



## Your Mouth and Chronic Graft-versus-Host Disease

Celebrating a Second Chance at Life Survivorship Symposium

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Joel Epstein DMD, MSD, FRCD(c), RCS(Edin)

City of Hope

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### GVHD ORAL CARE

Joel B. Epstein  
DMD, MSD, FRCD(C), FDS  
RCS(Edin)  
Diplomate American Board of  
Oral Medicine  
  
City of Hope Comprehensive  
Cancer Center, Duarte CA;  
Cedars-Sinai Health System  
Los Angeles, CA

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### Oral Chronic GVHD: Salivary Gland Involvement



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### Human Papilloma Virus Infection



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**Mucosal  
GVHD**

**Oral Lesion Management**

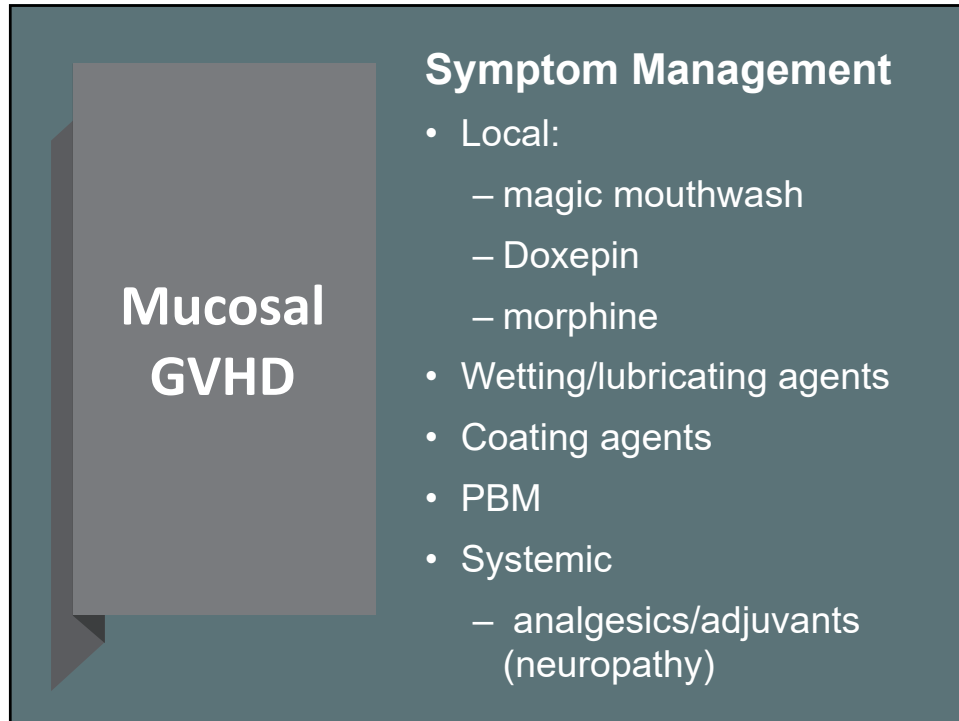
Steroids:

- topical:
  - budesonide rinse
  - fluocinonide gel
  - clobetasol gel
- Intralesional Steroids

Others:

- Tacrolimus
- Pimcrolimus
- retinoic acid
- minocycline
- Photobiomodulation therapy (PBM)

