

Sep 21st, 4:30 PM - 5:15 PM

# HIV and Dental Care

Debra Wilson

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# Oral Health and HIV

## Clinical Management Issues

Debra Wilson, D.M.D.

Grady Health System – Atlanta, Georgia

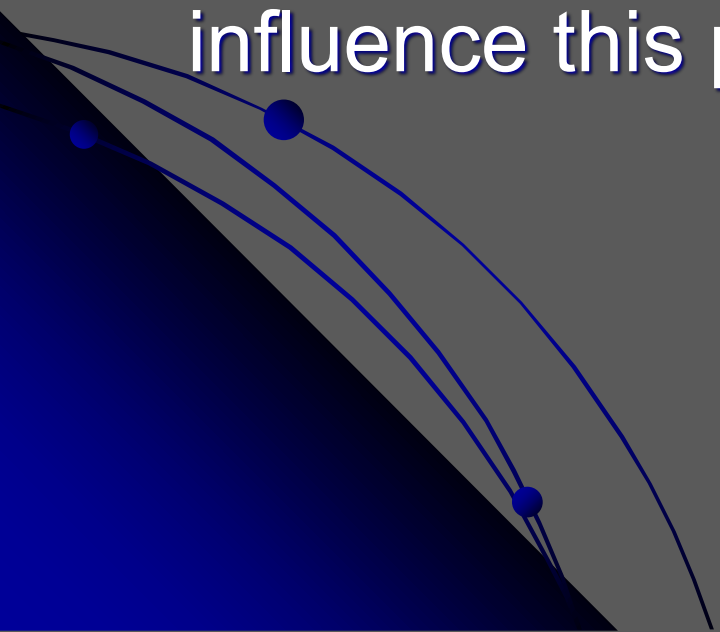
Retired Lead Dentist

September 21, 2018

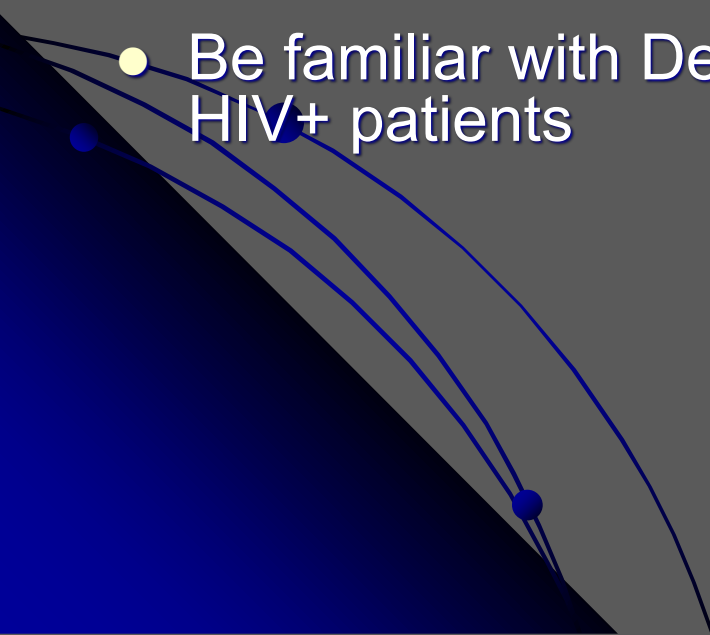
**6<sup>th</sup> Annual Rural HIV research and Training Conference**

# Disclaimer

I do not have relationships with any manufacturers/companies that would influence this presentation.



# Learning Objectives

- Describe the latest trends in oral manifestations seen in association with medically complex patients
  - Be able to recognize and manage the most common oral manifestations seen in association with medically complex patients.
  - Be familiar with Dental Treatment Considerations for HIV+ patients
- 





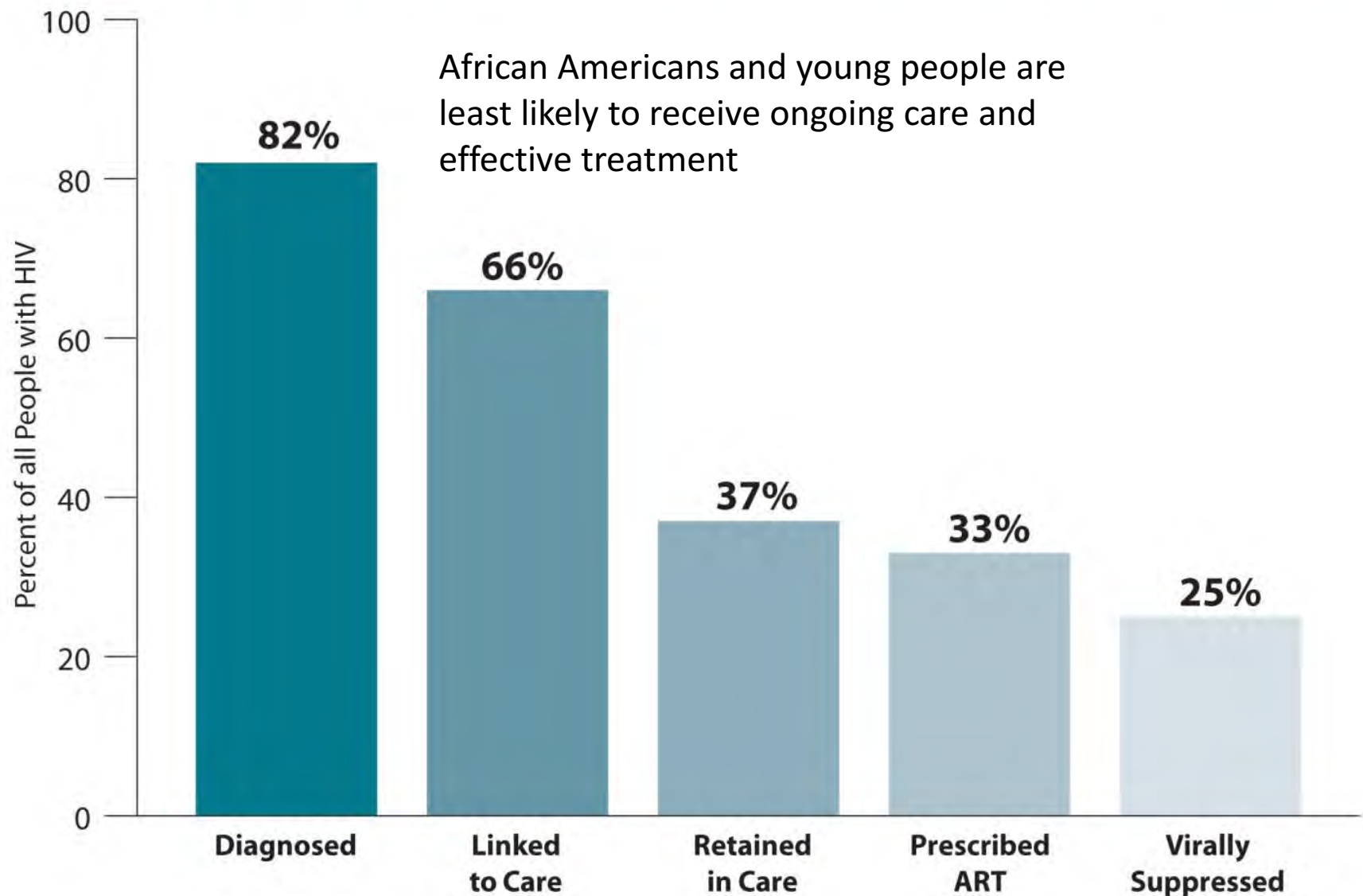
>1 MILL ARE LIVING WITH HIV IN THE U.S.

1 IN 5 LIVING WITH HIV



ARE UNAWARE OF THEIR INFECTION

**OVERALL: Of the 1.1 million Americans living with HIV, only 25 percent are virally suppressed.**



# Blacks/African Americans are more affected by HIV than any other racial/ethnic group



We represent approximately 14% of the U.S. population, but accounted for an estimated 44% of new HIV infections . (HIV incidence was almost 8x higher than that of whites)

We also account for 44% of people living with HIV infection.

## Testing campaign targeting African American Women



**You know him.  
But you can't  
know everything.**

**Get a Free HIV Test**

**HIV** TAKE CHARGE,  
TAKE THE TEST.

**1-800-CDC-INFO (232-4636)**

## WHAT CONTRIBUTES TO THE SPREAD OF HIV???



Drug intoxication affects mental status and judgment, increasing the likelihood of high-risk sexual behavior



# ALCHOL IS A DRUG TOO!



8:00 PM



10:00 PM



1:00 AM

Source unknown



**In 2015, 50% of HIV-patients were older than 50**

**Older age is associated with more rapid progressions of ;**

**HIV INFECTION**

**HEART DISEASE**

**KIDNEY DISEASE**

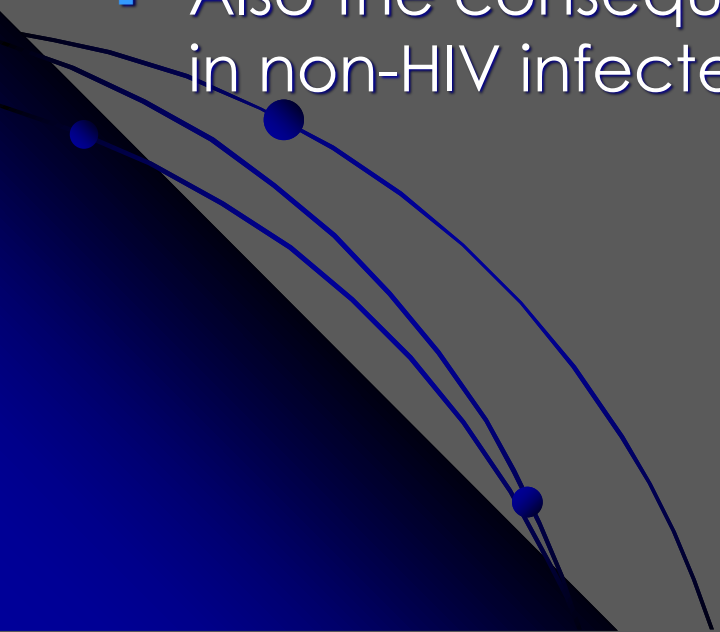
**DIABETES**





# HIV TREATMENT CONSIDERATIONS

- Despite adequate suppression of HIV the immune system continues to be defective in similar ways to the aging process.
- Also the consequences of aging occur earlier than in non-HIV infected individuals.



