You Are the Key to HPV Cancer Prevention: The Role of the Medical Interpreter

Eileen Lind, MSN, RN, CPNP
Team Maureen/Dana-Farber Cancer Institute
Community Benefits Department

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In today’s discussion, we’ll talk about

• HPV
• The HPV-cancer connection
• Risk factors for HPV and related cancers
• HPV/cancer screening
• HPV and cancer prevention
  – HPV Vaccine
  – Safety and effectiveness of HPV vaccine
HPV: What is it?

- **Human Papilloma Virus**
- Sexually Transmitted Infection (STI)
- Spread by skin-to-skin contact
- Can infect the genital skin (skin around private parts) of men and women
HPV: What is it?

- Many different types or strains of HPV
- Some types act externally, or on the outside of the genitals, causing warts on skin of penis, vulva, and anus
- Some types of HPV also infect other parts of your body and can cause cancer of the cervix, vulva, vagina, penis, tongue, tonsils and throat
How common is HPV?

- HPV is the most common STI in the US today; most people who are sexually active will have HPV at some point
- About 79 million people have HPV
- At least 80% of sexually active men and women will be infected with this virus during their lives

CDC image
Who gets HPV?

Nearly 20 Million New Infections Occur Each Year – Half among the Nation’s Youth

CDC estimates that there are more than 19.7 million new STIs in the United States each year. While most of these STIs will not cause harm, some have the potential to cause serious health problems, especially if not diagnosed and treated early. Young people (ages 15-24) are particularly affected, accounting for half (50 percent) of all new STIs, although they represent just 25 percent of the sexually experienced population.

Estimated number of new sexually transmitted infections
- United States, 2008

<table>
<thead>
<tr>
<th>STI</th>
<th>Ages 25+</th>
<th>Ages 15-24</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis B</td>
<td>8%</td>
<td>8%</td>
<td>19,000</td>
</tr>
<tr>
<td>HIV*</td>
<td>20%</td>
<td>20%</td>
<td>41,400</td>
</tr>
<tr>
<td>Syphilis</td>
<td>45%</td>
<td>45%</td>
<td>55,400</td>
</tr>
<tr>
<td>HSV-2</td>
<td>70%</td>
<td>70%</td>
<td>776,000</td>
</tr>
<tr>
<td>Gonorrhea</td>
<td>13%</td>
<td>13%</td>
<td>820,000</td>
</tr>
<tr>
<td>Trichomoniasis</td>
<td>63%</td>
<td>63%</td>
<td>1,090,000</td>
</tr>
<tr>
<td>Chlamydia</td>
<td>49%</td>
<td>49%</td>
<td>2,860,000</td>
</tr>
<tr>
<td>HPV</td>
<td>49%</td>
<td>49%</td>
<td>14,100,000</td>
</tr>
</tbody>
</table>

**Total:** 19,738,800
HPV is found in virgins

A study was done to look at a group of young women who had never had vaginal sex to see how many of these women had vaginal HPV.

The study found that:

• HPV was found in 46% of the women; almost half of the women had HPV before ever having sex
• 70% of these women reported non-coital (no vaginal sex) sexual behaviors that may in part explain how they got HPV; intimate contact can spread HPV

Shew, J Infect Dis. 2012
Adolescent behavior can change very fast

Nearly 50% of high school students have already engaged in sexual (vaginal-penile) intercourse

- 1/3 of 9th graders and 2/3 of 12th graders have engaged in sexual intercourse
- 1/4 of high school seniors have had sexual intercourse with 4 or more partners
- Important to protect before exposure

**Teen Sexual Activity**

Adolescence is a time of rapid change.

% of adolescents who have had sex by each age

- **Female**
- **Male**

www.guttmacher.org
How is HPV spread?

• Any type of intimate sexual contact, genital touching or rubbing
• Penetrative intercourse is NOT necessary to get HPV
• Most commonly spread through sexual intercourse (genital-genital, anal-genital, oral-genital, manual-genital)

What makes getting HPV infection more likely?

• Sexual activity
• Having sex with a partner who has had several different sex partners
• Increasing number of sex partners throughout your life
• Not using condoms, which work as a barrier to spreading HPV
How do you know if you have HPV?