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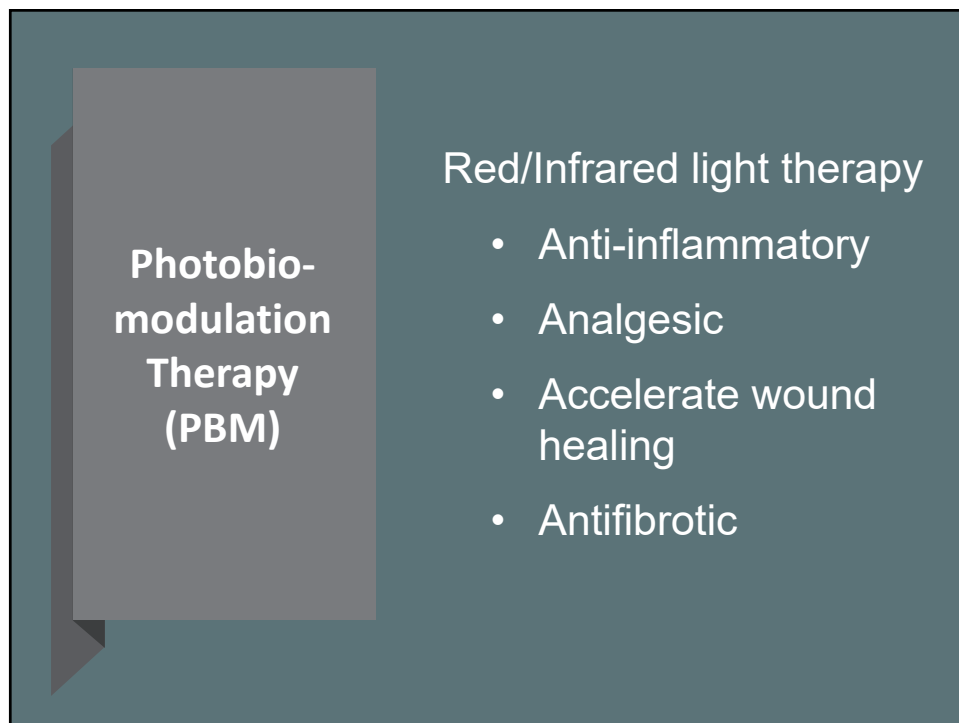


**Mucosal GVHD**

### Symptom Management

- Local:
  - magic mouthwash
  - Doxepin
  - morphine
- Wetting/lubricating agents
- Coating agents
- PBM
- Systemic
  - analgesics/adjuvants (neuropathy)

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**Photobio-  
modulation  
Therapy  
(PBM)**

### Red/Infrared light therapy

- Anti-inflammatory
- Analgesic
- Accelerate wound healing
- Antifibrotic

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## Salivary Gland Problems

- Saliva function
  - Quantity/ Quality
  - History
  - Volume: objective resting/stimulated
- Residual function
  - fluid intake, taste, chewing stimulation
  - Systemic sialogogues
  - PBM
  - Dental/periodontal
- Topical/palliation
  - Wetting, hydration, lubrication
  - Dental/periodontal

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**Mouth and Throat Infections**

- Candida
  - clinical diagnosis, culture
  - Treat risk factors
  - Antifungals
- Herpes viruses
  - Diagnosis, antivirals
- Human Papilloma Virus
  - Diagnosis; clinical/cytology follow-up

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## Gum Disease and GVHD

Effect of gingival/periodontal infections

- Low grade chronic immune challenge
- Gingival involvement by GVHD

Stimulation of Immune System



Local Recruitment of Lymphocytes



Worsens GVHD Attack on Oral Tissues

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## Gum Disease and GVHD



Aggressive periodontal therapy

- Plaque removal
- Antibiotics: systemic / topical / subgingival
- Photobioimodulation (PBM)
- Extraction of significantly involved teeth

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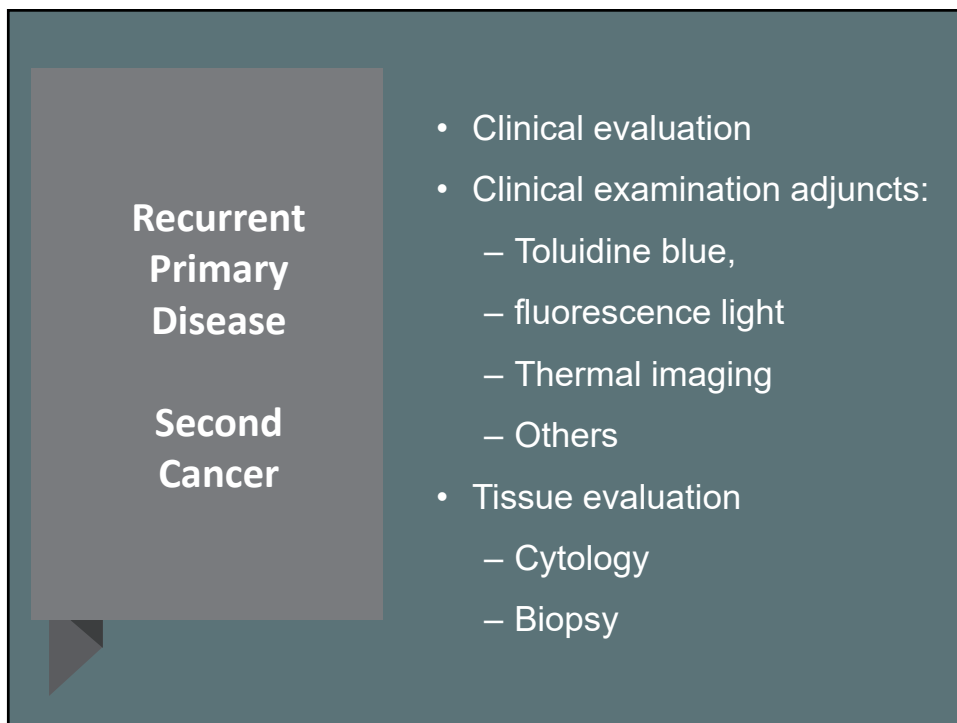
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**Dental and Periodontal Needs**