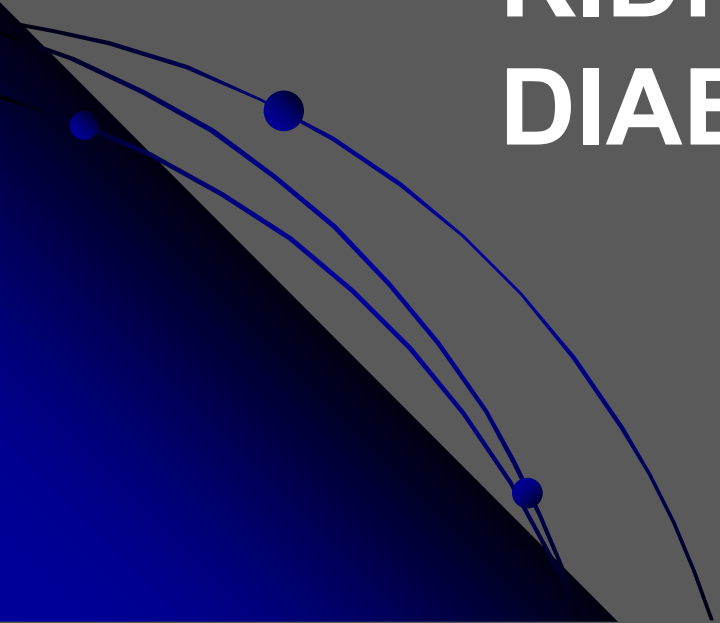
Over 50?  
*Rapid Progression of*

*HIV DISEASE*

**HEART DISEASE**

**KIDNEY DISEASE**

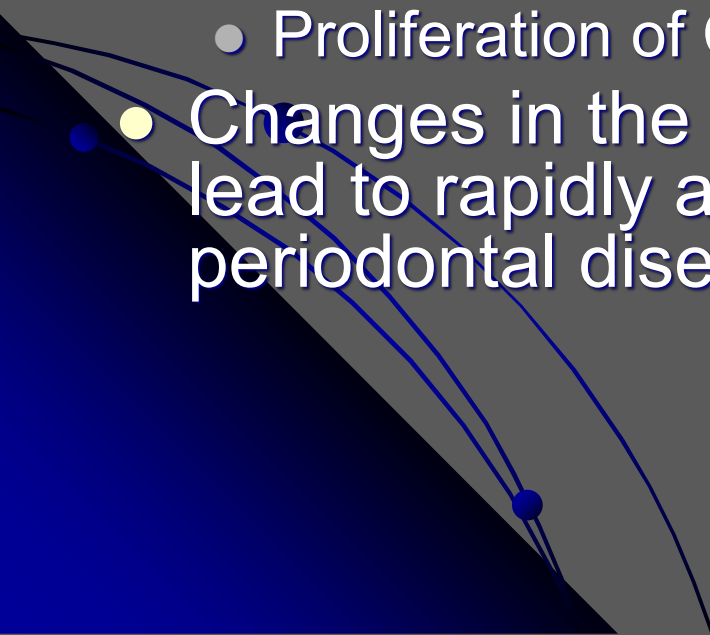
**DIABETES**



# Dialysis patients

- The main oral health problem experienced by renal patients is **xerostomia**. This is as a result of several factors which include multiple medications, restricted intake of fluids and diabetes, which many renal patients suffer from.
- Xerostomia may also predispose the patient to caries and oral infection as the protective factors in saliva are not present.

# Xerostomia

- Over 500 medications lead to symptoms of xerostomia
  - Approximately 30% of people living with HIV/AIDS experience moderate to severe xerostomia.
    - Effect of medications
    - Proliferation of CD8 cells in the major salivary glands
  - Changes in the quantity and quality of saliva lead to rapidly advancing dental decay and periodontal disease.
- 

# Xerostomia - Management

- Increase Topical Fluoride
- Prevident varnish
- Prescribe Prevident 5000 toothpaste for home use.
- Dietary advice



# Important lab values

- **CD4 count<sup>1</sup>**

- No need to pre-medicate prior to invasive dental care no matter how low.

- **HIV Viral Load<sup>1</sup>**

- No need to pre-medicate prior to invasive dental care no matter how low.

- **Platelet count<sup>1</sup>**

- Normal – male/female: 150,000 – 450,000 per microliter (mcl) of blood
- **Dental procedures can safely be performed with a platelet count of 60,000 mcl or greater**

- <sup>1</sup>*Dental Management of the HIV-Infected Patient*, copyright © 1995 American Dental Association, published by the ADA and the American Academy of Oral Medicine.



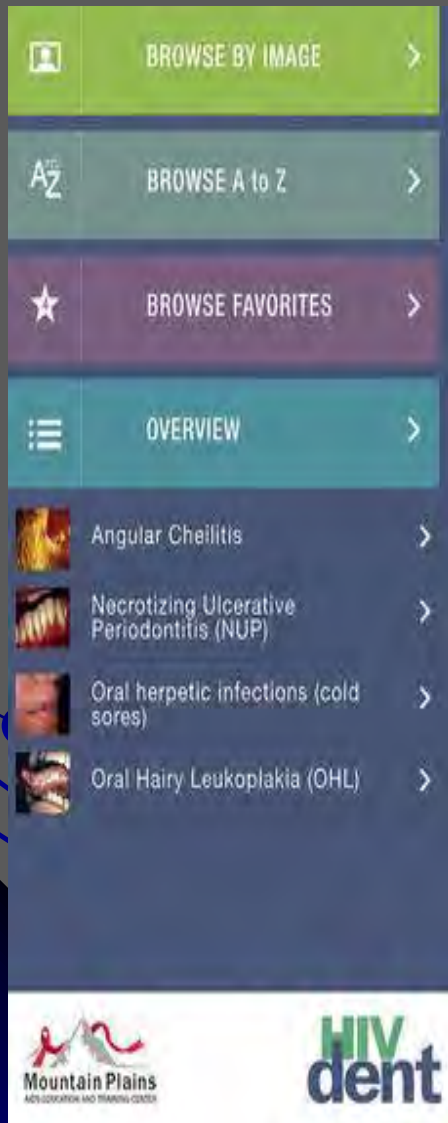
# Important lab values

- INR for patients on warfarin
  - No alteration of anticoagulation is necessary for INR that is in therapeutic range (INR 2-3), given that local hemostatic measures are used.<sup>2</sup>
- Absolute Neutrophil Count<sup>1</sup>
  - **An Absolute Neutrophil Count <500 cells/mcl requires premeditation prior to invasive dental procedures.**
    - Follow the American Health Association/ADA guidelines
- Glucose/ A1c
  - A1c > 8% is poorly controlled; <7% is well controlled.

● <sup>2</sup>J Am Dent Assoc, Vol 134, No 11, 1492-1497.

# GET THE APP HIV ORAL DISEASES

## HIV Oral Diseases





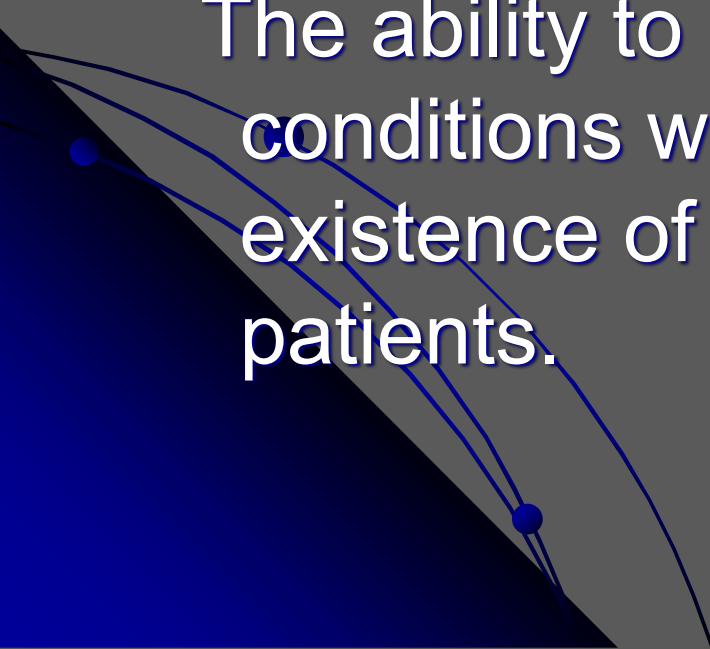
# Dental Treatment Considerations

- Evidence-based research has proven that providing dental care for the vast majority of people living with HIV/AIDS is no different than providing care for the general patient population.
- Evidence Report/Technology Assessment No. 37, *Management of Dental Patients Who Are HIV Positive* (AHRQ Publication No. 01-E042)

# ALWAYS REMEMBER

Patients may or may not know their HIV status; however, all people have the right to access dental care.

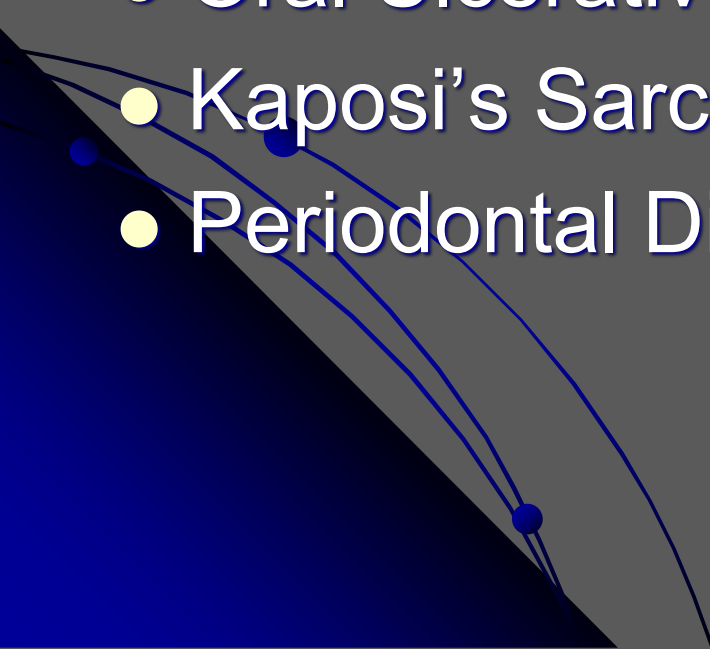
The ability to identify and treat oral conditions which may indicate the existence of HIV is vital to all dental patients.

A decorative graphic in the bottom-left corner consisting of several curved blue lines and three small blue dots, creating a modern, abstract design.

# Oral Manifestations of HIV Disease: The Basics

- Oral manifestations of HIV infection are a fundamental component of disease progression.
- Factors, which predispose expression of oral lesions, include:
  - **CD4 counts less than 200 cells/mm<sup>3</sup>**
  - **Viral load greater than 3,000 copies/mL**
  - xerostomia (dry mouth)
  - poor oral hygiene
  - smoking

# Six Common Oral Manifestations

- Oropharyngeal candidiasis (OPC)
  - Oral Hairy Leukoplakia
  - Oral Warts due to HPV
  - Oral Ulcerative Diseases
  - Kaposi's Sarcoma
  - Periodontal Disease
- 

# Oral Manifestations of HIV/AIDS

- For those with unknown HIV status, oral manifestations may suggest HIV infection, although they are not diagnostic.