- Most people with HPV don’t have any symptoms
- Genital warts are a symptom of HPV in men and women
- WOMEN: Abnormal changes on a Pap smear
- MEN: No way of testing for HPV in men
Genital Warts

Genital warts:
- Found on shaft of penis (male),
- vagina, vulva, cervix (female),
- and around anus
Is there treatment for HPV infection?

- There is currently no treatment for HPV infections
- HPV is a virus, so it cannot be cured with antibiotics
- However, cervical lesions and warts that can result from HPV infections can be treated
- Like all viruses, HPV can live in the body for many years. The infection can remain inactive for decades, then reactivate later in life as the immune system weakens.
What’s the connection between HPV and cancer?

Cancer: a group of related diseases where cells stop working normally and grow out of control.

The HPV virus can disturb the normal working of the cells it infects, causing them to change and sometimes grow uncontrollably.

Tumor: a mass of uncontrolled cell growth.
HPV causes cancers in men and women

- HPV is now the most common cause of mouth & throat cancer, in both older adult men and women
- Head and neck cancers caused by HPV are on the rise, and will become more common than cervical cancer
- HPV also causes anal, vulvar, penile cancers but those are more rare

The rate of new head and neck cancers increased in the past 20 years

During this time:

- Smoking and alcohol-related head and neck cancers decreased 50%
- HPV-related head and neck cancers increased by 225%
What’s the connection between HPV and cervical cancer?

• HPV infection is the major risk factor for developing cervical cancer
• The majority of all cervical cancers are caused by HPV
• Cervical cancer is most common in women over age 30
Cervical cancer basics: What is the cervix?

- The cervix leads from the uterus to the vagina (birth canal)
- It acts like a doorway; keeps things from entering the uterus and opens during labor to deliver a baby
- When a woman is young (13-26) the cervix is immature and can be easily infected by any sexually transmitted disease
What increases the risk for cervical cancer?

• Giving birth to many children
• Having many sexual partners
• Having first sexual intercourse at a young age
• Smoking cigarettes
• Using oral contraceptives ("the Pill")
• Having a weakened immune system
• Persistent infections with high risk strains of HPV
• Having an HIV infection
• Not having screening tests
• Not getting the vaccine
Since Pap testing has become routine in the US, the cervical cancer death rate has decreased by 74%.

- Screening should begin about three years after a woman begins having sexual intercourse, but no later than 21 years old.
- Cervical cancer is extremely rare in women under the age of 25.
- HPV DNA testing is recommended at age 30.
Does having HPV mean that person will develop cancer?

- No, in most cases HPV infection goes away without causing problems.
- If it doesn’t go away, HPV can cause infected cells to change and become abnormal.
- These abnormal changes can eventually lead to cancer if not treated.
- Many different types of HPV can affect the cervix, head and neck, anus, penis, and only some of them cause abnormal cells that may become cancer.

*Screening and early detection are the key*
Can HPV infection be prevented?

- Avoiding genital contact with another individual
- If sexually active, be in a long-term and monogamous relationship (partners are only seeing each-other and no one else), with an uninfected partner and practice open communication
- Correct and consistent condom use can reduce the transmission of HPV, though areas not covered by a condom can still be infected by the virus
- Get the HPV vaccine
HPV Prevention: The Vaccine

- Two vaccines to prevent HPV infection: Gardasil® and Cervarix®
- Prevent infections with seven high-risk HPV types which cause about 70-90% of cervical and anal cancers
- Gardasil also prevents infection with HPV types that cause 90% of genital warts

*The HPV vaccine is the ONLY vaccine that can prevent cancer*
When should boys and girls get the vaccine?

- Early vaccination is the key
- Best before before sexual activity (before exposure to HPV)
- Doctors recommend that girls and boys get the HPV shots starting at age 11 or 12, but can start when older (up to age 26)
- Best immune system response to vaccine in boys and girls under 14
- Given in 3 separate shots over a 6 month period
Is the vaccine safe & effective?
Are there side effects?