- Caries/demineralization risk
  - Dental structure
  - Microbial risk:
    - oral hygiene
    - medication considerations
    - flouride
    - chlorhexidine
  - diet instruction
  - saliva
- Periodontal/gingival involvement
  - atrophy, inflammation
  - recession/attachment loss

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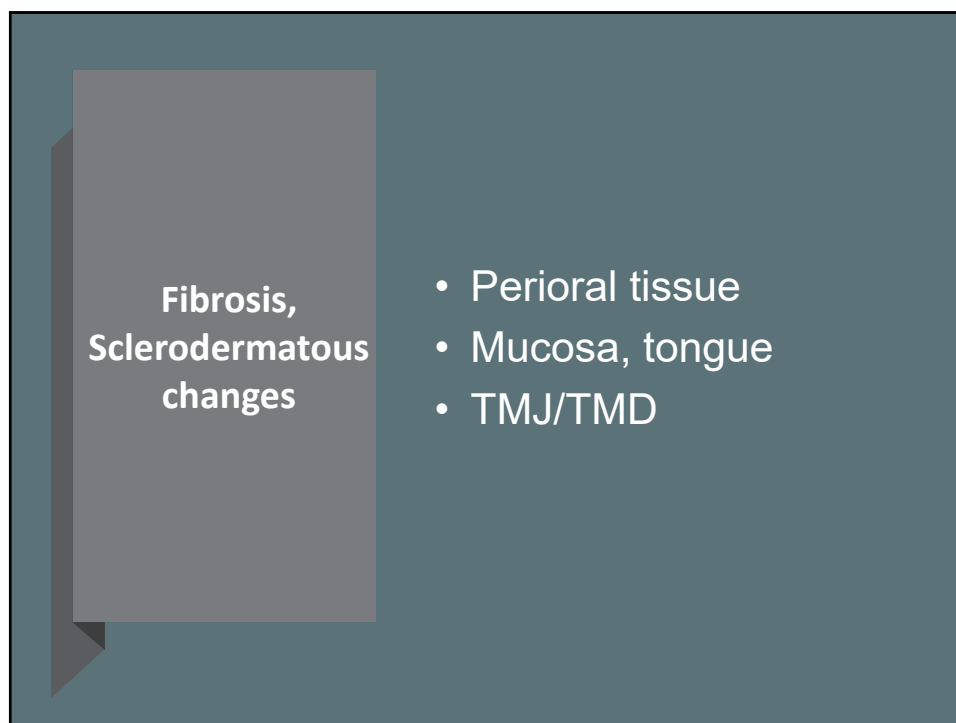


**Recurrent Primary Disease**

**Second Cancer**

- Clinical evaluation
- Clinical examination adjuncts:
  - Toluidine blue,
  - fluorescence light
  - Thermal imaging
  - Others
- Tissue evaluation
  - Cytology
  - Biopsy