- Reznik DA. Perspective - Oral Manifestations of HIV Disease. International AIDS Society–USA *Topics in HIV Medicine*. Volume 13 Issue 5 December 2005/January 2006





94 7 26

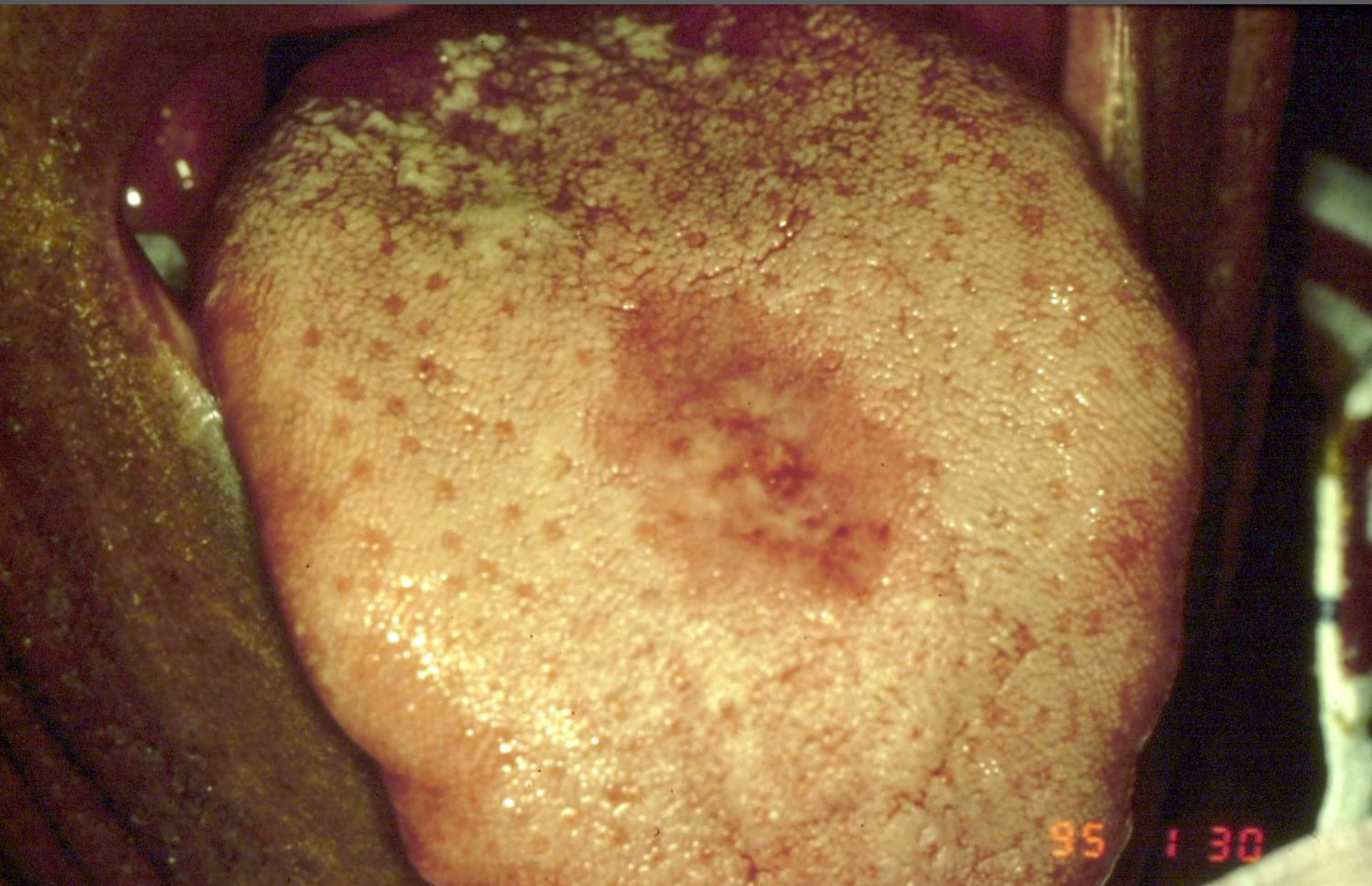
# Oral Manifestations of HIV/AIDS

- For persons living with HIV disease not yet on therapy, the presence of certain oral manifestations may signal progression of disease.



● Reznik DA. Perspective - Oral Manifestations of HIV Disease. International AIDS Society–USA *Topics in HIV Medicine*. Volume 13 Issue 5 December 2005/January 2006



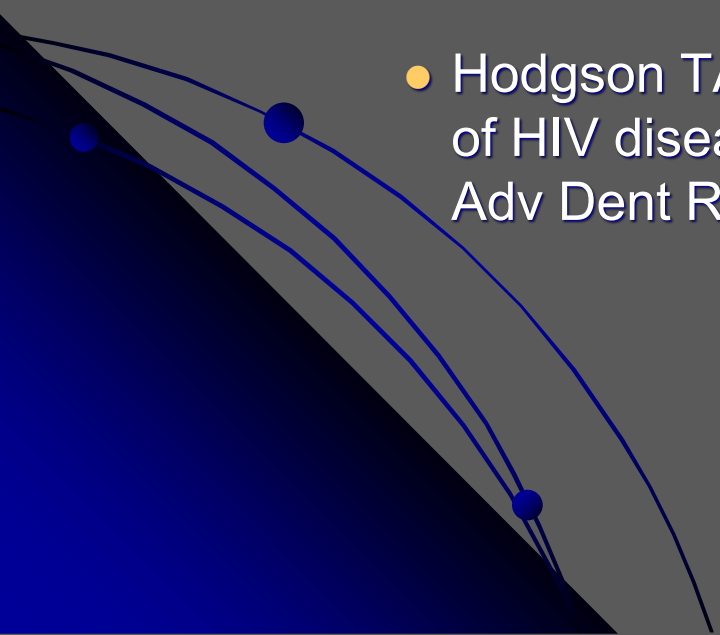




# Oral Manifestations of HIV/AIDS

- **For persons living with HIV disease on antiretroviral therapy the presence of certain oral manifestations may signal a failure in therapy.**

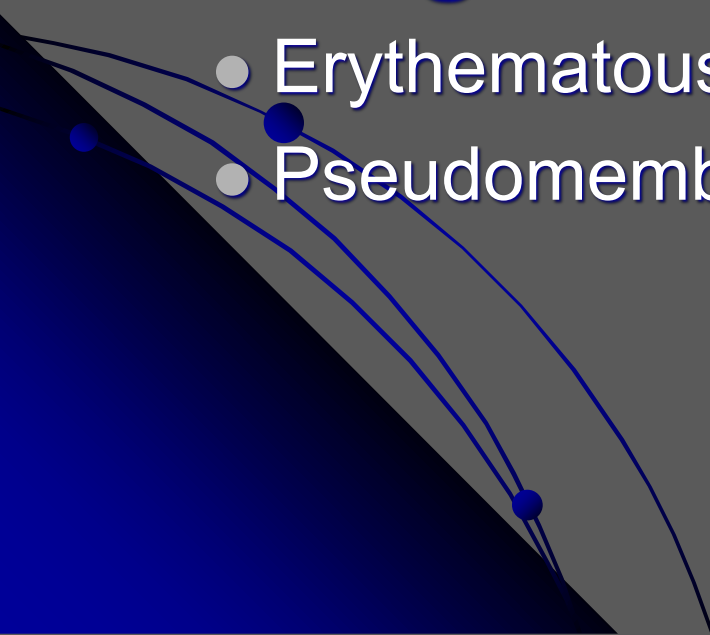
- Hodgson TA, Greenspan D, Greenspan JS. Oral lesions of HIV disease and HAART in industrialized countries. Adv Dent Res. 2006 Apr 1;19(1):57-62



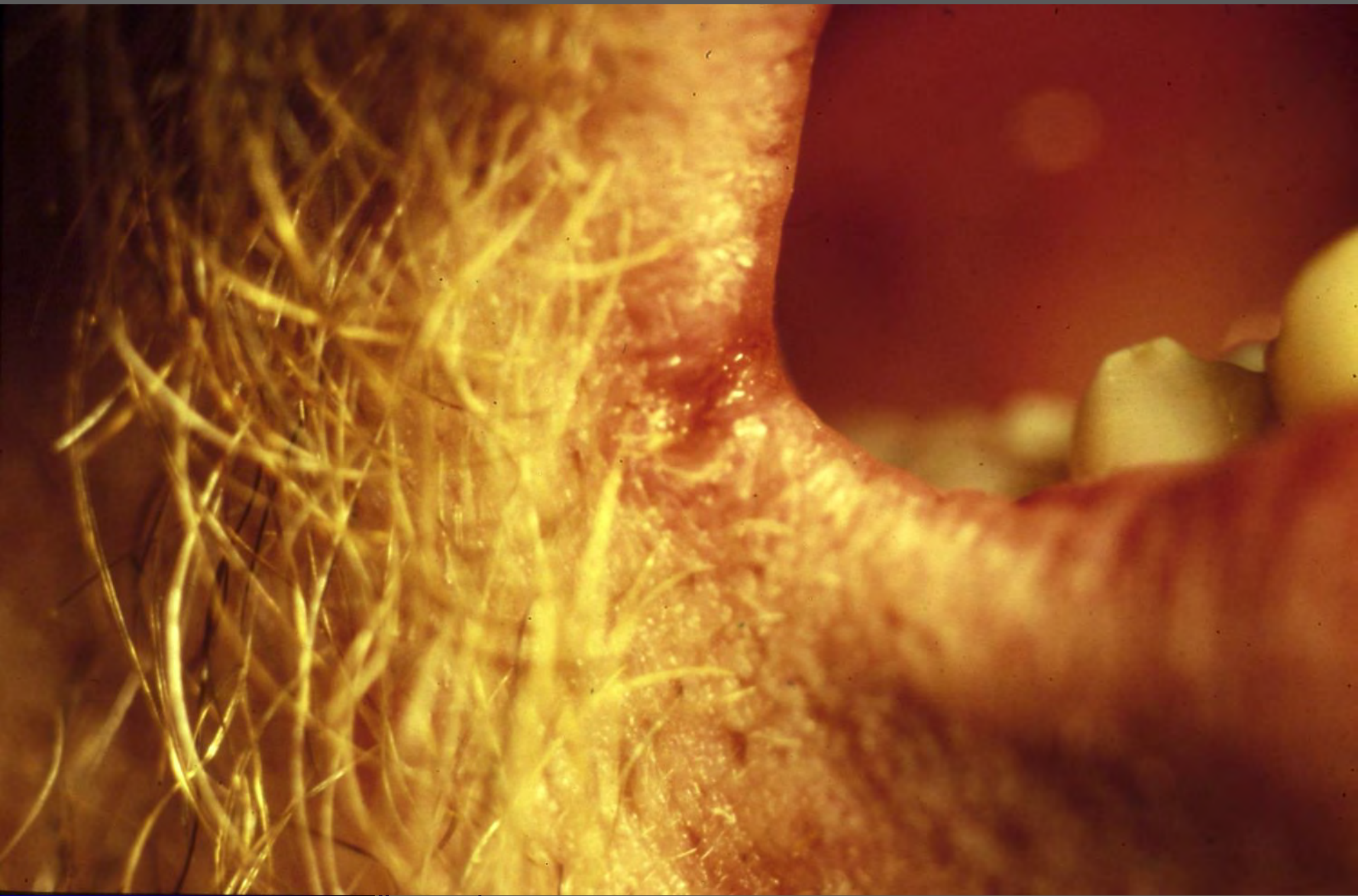


98 2 27

# Candidiasis

- There are three common presentations of candidiasis seen among people living with HIV/AIDS
    - **Angular cheilitis**
    - Erythematous candidiasis
    - Pseudomembranous candidiasis
- 