• The vaccine is safe and very effective
• More than 60 million doses of HPV vaccine given in US since 2006
• Over 170 million doses worldwide (Europe, Australia)
• Side effects are mild; redness, soreness at injection site, mild fever, and upset stomach (similar to the ones with all vaccines like meningitis and tdap)
• No serious side effects found to be caused by vaccine
Australian study of 39,000 girls found vaccination by age 14 is twice as effective at preventing abnormal cell changes

The study looked at girls who were vaccinated between age 14 and 17:

• It showed a 75% reduction in cervical pre-cancer for girls vaccinated by age 14
• It showed a 35% reduction in cervical pre-cancer for girls vaccinated after 14
• The vaccine was twice as effective in 14 year olds because they had a better immune response and were less likely to have been exposed to HPV
Vaccination does not change sexual behavior

Three large studies including more than 200,000 girls and young women found that HPV vaccination is NOT associated with:

- Being sexually active
- Having and increased number of sexual partners
- Receiving counseling on contraceptives
- Testing for or diagnoses of sexually transmitted infections

Bednarczyk RA, Pediatrics 2012;130:798
Jena AB, JAMA Intern Med, 2015
Points to remember

• Most women and men are exposed to HPV
• People can have HPV for a long time and not know it
• HPV can be prevented by vaccination
• The best time to get the vaccine is before being exposed to HPV by 13-14 years of age.
• Over 160 million doses of the HPV vaccine have been given with no evidence of serious side effects
• Boys should be vaccinated as well as girls, especially because of the increase in HPV-related head and neck cancers
• The HPV vaccine is the only vaccine that can prevent cancer
Lady Ganga

http://ladyganga.org/

They were separated by time and space but connected through something even stronger.
Human Papillomavirus (HPV)

For Clinicians

KNOW THE FACTS
Get information on the burden of HPV cancers, the importance of HPV vaccination, and how to help parents overcome hesitancy about HPV vaccine.

COMMIT TO THE CAUSE
Find ways to help improve HPV vaccination rates by promoting vaccination in your offices. Get CDC resources to help raise awareness among parents about the importance of HPV vaccine for preventing cancer.

LEAD THE CONVERSATION
Learn how to successfully communicate about HPV vaccine with the parents of your preteen patients, as well as how to become an HPV vaccination champion with your colleagues and in your community.
Continuing Education
Parents and healthcare professionals are the key to protecting adolescents from HPV cancers.

**VACCINATE YOUR 11-12 YEAR OLDS.**

www.cdc.gov/vaccines/teens

Free posters available for ordering in the following sizes: 8.5x11, 11x17, 18x24.
Want to know when we have new resources and tools?
Send us an email to request our newsletter:
PreteenVaccines@cdc.gov

We can help provide speakers for grand rounds and continuing education events, as well.
Thank you!

Contact us:

TeamMaureen.org
info@TeamMaureen.org
You are The Key to HPV Cancer Prevention
Evidence-Based Study: The Prevalence of Human Papillomavirus (HPV) Related to Oral Squamous Cell Carcinoma (OSCC) in the U.S. Latino Population

Principle Investigators:
Aidee Herman, DMD, CAGS, MSc D, Associate Clinical Professor Department of Periodontology, Tufts University School of Dental Medicine
Sang Joon Lee Tufts University School of Dental Medicine D’19

Co-Investigators:
Dr. Zuzana Mendez, Dr. Ana Stefania Seith, Dr. Ahmad Al Alwan, Dr. Isaac Nawar, Dr. Moaz Zanbarakji, Cassandra Kocek, Trish Dang, Ilene Ea, Alexander Quiroz, Nelson Martinez, Claudia Martinez, Jeyrie Ramos, Diana Florencio, Yudi Quintero
Objectives:

- Oral Squamous Cell Carcinoma (OSCC) Definition
- Correlation between HPV/OSCC
- Prevalence of HPV and OSCC in U.S. Latino Population
- Importance of Healthcare Interpreting
- Recommendations
- Conclusions
Oral Squamous Cell Carcinoma (OSCC) Definition

Oral Squamous Cell Carcinoma (OSCC): Oral Squamous Cell Carcinoma (OSCC) is the result of mutated genes that cause cells to grow and proliferate at an uncontrolled rate, to be unable to repair DNA damage within itself, or to refuse to die.

- One of the real dangers of this cancer is that it can go unnoticed in its early stages. In addition, it can be painless and/or physical changes may not be obvious.