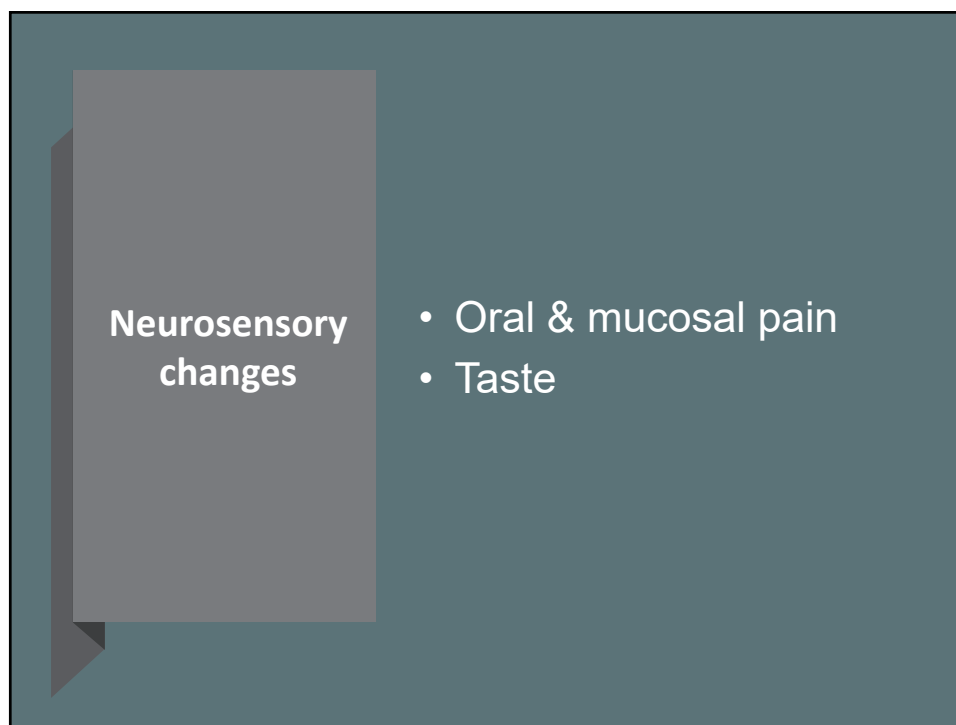
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Fibrosis,  
Sclerodermatous  
changes

- Perioral tissue
- Mucosa, tongue
- TMJ/TMD

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Neurosensory  
changes

- Oral & mucosal pain
- Taste

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**Taste and Quality of Life after Transplant**

Cause of Taste Changes

- Receptor toxicity, neuropathy
- Mucositis, GVHD
- Saliva
- Infection, microbial shifts
- oral hygiene

Smell & taste linked

Associated Toxicities

- Nausea / Vomiting
- Food aversion

Recovery

- Variable: Gradual over 2-12+ months

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**Osteonecrosis**

- Manage risk
- Diagnosis
- Medical intervention:
  - Antimicrobial: topical/systemic
  - Trenal®/ vitamin E/Clodronate
  - Teriparatide
  - HBO? PBM?
- Surgery

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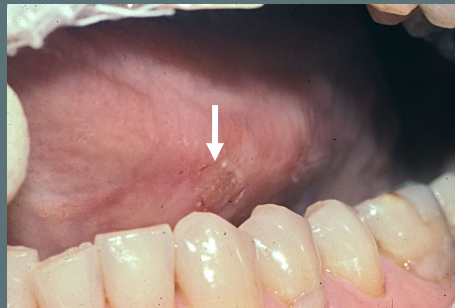
## Second Cancers after HCT

### Malignancies:

- Lymphoproliferative disorders
- Hematologic disorders
- Kaposi's sarcoma
- Solid tumors: oral cancer

### Risk Factors:

- Previous treatments
- Total Body Irradiation
- GVHD & GVHD therapy (Immunosuppression)
- Tobacco, alcohol abuse
- Viral infection?



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## Seeking Oral and Dental Care after Transplant

- General Dental & Oral Medicine Needs
- Support Dental Team or recommendations of Transplant Center
- Community
  - Dentist with hospital appointment/hospital training
  - Dentist with Oral Medicine training
  - GVHD support group

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## Summary

Oral care plays an important role in providing supportive care for HCT patients

- Patient Management:
  - Oral diseases / Oral & systemic toxicities
  - Chronic complications of treatment
- Before, During, and After chemotherapy / HCT
- Therapy can affect oral health
- Oral health can affect quality of life, and systemic health

Haverman TM, Raber-Durlacher JE, Raghoobar II, Rademacher WMH, Rozema FR, Hazenberg MD, Epstein JB, Treister NS. Oral chronic graft-versus-host disease: What the general dental practitioner needs to know. J Am Dent Assoc 2020; 151(11):846-56

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# Questions?



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[bmtinfonet.org](http://bmtinfonet.org) ♦ [help@bmtinfonet.org](mailto:help@bmtinfonet.org) ♦ 847-433-3313

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