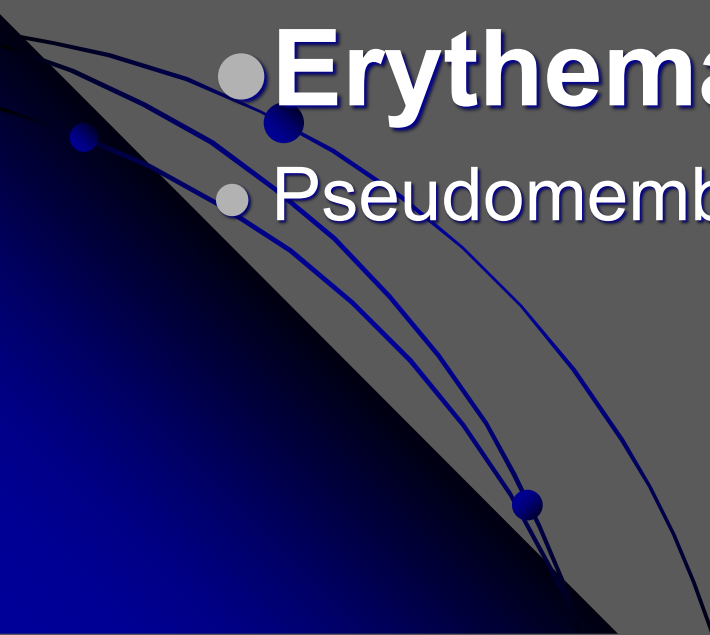


# KETOCONAZOLE CREAM 2%

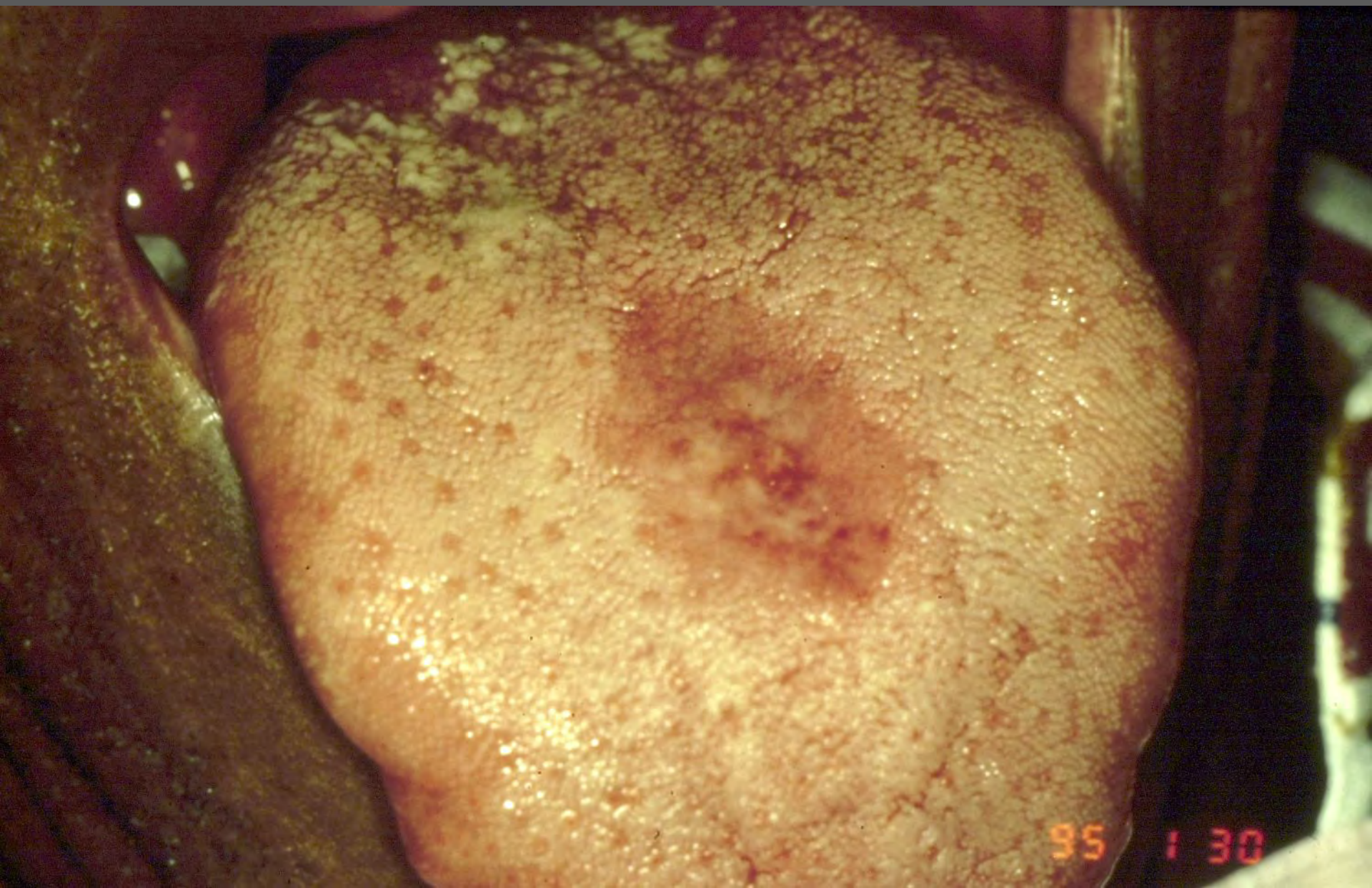


99 2 11

# Candidiasis

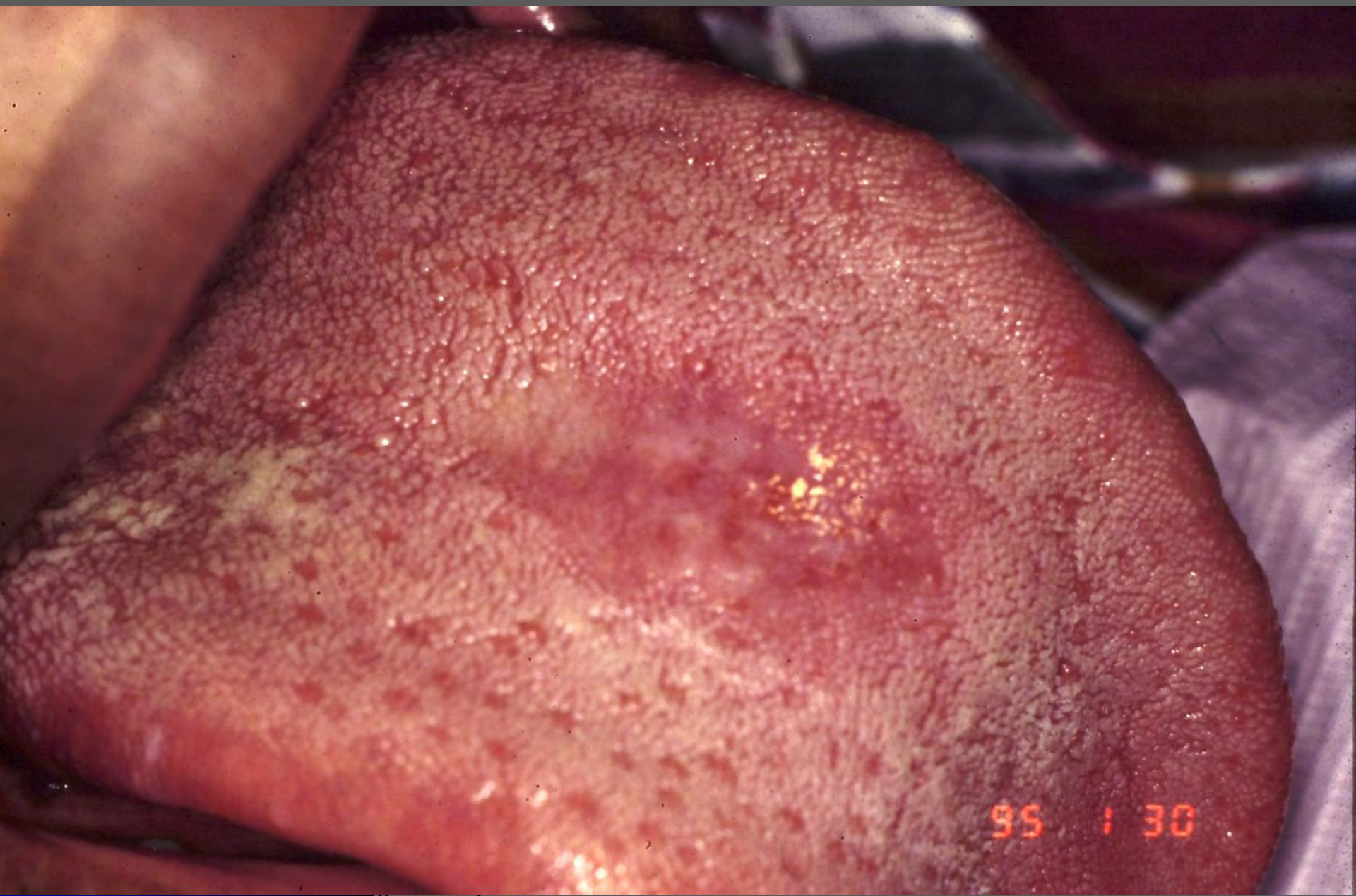
- Three presentations of candidiasis are seen in association with HIV disease:
    - Angular Cheilitis
    - **Erythematous Candidiasis**
    - Pseudomembranous candidiasis
- 







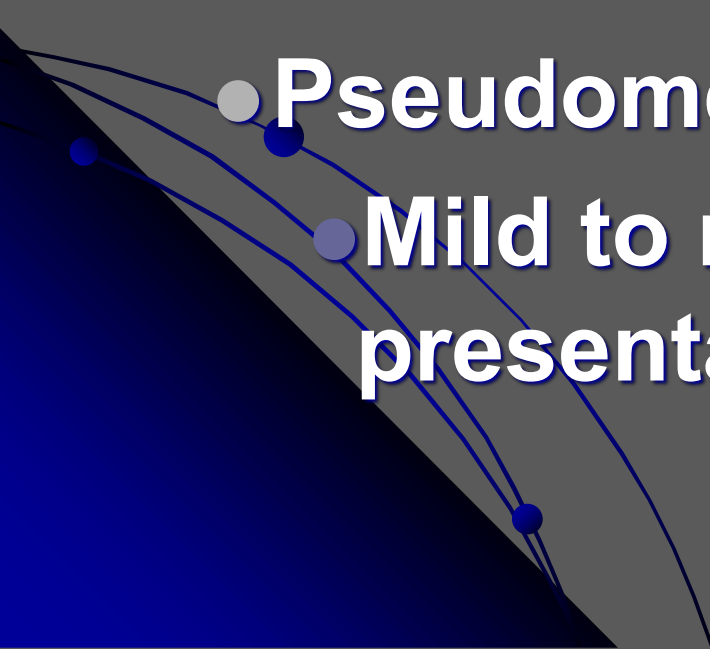








# Candidiasis

- Three presentations of candidiasis are seen in association with HIV disease:
    - Angular cheilitis
    - Erythematous candidiasis
    - **Pseudomembranous candidiasis**
    - **Mild to moderate disease presentation**
- 





94 7 26

# Treatment of mild to moderate erythematous and pseudomembranous candidiasis

- Topical agents for mild to moderate oral candidiasis
  - **Clotrimazole troches** 10 mg: Dispense 70, dissolve one troche in mouth 5 times a day for 14 days
  - **Nystatin oral suspension** 500,000 units: Swish 5 mL in mouth as long as possible then swallow (optional), 4 times a day for 14 days

# Candidiasis

- Three presentations of candidiasis are seen in association with HIV disease:
  - Angular cheilitis
  - Erythematous candidiasis
  - **Pseudomembranous candidiasis**
    - Mild to moderate disease presentation
    - **Moderate to severe disease presentation**