- Symptoms of OSCC include:
  - A white or red patch of tissue in the mouth
  - A small, hard ulcer that looks like a canker sore
  - A lump which can be felt inside the mouth or neck
  - Pain or difficulty swallowing, speaking, or chewing
  - Any wart like masses
  - Prolonged hoarseness
  - Any numbness in the oral region
  - Persistent ear ache on one side

- Cancer may occur for a number of reasons:
  - Random genetic mistakes
  - Inherited genetic errors
  - Exposure to chemicals or radiation
  - Caused by a virus

Examples of oral squamous cell carcinoma (OSCC).
Source: Copyright 2006 Martin S. Spiller, D.M.D. courtesy of Dr. Ed Cataldo - http://doctorspiller.com/squamouscell.htm#sthash.CUUQQw9G.dpuf
Correlation between HPV/OSCC

- Studies have shown that HPV is associated with causing oral squamous cell carcinoma. HPV does this by inhibiting Rb (a tumor suppressor protein) and p53 (a protein that induces cell death), which ultimately leads to uncontrolled cell division - cancer.

- HPV 16 is found in 80 - 100% of HPV+ oropharyngeal cancers. These are mainly found in posterior regions such as the base of the tongue, back of the throat, and tonsils. In addition, HPV 16 and 18 are the most common oncogenic types which cause ~70% of all cervical cancers worldwide.

- In contrast, HPV doesn’t appear to be a significant risk factor for cancer of the anterior 2/3 of the tongue or the remaining oral cavity (HPV- cancers are associated with alcohol and tobacco use).

- The importance of this distinction is highlighted by evidence that HPV- related carcinomas have a better prognosis overall than HPV+ cancers.
The U.S. Census counted 50.5 million Hispanics in 2010, or 16.3% of the total U.S. population, and the Hispanic population is projected to double by 2050, reaching 102.6 million. Since 2000, Hispanics have accounted for 56% of the U.S. population growth.
The chart shows the incidence of oropharyngeal cancer by race and ethnicity. All bars include male and female data. Hispanic ethnicity includes all races.

Racial/ethnic minorities and low-income individuals suffer poorer HPV cancer outcomes. There are a number of factors that impact this statistic, but the data are clear that racial/ethnic minority women and women living below the poverty line are more likely to become infected with HPV and get cervical cancer compared to Whites and higher income individuals.

Racial disparity: Much of the racial disparity in survival rates was due to the greater proportion of tumors diagnosed at late stages among black men than among white men (1999-2005).
CANCERS COMBINED INCIDENCE RATES BY STATE:

According with the statistics by the CDC 2014, Massachusetts State have the highest incidence of Human Papilloma Virus related to Oral Cancer.

<table>
<thead>
<tr>
<th>Color on Map</th>
<th>Interval</th>
<th>States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light green</td>
<td>373.8 to 435.8</td>
<td>Alaska, Arizona, Arkansas, California, Colorado, Florida, Hawaii, New Mexico, South Carolina, Texas, Utah, Virginia, and Wyoming</td>
</tr>
<tr>
<td>Medium green</td>
<td>435.9 to 457.6</td>
<td>Alabama, Idaho, Indiana, Maryland, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, Oregon, South Dakota, Vermont</td>
</tr>
<tr>
<td>Medium blue</td>
<td>457.7 to 477.2</td>
<td>Georgia, Illinois, Iowa, Kansas, Michigan, Mississippi, Montana, North Carolina, Rhode Island, Tennessee, Washington, Wisconsin</td>
</tr>
<tr>
<td>Dark blue</td>
<td>477.3 to 509.3</td>
<td>Connecticut, Delaware, District of Columbia, Kentucky, Louisiana, Maine, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, West Virginia</td>
</tr>
<tr>
<td>Light Gray</td>
<td>Data not available</td>
<td>Nevada</td>
</tr>
</tbody>
</table>

*Rates are per 100,000 and are age-adjusted to the 2000 U.S. standard population.

†Rates are not shown if the state did not meet USCS publication criteria or if the state did not submit data to CDC.

Detecting Oral Cancer Through Visual and Tactile Examination

Signs of potentially malignant lesions

- sharp or distinct margins;
- a red component (color variation);
- a non homogenous white component (surface irregularity);
- persistent ulceration;
- size larger than 1 centimeter;
- lesion of the ventral lateral tongue or the floor of the mouth.

