</b>
<b>Breast</b>	<b>16</b>	<b>27.2</b>	<b>23.5</b>	<b>19.2</b>	<b>123.4</b>
<b>Cervical Cancer, invasive</b>	<b>13</b>	<b>22.1</b>			<b>7.6</b>
<b>Thyroid</b>	<b>10</b>	<b>7.7</b>			<b>14.0</b>
<b>Stomach</b>	<b>10</b>	<b>7.7</b>			<b>6.7</b>

*Source: Incidence Data reported from Guam to Pacific Regional Central Cancer Registry, 2007-2015*

### Palau Cancer Data 2007-2015

	Count	Tobacco related	Obesity related	Screening test available	Early Physical diagnosis	% dead within 5 yrs of diagnosis	% diagnosed stage 1	% diagnosed stage 2	% diagnosed stage 3 or higher
<b>Adult cancers</b> (20 years and older)	<b>250</b>	<b>55%</b>	<b>21%</b>	<b>27%</b>	<b>16%</b>	<b>65%</b>	<b>8%</b>	<b>5%</b>	<b>87%</b>
<b>65 other tobacco related cancers:</b> (38) lung; (20) tobacco-related oropharynx; (6) esophagus, (1) pharynx	<b>65</b>	<b>x</b>				<b>78%</b>	<b>8%</b>	<b>3%</b>	<b>89%</b>
<b>Liver</b>	<b>34</b>					<b>100%</b>	<b>6%</b>	<b>3%</b>	<b>91%</b>
<b>Prostate</b>	<b>22</b>			<b>x</b>	<b>x</b>	<b>32%</b>	<b>9%</b>	<b>9%</b>	<b>82%</b>
<b>Uterus</b>	<b>19</b>	<b>x</b>	<b>x</b>			<b>26%</b>	<b>16%</b>		<b>84%</b>
<b>Colorectal</b>	<b>17</b>	<b>x</b>	<b>x</b>	<b>x</b>		<b>41%</b>	<b>12%</b>	<b>12%</b>	<b>76%</b>