# Available systemic medications used in the management of moderate to severe oral/esophageal candidiasis

## Systemic agents

- **Fluconazole** 100mg: dispense 15 tablets, take 2 tablets on day 1 followed by 1 tablet a day for the remainder of the 14 day treatment period
- **Voriconazole** 200mg: dispense 14 tabs, take 1 tab BID for two weeks or at least 7 days following resolution of symptoms.
- Drug interactions – Contraindications: Rifampin, Rifabutin, Ritonavir and Efavirenz (all potent CYP450 inducers)





96 1 10

# Azole resistant *C. albicans*



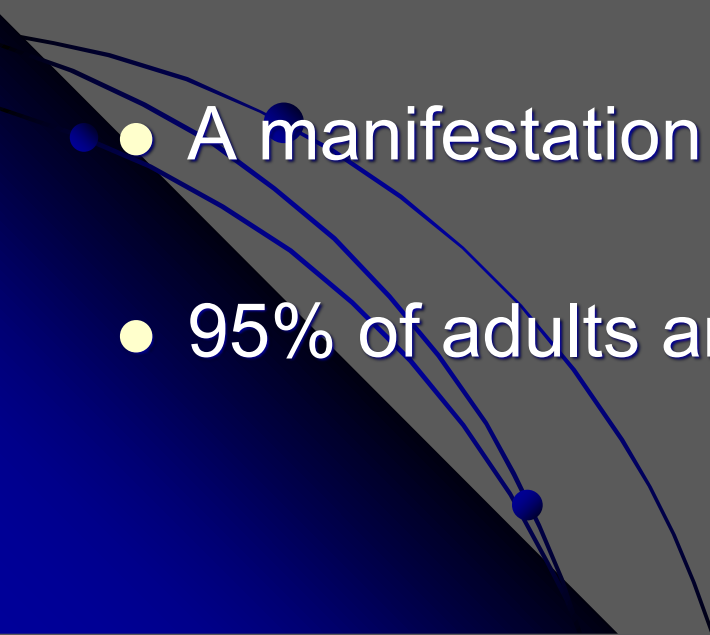
97 2 7

# Azole resistant *C. glabrata*





# Hairy Leukoplakia

- Secondary expression of EBV
  - Successful suppression of HIV viral load will result in resolution
  - A manifestation of immune suppression
  - 95% of adults are EBV+
- 

# Oral Hairy Leukoplakia

OHARA Training Slide





# Oral Hairy Leukoplakia

OHARA Training Slide



# Twenty-first-century oral hairy leukoplakia-a non-HIV-associated entity

- In the twenty-first century, the presence of OHL should not be regarded as pathognomic for HIV infection or significant systemic immunosuppression.
- Local and systemic immunosuppression, in the form of steroid inhaler use, is a risk factor for the development of OHL.

# Trends in Oral Manifestations

Advances in Dental Research 04/06

Hodgson TA, Greenspan D, Greenspan JS

- Evidence suggests that cART plays an important role in controlling the occurrence of oral candidiasis.
- The effect of cART on reducing the incidence of oral lesions, other than oral candidiasis, does not appear as significant.



# Oral Warts due to HPV

- Published reports show a marked increased incidence of oral warts in the Combination ART era \* \*\*

- \*Greenspan D, Canchola AJ, MacPhail LA, Cheikh B, Greenspan JS. Effect of highly active antiretroviral therapy on frequency of oral warts. Lancet 2001 May 5;357(9266):1411-2)

- \*\*King MD, Reznik DA, O'Daniels CM, Larsen NM, Osterholt DM, Blumberg HM. Human Papillomavirus-Associated Oral Warts among HIV-Seropositive Patients in the Era of Highly Active Antiretroviral Therapy: An Emerging Infection. Clinical Infectious Diseases, March, 2002.