Zones at high-risk for squamous cell carcinomas

ADA American Dental Association®
America’s leading advocate for oral health

† ADA Council on Scientific Affairs. Oral Cancer Screening: Evidence-based clinical recommendations. JADA 2010; 141:509-516. Copyright © 2010 American Dental Association, All rights reserved. Adapted with permission. To see the full text of this article, please go to http://jada.ada.org/content/411

Images provided courtesy of Dr. Brad W. Neville, College of Dental Medicine, Medical University of South Carolina, Dr. John R. Kalkos, College of Dentistry, The Ohio State University and National Institutes of Health: Detecting Oral Cancer.

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Recommendations:

Suggestions to help prevent/identify early onsets of HPV and HPV-related cancers:

- Improve dentist-patient communication - dentists should stress the need for more clinicians to remain alert for signs of malignancy when performing a routine visual and tactile exam in dental patients, especially those with a history of tobacco and heavy alcohol use and HPV

- Improve HPV vaccination rates

- Encourage all US healthcare professionals to be active and strong advocates to motivate parents to protect their children by being vaccinated

- Make vaccination procedure routine and focus on ways to reduce missed opportunities

- Inform/counsel HPV-positive patients about the risks of infection/how HPV can affect their sexual partners; refer patients to educational materials, hotlines, and other resources

- Aid organizations interested in HPV prevention, such as the CDC, in holding meetings to develop and distribute simple, cost-effective modules for use by local programs

- Assist researchers in developing low-cost, easy-to-implement options to screen for and treat HPV-related cancers in low-resource settings
Recommendations:

- **More education/public awareness**
  - Increase usage of promotoras and other services to educate non-English speakers and speakers in which English is not their first language
  - Create programs in school to educate and encourage young students to get vaccinated
  - Notify public that the HPV vaccine is available through the federal Vaccines for Children (VFC) program in all 50 states
    - provides vaccines for children ages 9-18 who are covered by Medicaid, Alaskan-Native or Native American children, and some underinsured or uninsured children

- **Fund state legislation**
  - Require students to be vaccinated in order to attend school (currently enforced in Rhode Island, Virginia, and DC)
  - In 2007, at least 24 states and D.C. introduced legislation to specifically mandate the HPV vaccine for school
  - Since 2006, legislators in at least 42 states and territories have introduced legislation to require the vaccine, fund or educate the public or school children about the HPV Vaccine; at least 25 states and territories have enacted legislation
Conclusions:

- Since there is currently no medical cure for HPV, prevention and education are key. By educating the public, in particular the Latino population, about HPV and its prevention, we can help decrease the amount of HPV+ individuals and decrease the likelihood of developing HPV-related cancers.

- The following is a list of preventative measures to help avoid contraction of HPV:
  - Vaccination (recommended for males and females at 11 or 12 years old)
    - Gardasil (for males and females aged 9-26)
  - Limit number of partners
  - Use protection - use a condom when engaged in sexual contact
  - Circumcision
  - Pap test - have regular check-ups to spot in early stages
  - Avoid sex at a young age
  - Adopt a healthier lifestyle - to boost immune system
Research done by a Tufts student (2015) on “HPV/OSCC: Dental students’ Knowledge and attitudes”

- A research conducted by a Tufts student (I. De La Cruz) had an objective to develop an instrument to assess American dental students’ knowledge of HPV and oropharyngeal cancer and their attitudes towards addressing it.

- The research respondents answered about half of the knowledge questions correctly, only about a quarter of them felt confident about educating their patients about the correlation between HPV and OSCC. However most showed an interest in learning more about the correlation and had the intention in teaching their patients about the link.
Flow Chart: Search Strategy

- The authors searched PubMed and Google Scholar database and reviewed titles, abstracts, and full reports.