# Cancer Data

## CNMI – 325 cases

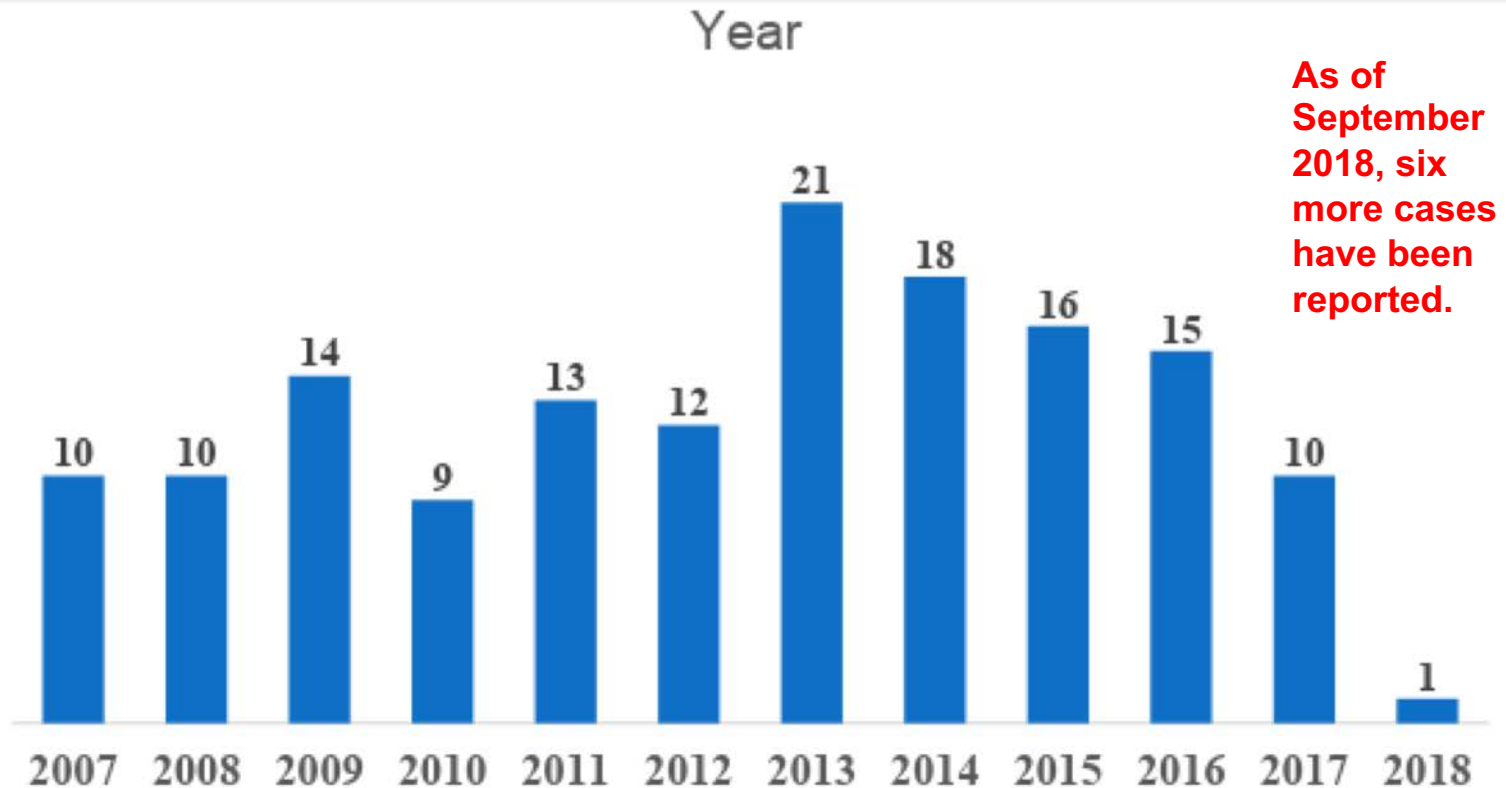
- ❑ 34% of adult cancer patients passed away within 5 years of diagnosis
- ❑ 65% of CNMI's adult cancers are tobacco-related
- ❑ 35% of CNMI's adult cancers are obesity-related

## Palau – 250 cases

- ❑ 65% of adult cancer patients passed away within 5 years of diagnosis
- ❑ 56% of Palau's adult cancers are tobacco-related
- ❑ 21% of Palau's adult cancers are obesity-related

Source: Incidence Data reported from Guam to Pacific Regional Central Cancer Registry, 2007-2015