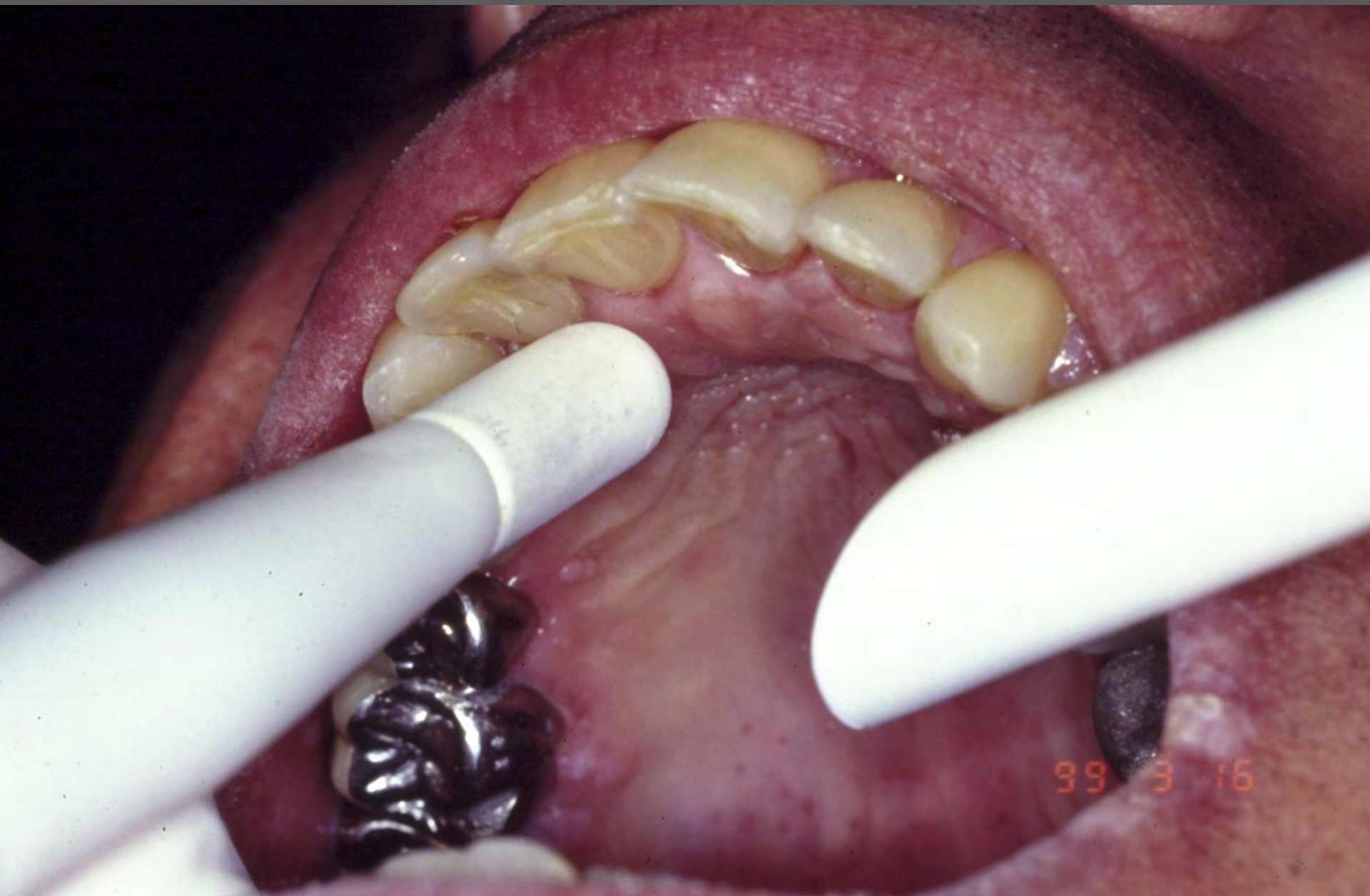




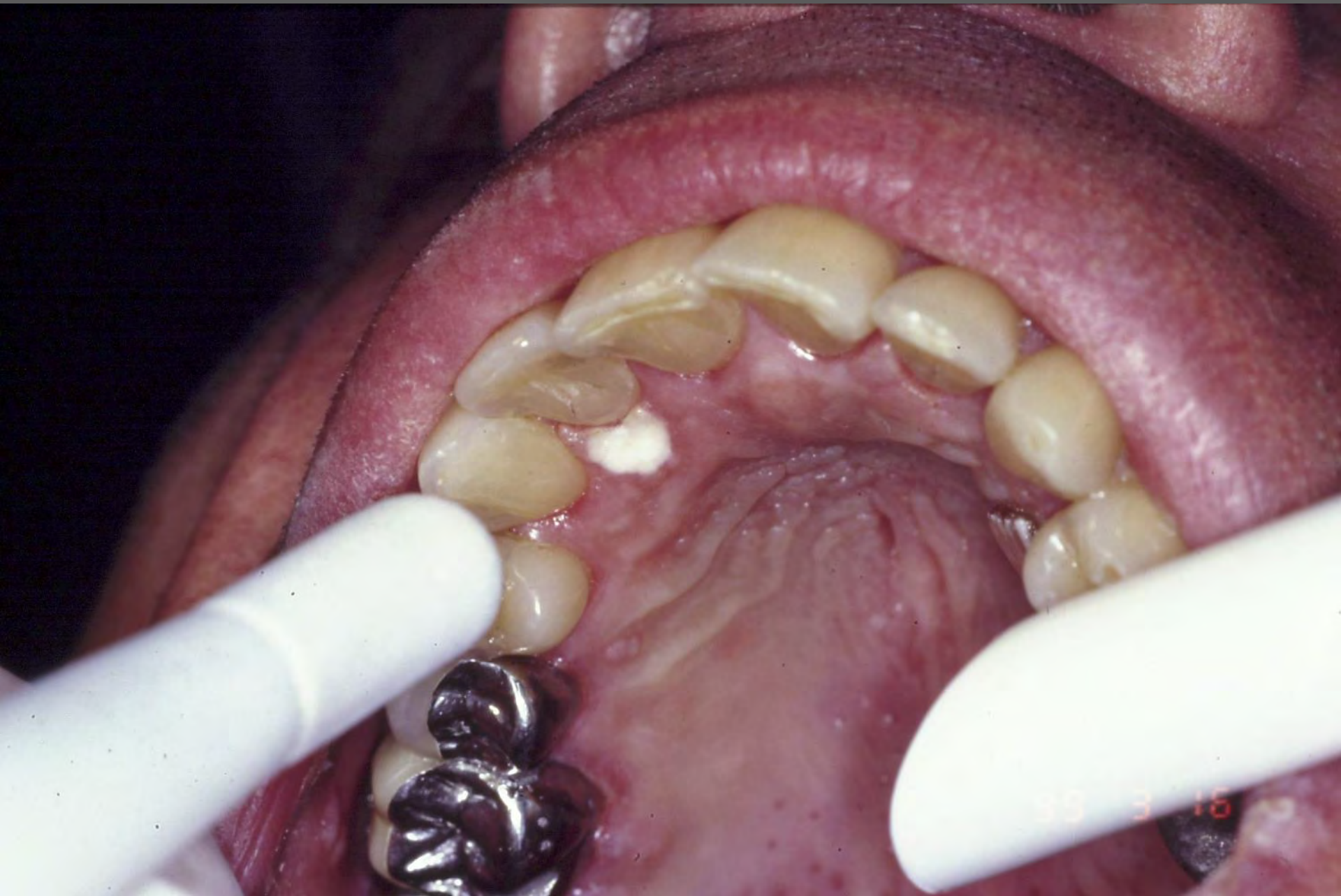


























# Oral Ulcerative Diseases

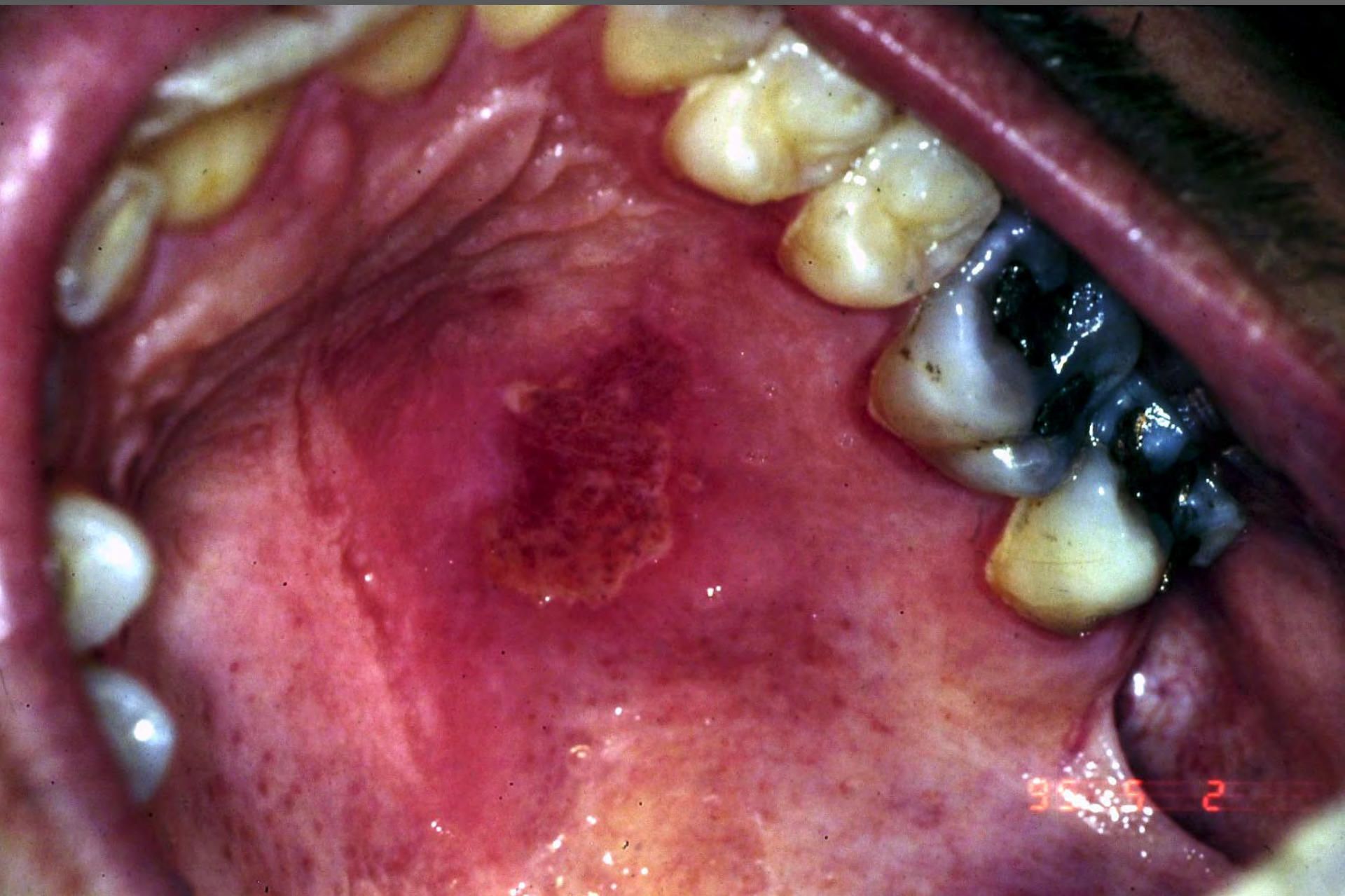
- HSV
- Aphthous ulcers

INCREASED FREQUENCY AND SEVERITY



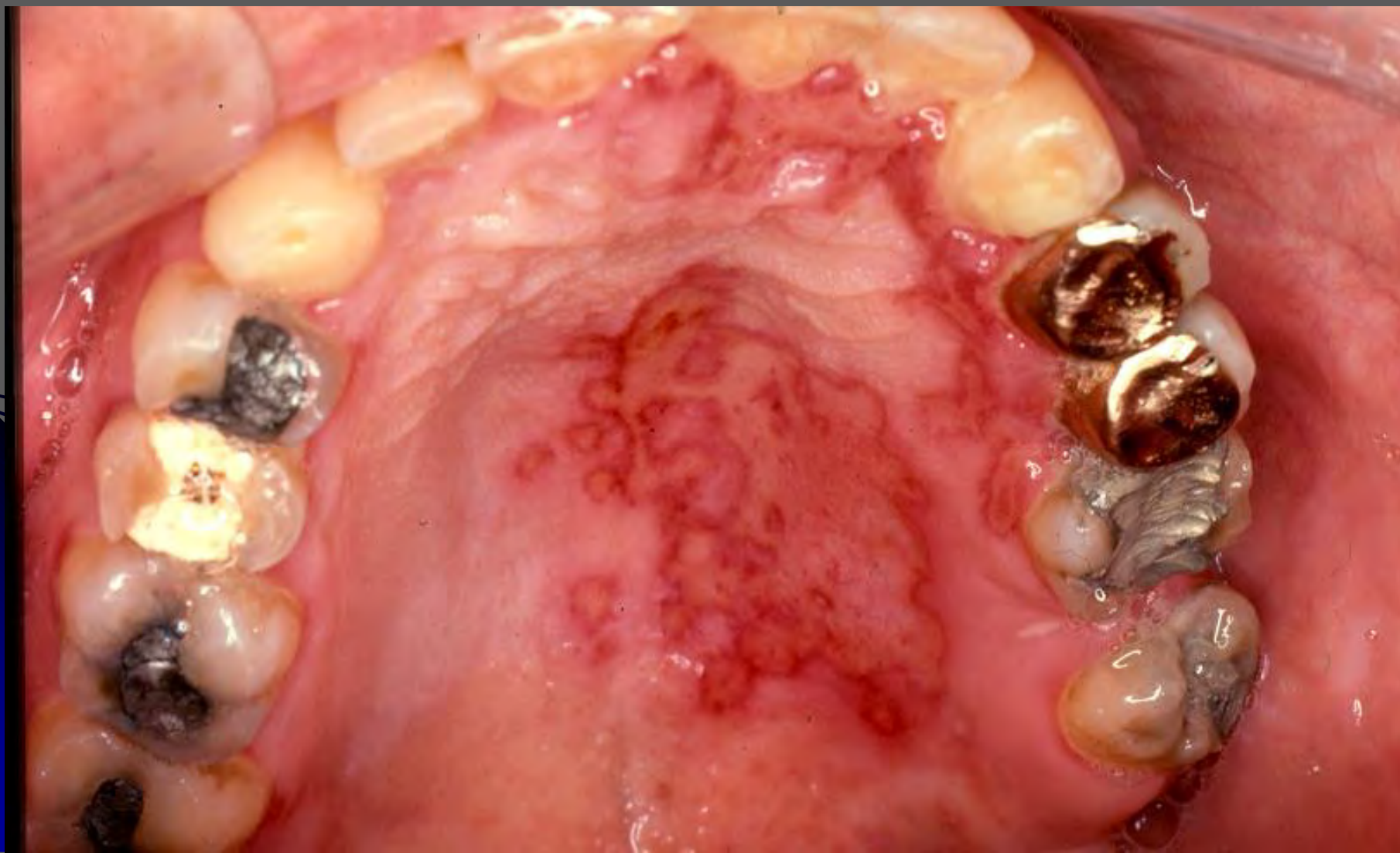
# Herpes Labialis - OHARA Training Slide