Potentially relevant articles, based on title search: 240

Potentially relevant articles, based on abstract: 70 (170 excluded)

Potentially relevant articles, based on full article review: 6 total (64 excluded)

Exclusion Criteria:
- Irrelevant to topic
- Published over 10 years ago
- Not published in US
- Did not contain information about HPV and OSCC in the US Latino population
Conclusions

- The authors conclude that studies addressing the relationship between HPV and OSCC were methodologically weak due to the limited available studies and biases.
- Additional research regarding HPV and OSCC in the US Latino population is needed.
- Recommendations for research:
  - Determine the value of salivary diagnostics in identifying biological markers, including serum and cellular markers, as a means of reducing morbidity and mortality resulting from oral cancer.
  - The natural history and pre-cancer stage of oropharyngeal cancers are not well established as they are for cervical cancer; direct trials with oropharyngeal neoplasia are more difficult.
  - Researchers need a universal definition of the anatomic oropharynx and associated malignancies and agreement on laboratory methods to obtain meaningful and comparable data to overcome this problem.


Health Care Interpreting

- According to the National Council on Interpreting in Health Care (NCIHC): The basic purpose of an interpreter is to enable communication between people who do not speak each other's languages (2014)

- Health care interpreting can facilitate communication between limited English proficient (LEP) patients and physicians, nurses, lab technicians and other health care providers working in a variety of settings
Important Definitions:

- **Interpreter**: Interpreting is the act of accurately rendering spoken or signed communication from one language into another.

- **Translator**: Translating is the rendering of a written text in one language into a comparable written text in another language.
Interpreters and Translators are High in Demand in 2014

- A new US study shows that interpreters and translators are in the top 12 high-wage, in-demand skilled positions.

- The Title VI of the Civil Right Act of 1964 states that: “No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance”

- *National origin includes individuals with limited English proficiency (LEP)*

- President Clinton’s Executive order from August 2000
Reasons why this is a problem

- In cases of patients with HPV, which is a sensitive topic because it is an STD, it is difficult to inform it in some cultures
  - Interpreters should mention this point to the provider
- Interpreters have an important role because they not only transmit verbal messages, but also transmit messages through attitude, body, and facial expression
  - A sympathetic, non-judgmental attitude generates trust and a warm atmosphere
- Conflicts related to cultural differences are frequent between two parties who do not speak the same language or share the same belief system
- These conflicts occur because of the different thought processes; what may be considered normal and acceptable behavior in one culture could be interpreted as offensive, threatening or even forbidden in another
- The professional code ethic should discourage an individual to not be an interpreter for family and friends.
Trained health care Interpreters

**Requirements:**

1. Knowledge of medical terminology in both languages
2. Employ professional techniques to handle the complications that may arise with patients, families, and health care providers
3. Besides the necessary linguistic competence, cultural competence is very important for the job
4. To possess the knowledge of both the providers and patients cultures, and to be able to put this knowledge to work by offering explanations when cultural differences or conflict between the two parties arise in the clinical encounter

**Training for Culture Competence:**

1. Formal Training-certification of completion, Licensure, and Accreditation
2. Attending Seminars
3. Professional competence
4. Extensive Reading
5. Speaking with other interpreters
6. Ethical responsibility
Risk/ Lack of Training

- Without the proper culture knowledge, training in the field health care interpreters would run the risk of ignoring, misunderstanding, and mishandling situations involving culture conflicts that arise during a health care encounter.

- Our duty is to care for the patients physical and mental well being and it is proven that LEP patients can experience much physiological stress (distress) making it important to give them the right assistance.

- According with the code of ethics created by the NCIHC in 2004 the “ethical obligation of interpreters is to process enough understanding of cultural differences, seeking to minimize and if possible to avoid potential misunderstanding and miscommunication based on cultural assumptions and stereotyping”
QUESTION:
- Whose responsibility is it to be culturally competent?

ANSWER:
- Cultural competence is a value and an ethical principle that should be showed by all members of the medical team, including the interpreters.
The challenge for interpreters is to manage the dialogue in a way that creates an atmosphere of:

- Trust
- Mutual Respect
Health care interpreters are seen as advocates who must be culturally and linguistically qualified in order to be able to do this job efficiently and ethically.
Thank you!

- **Principle Investigators:**
  - Aidee Herman, DMD, CAGS, MScD, Associate Clinical Professor Department of Periodontology, Tufts University School of Dental Medicine
  - Sang Joon Lee Tufts University School of Dental Medicine D’19

- **Co-Investigators (LEP):**
  - Dr. Ahmad Al Alwan, Dr. Samer Tabakh, Dr. Jumana Jbara, Ilene Ea, Alexander Quiroz