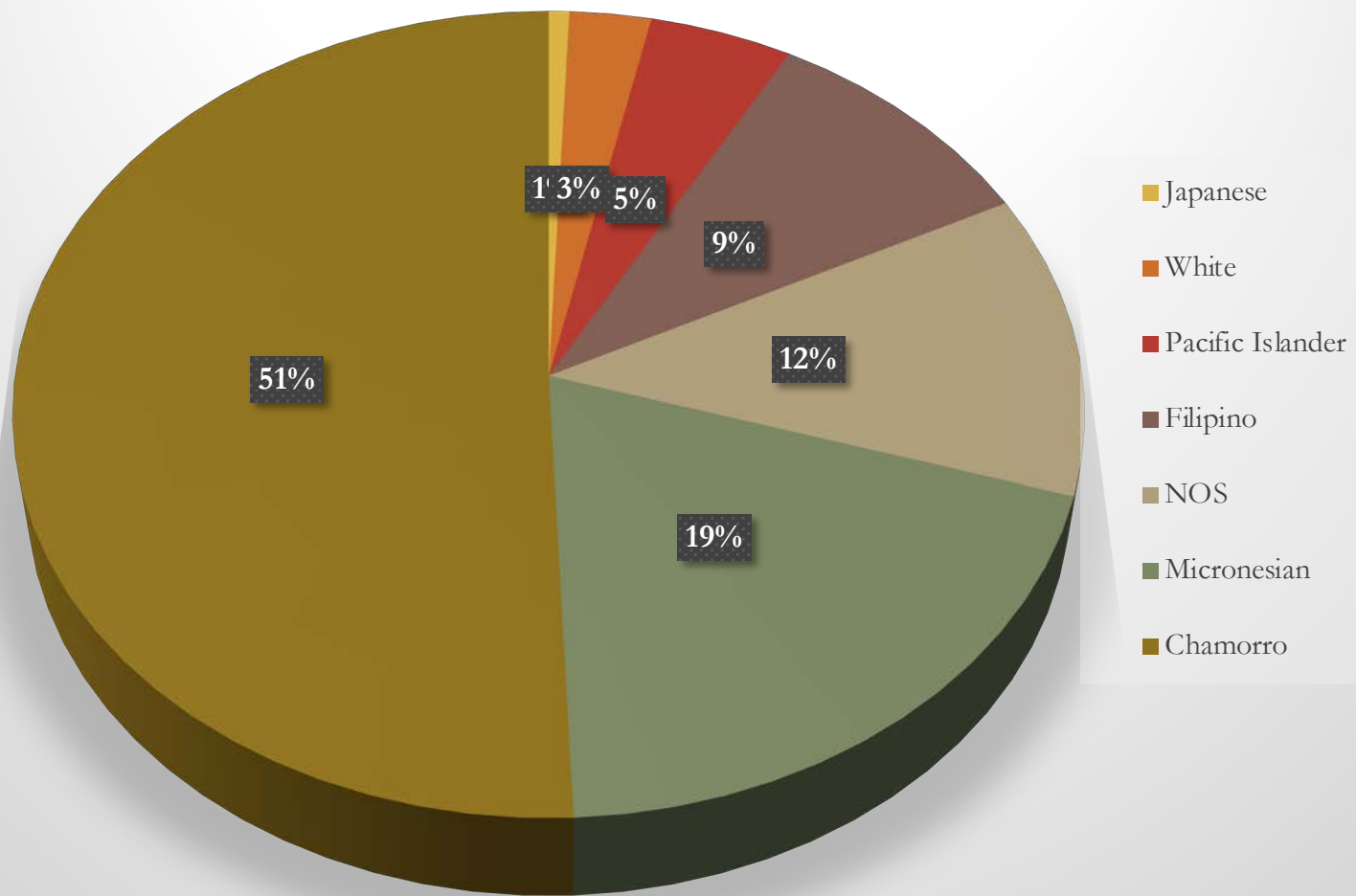
# Head and Neck Cancer in the CNMI



\*The data is collected and entered into the CNMI Cancer Registry database on a daily basis. Therefore, database is updated daily and data subject to change when other cases are identified. Information can be retrieved in real time.

\*\*based on in office record of patients diagnosed with squamous cell carcinoma





1) NOS – Not otherwise specified or no info collected;

2) Micronesia – reflects Carolinian, FSM Nationals and Palauan and Marshallese

What does  
the mouth of  
a normal  
betel nut  
chewer look  
like?