# Recurrent Intra Oral Herpes

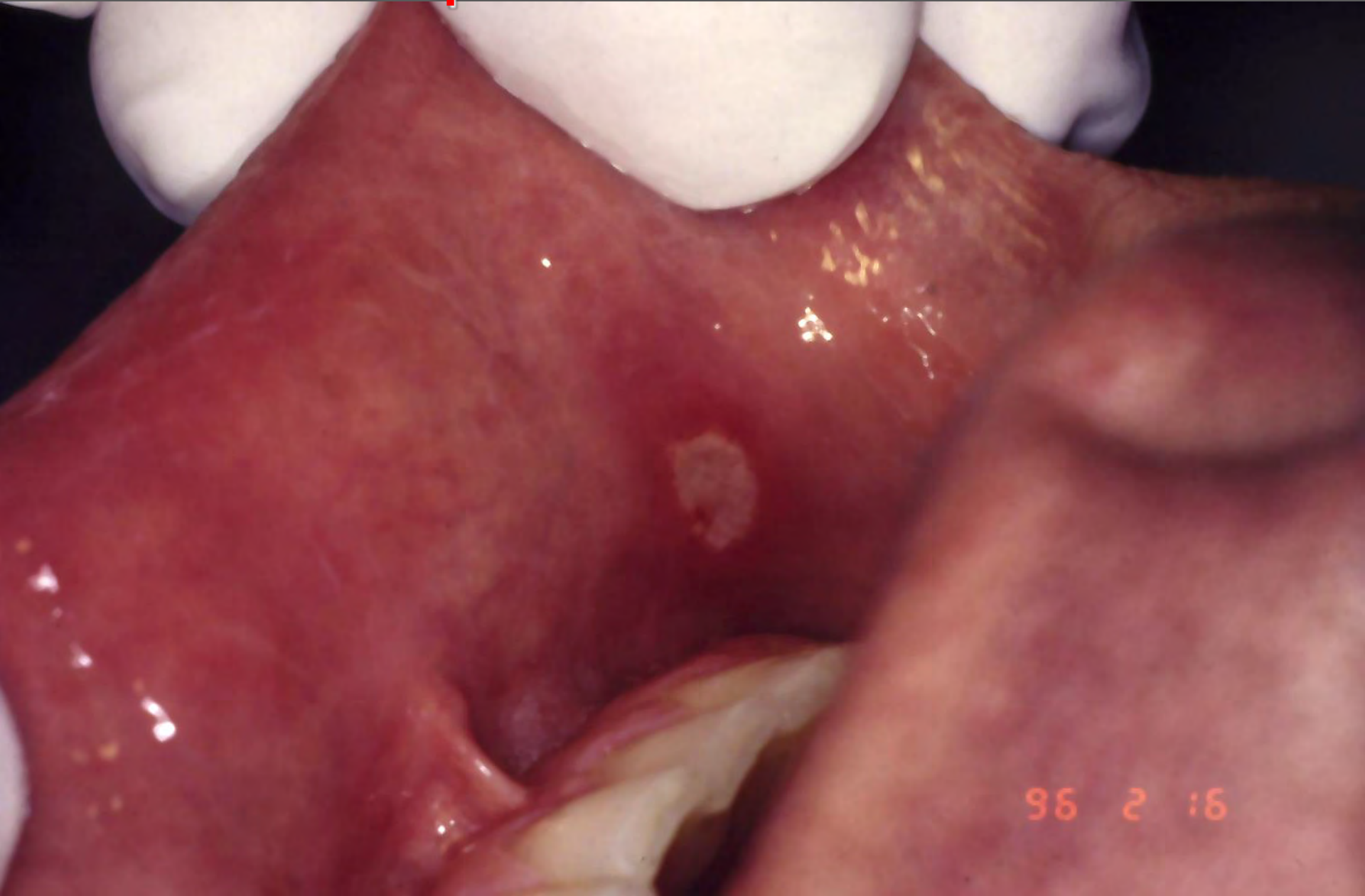




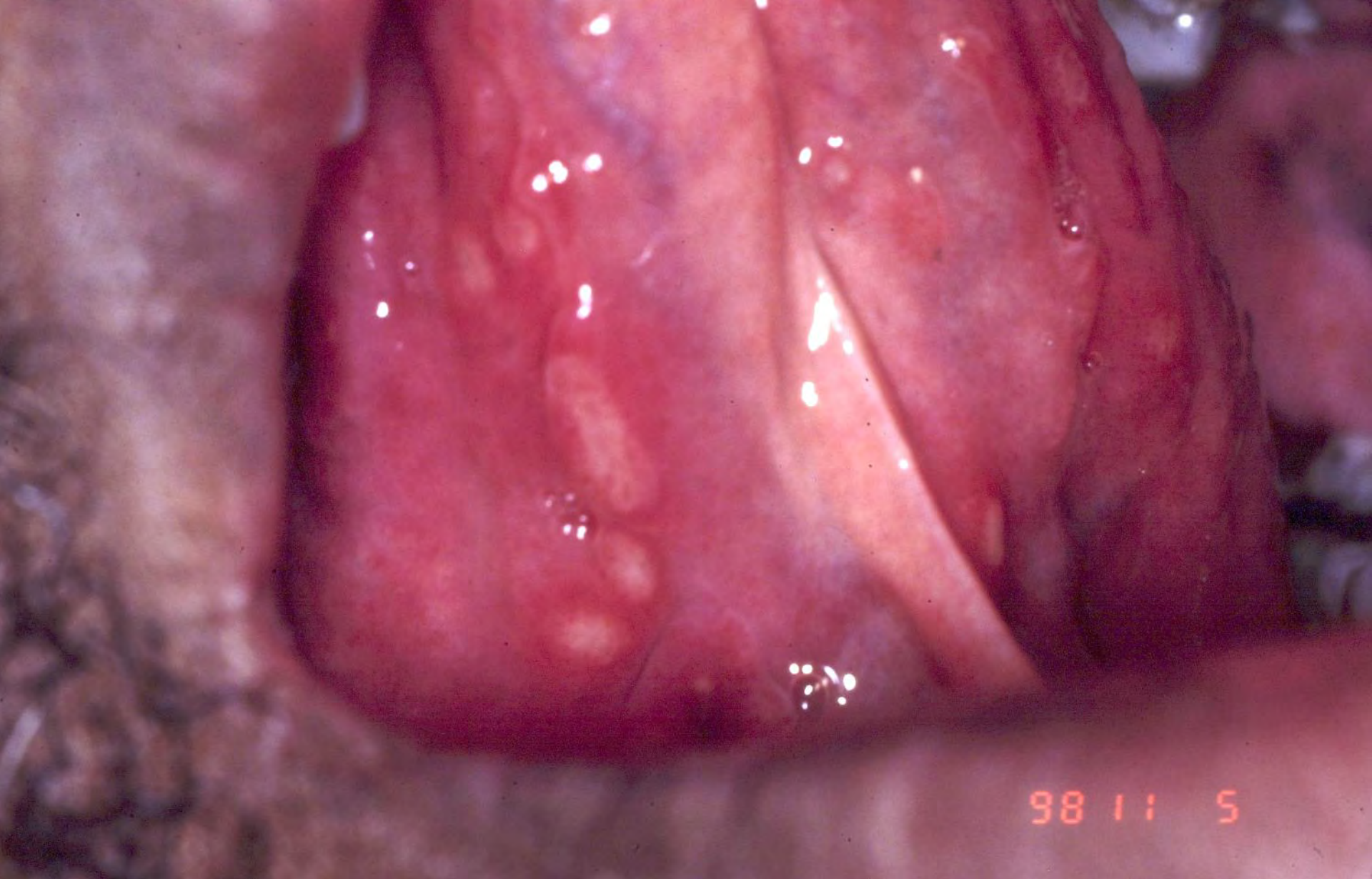
Mild to moderate pain for 7 days – similar  
episodes several times per year - OHARA  
Training Slide



# Aphthous Ulcer



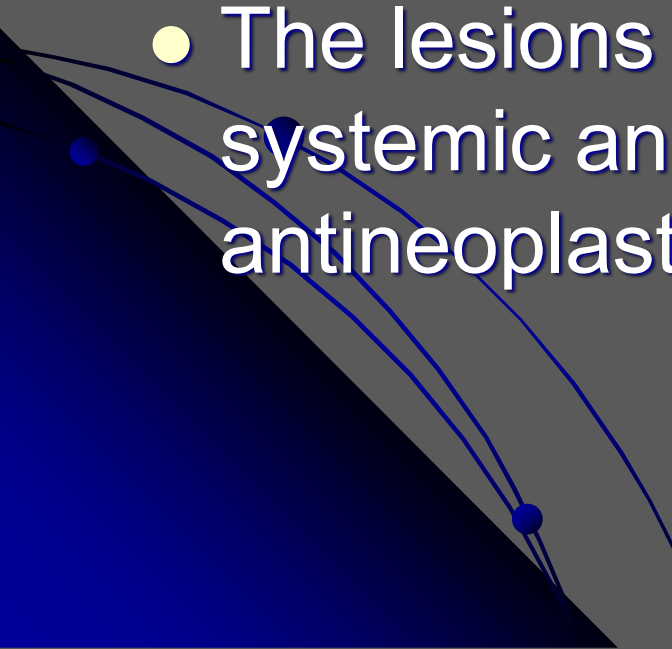




**Minor Aphthous Ulcers**



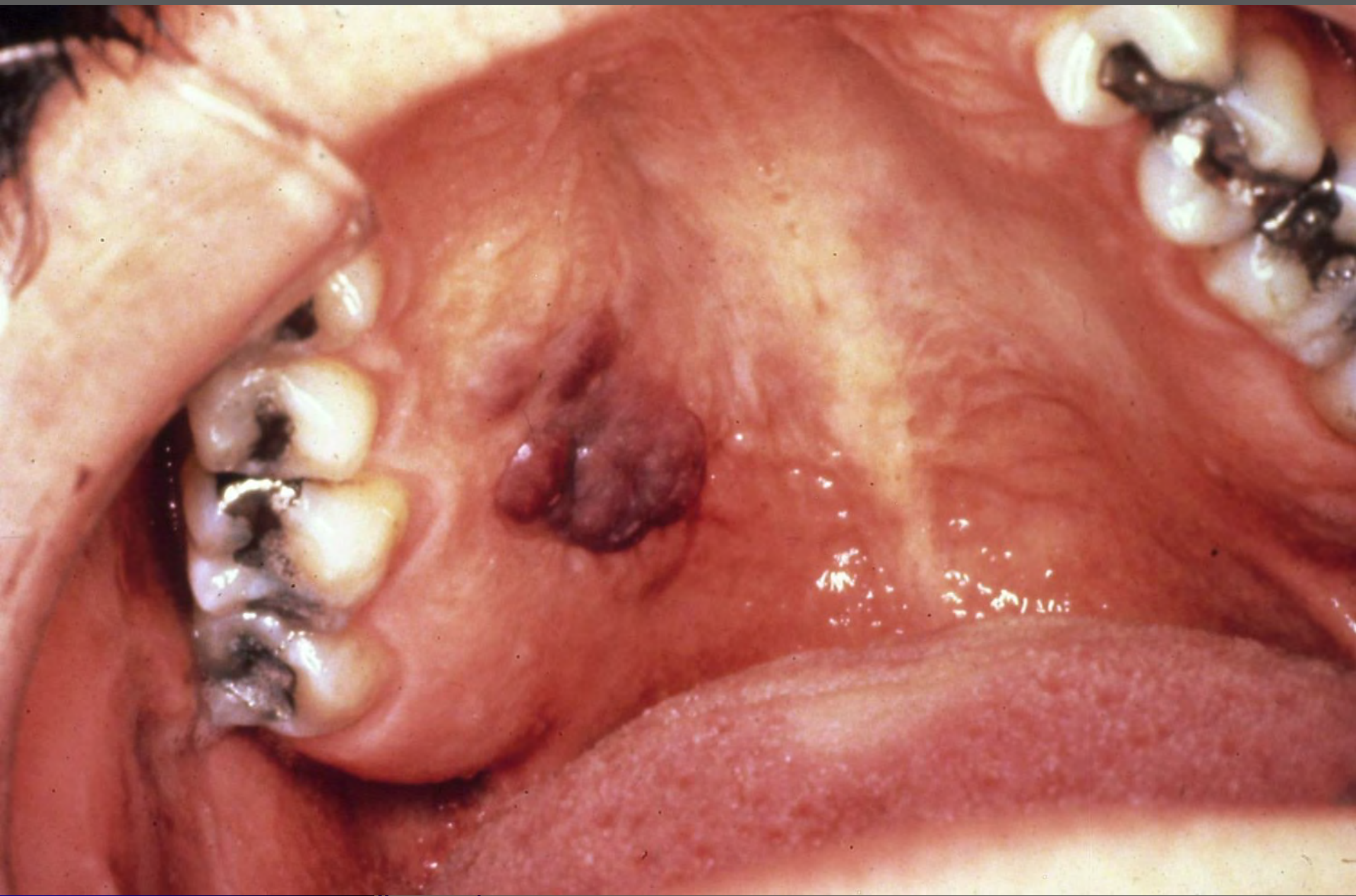
# Kaposi's Sarcoma

- A neoplastic lesion that was once the hallmark of AIDS. With the advent of ART there have been marked reductions in presentation.
  - The lesions can be managed with systemic and/or site specific antineoplastic therapy.
- 

# Kaposi's Sarcoma



Oral cavity is initial site in 15% of AIDS-related KS. Lesions easily damaged by chewing and bleed. Interfere with eating and speaking





# Kaposi Sarcoma

## “Mid-Stage”

Clinical presentation –  
“mid-stage”

Signs: -slightly raised  
-more diffuse  
-darker purple-brown  
-ulcerations

Symptoms: -painful ulcerations,  
especially secondary to trauma



# Kaposi Sarcoma Advanced

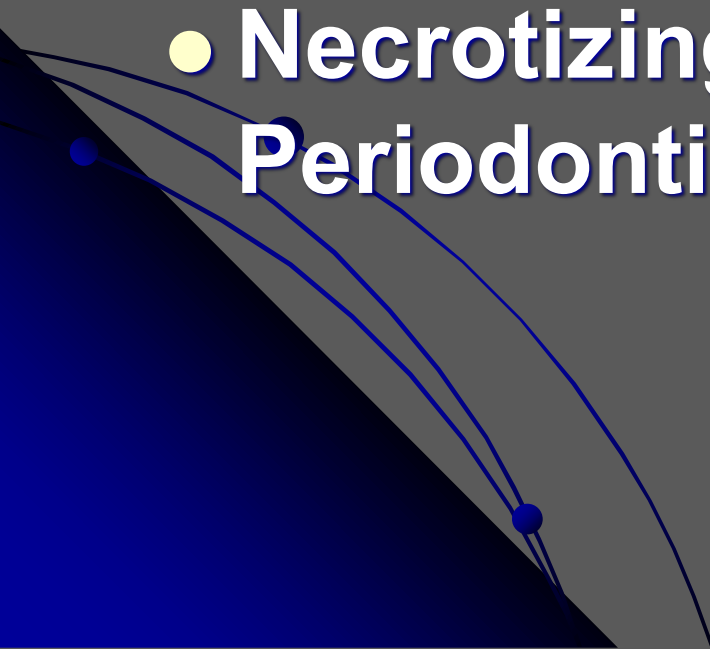
Clinical presentation –

Signs: -multiple sites or  
solitary lesions  
-nodular dark red or  
purple-brown