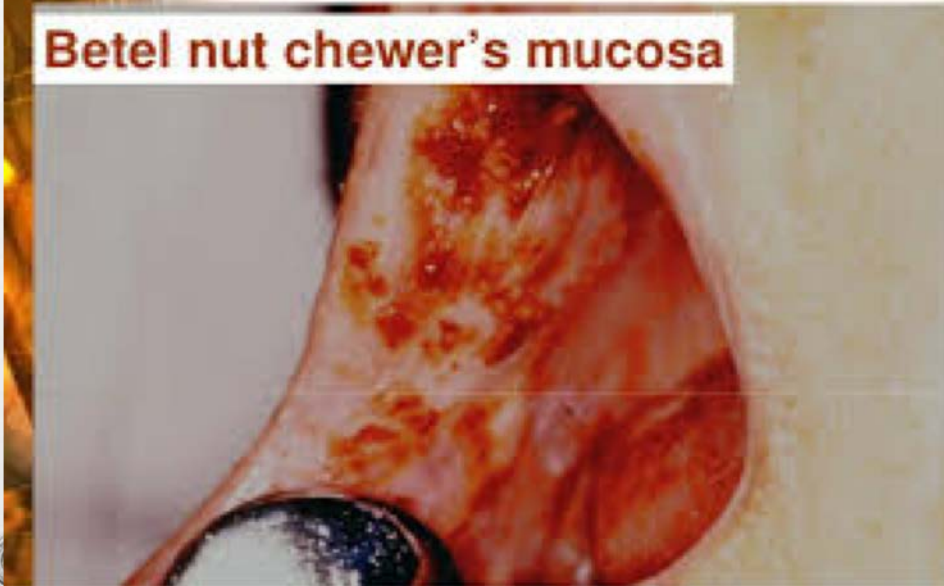




Normal Betel Nut Chewer:  
appearance – external and  
intra-oral



Betel nut chewer's mucosa



**What  
does  
oral  
cancer  
look  
like?**





## *Signs and Symptoms of Oral Cancer*



1. Mouth sore that doesn't heal
2. Persistent red and/or white patches
3. Unexplained bleeding in mouth
4. Difficulty chewing, swallowing, speaking or moving tongue
5. Hard, raised lesions (LUMP), eroded areas (ulcerations) in mouth

# Images of Oral Cancer in the CNMI



Diagnosed in January 2018  
Passed away August 2018

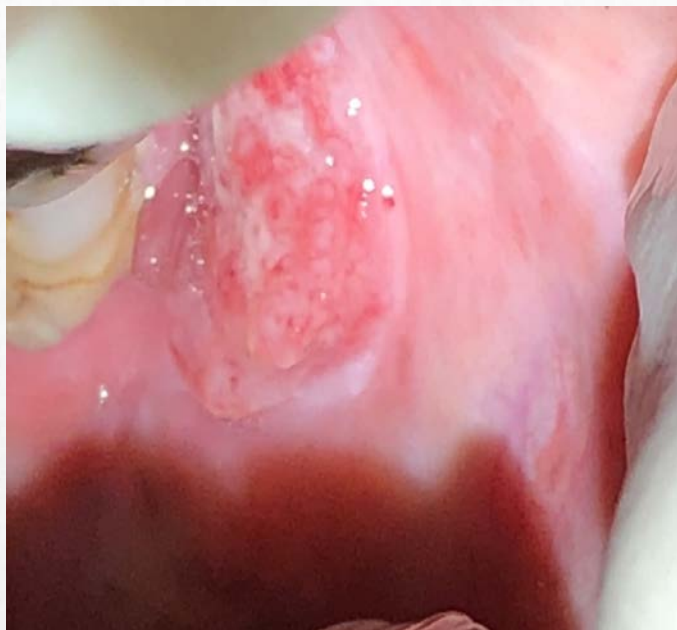




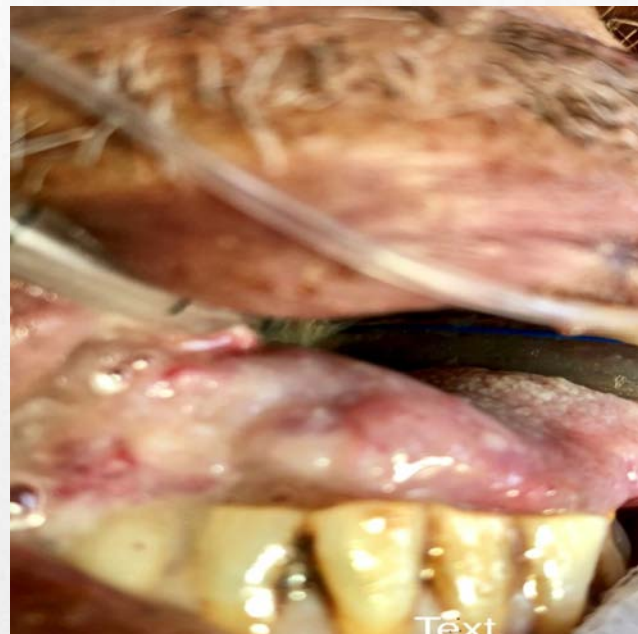
In Patient:

Diagnosed: May 29, 2018

Passed away: August 2018

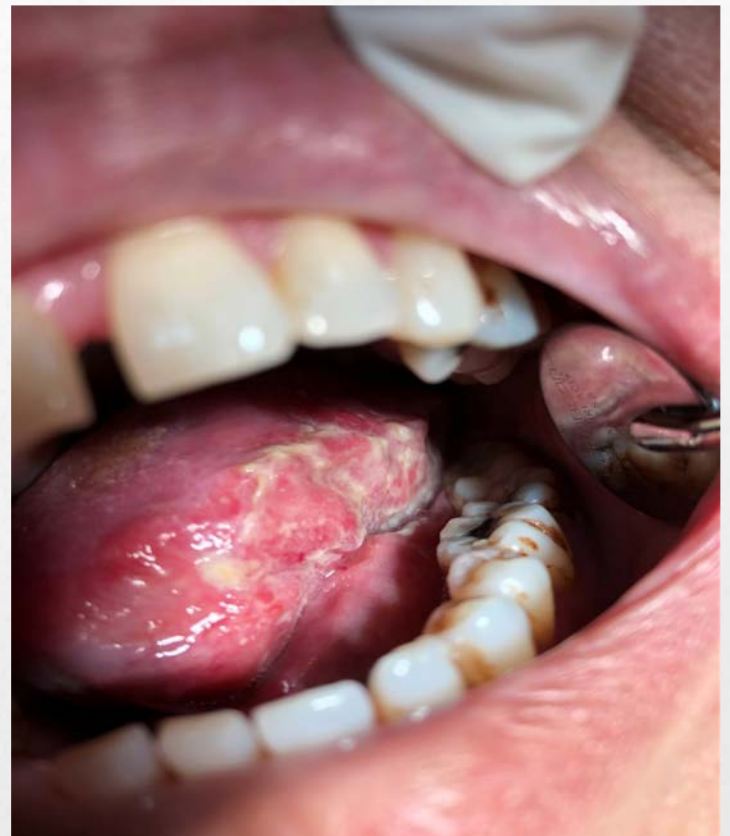


Squamous Cell Carcinoma of Cheek  
diagnosed: April 16, 2018  
treatment: May - present



Squamous Cell Carcinoma of Tongue  
diagnosed:  
treatment: current  
Intubation of the patient for referral





Squamous Cell Carcinoma of the Tongue  
diagnosed August 22, 2018  
surgical treatment Sept 2018



Oral Lesion:  
Biopsied  
March 23, 2019  
Rota Health  
Center



## Detection of Oral Cancer:

### 1. **Oral Examination**

1. **Visual Inspection**
2. **Biopsy**

### 2. Brush Cytology

3. Toluidine Blue – staining abnormal white cells
4. Chemiluminescence – usage of blue-white light
5. Tissue fluorescence – differentiates normal (green) to abnormal (darker) cell
6. Salivary Diagnosis –usage of salivary biomarkers



**Most effective tool as of today for EARLY detection is ORAL EXAMINATION, visually inspecting the oral cavity and recognizing suspicious lesions. These areas are then biopsied.**

# What happens when Oral Cancer is confirmed?

1. Surgical Removal of Tumor Site
2. Chemotherapy – used to shrink tumor to remove or as palliative
3. Radiation



*before*



*after surgery*



*before*



*after surgery*



# PUBLIC AWARENESS FOR ORAL CANCER PREVENTION

## What can YOU do?



- ✓ DON'T start chewing betel nut (IF you have not started)
- ✓ STOP chewing betel nut
- ✓ SEE your LOCAL dentist OR physician to get a FREE Oral Cancer Screening (an collaborative initiative by your local dentists)
- ✓ Get REGULAR oral exam check ups

**Thank you, Si Yu'us Ma'ase, Sulang,  
Kamagar, Komol Tata, Fa'afatai tele, Kalahngan,  
Kinisou, Kulo**

***Pacific Basin Dental Association***