● Symptoms:  
painful ulcerations  
bulky, interfere with function  
spontaneous bleeding



# Periodontal Diseases

- Necrotizing Ulcerative Gingivitis (NUG)
  - **Necrotizing Ulcerative Periodontitis (NUP)**
- 



# Necrotizing Ulcerative Periodontitis (NUP)

- Rapidly Advancing
- Painful/fetid odor
- Can be non-responsive to traditional treatments
- $<CD_4$ ,  $>$ Viral Load
- Marker of severe immune deterioration
- CHX 1/2oz BID
- Antibiotic therapy
  - metronidazole
  - clindamycin
- Pain management
- Nutritional supplementation

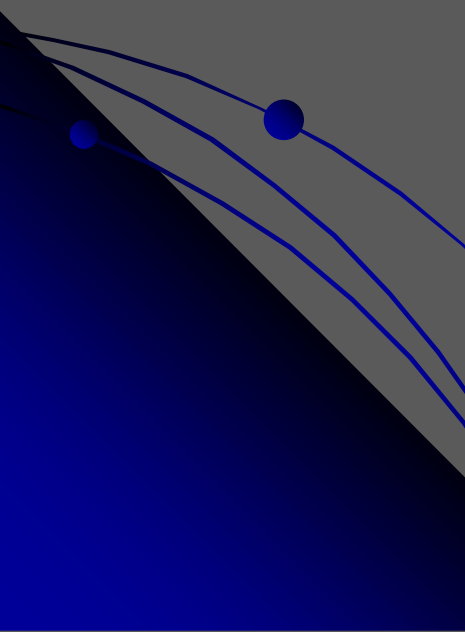
Severe pain; 1 month duration;  
strong halitosis



# OHARA Training Slide







# Gingivitis and Periodontitis in Persons with HIV

- It is important to emphasize that not all patients with HIV necessarily have gingival or periodontal conditions associated with immunodeficiency.
- Conventional gingivitis and periodontal disease occur in this patient population.



# Periodontal Disease



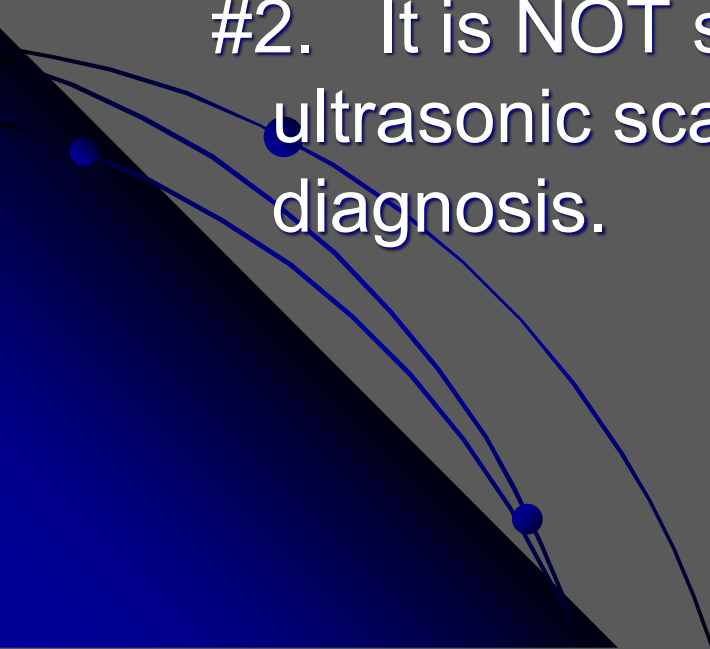


# Use of high-speed ultrasonic scalers

Which of the following statements is true?

#1. It is safe to use a high-speed ultrasonic scaler on a person with an AIDS diagnosis.

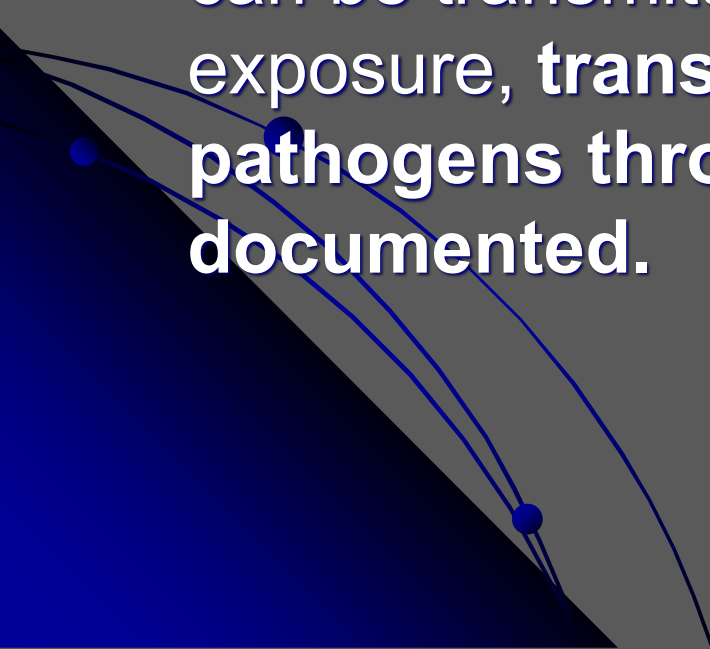
#2. It is NOT safe to use a high-speed ultrasonic scaler on a person with an AIDS diagnosis.



# CDC Statement on Aerosols and HIV

- Q. What is the risk of transmission of bloodborne pathogens (e.g., HIV) through aerosols generated during the use of an ultrasonic scaler or high speed dental drill?
  - Aerosols are invisible particles, less than 10 microns in diameter, generated by both human and environmental sources that have the capability to remain airborne for extended periods in the indoor environment.
  - There is no clear evidence that powered dental and surgical instruments can generate aerosols containing infective bloodborne pathogens

# CDC Statement on Aerosols and HIV

- Aerosols should not be confused with skin or mucous membrane exposures from droplets and splashes of blood or body fluid.
  - Although it is known that bloodborne pathogens can be transmitted through mucous membrane exposure, **transmission of bloodborne pathogens through aerosols has not been documented.**
- 



# UNIVERSAL PRECAUTIONS

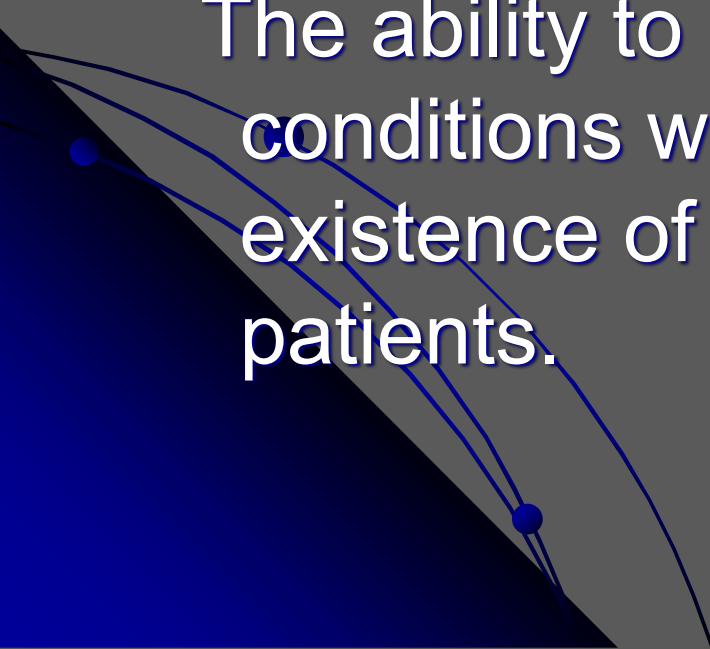


**PREVENTION IS  
PRIMARY!**

# CONCLUSION

Patients may or may not know their HIV status; however, all people have the right to access dental care.

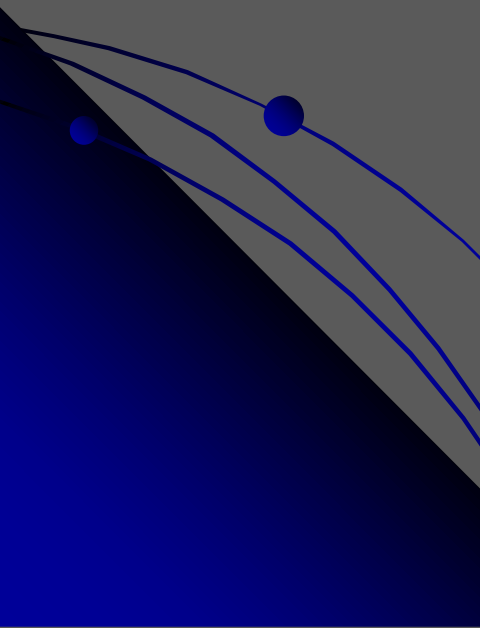
The ability to identify and treat oral conditions which may indicate the existence of HIV is vital to all dental patients.



Dr. Debra Wilson 1984

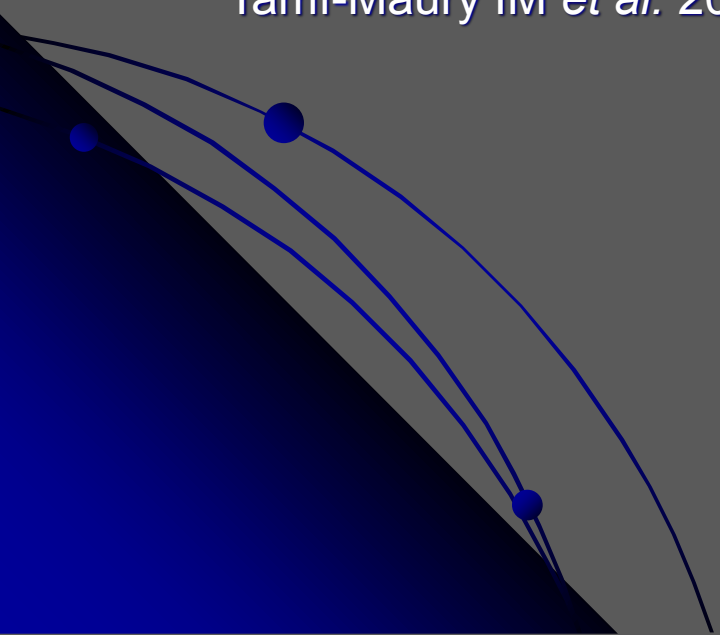






# Acknowledgements

- HIVdent [www.hivdent.org](http://www.hivdent.org)
  - (Patton *et al.* 2000; Schmidt-Westhausen *et al.* 2000;
  - Gaitan Cepeda *et al.* 2008, Tamí-Maury IM *et al.* 2011)
- Wolf E, Balogh A, Koegl C, *et al.* Excess cardiovascular risk in HIV+ patients aged over 50: results from the German 50/2010 cohort study in aging populations of HIV+ and HIV- patients. XVIII International AIDS Conference. July 18-23, 2010. Vienna. Abstract WEPE0043.



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