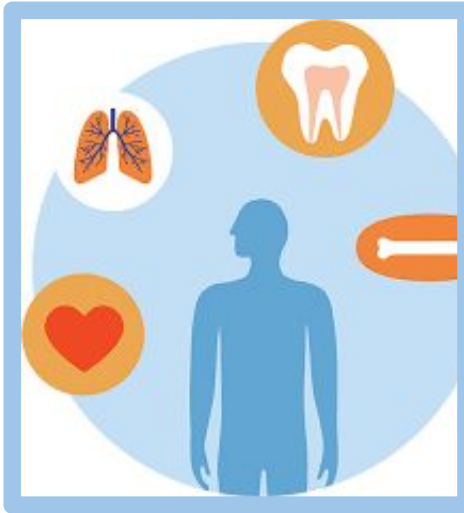
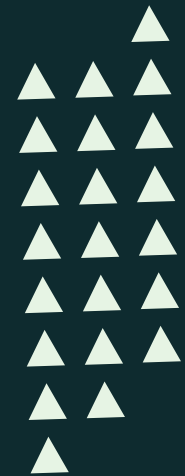
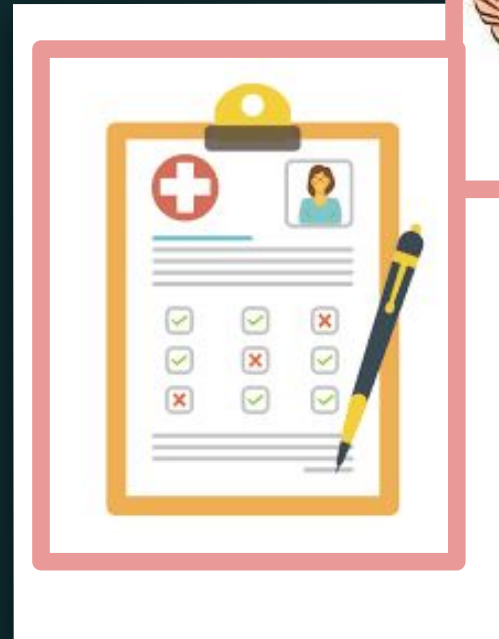


Case Study #2



Medical/Social History

- ❖ CC: “I am here for a cleaning”
- ❖ The patient is a 34 year old White male
- ❖ Patient has Type I diabetes, and receives 1.1 units of insulin hourly through a monitored device (Humalog)
 - Diagnosed at 13 yrs old
 - Last HbA1c was 6.7%
- ❖ Patient had thyroid removed in May of 2022, due to thyroid cancer
 - Patient went under radiation therapy post surgery
- ❖ Takes 275 mcg of Levothyroxine as hormone replacement
- ❖ ASA III
- ❖ Patient reports he has taken his medication in the morning, and has eaten a light meal prior to his appointment
- ❖ Patient does not smoke or drink alcohol



Type I Diabetes on Oral Health

1. **Increased risk of gum disease:** Uncontrolled blood sugar levels can lead to an increased risk of gum disease, also known as periodontal disease. Gum disease is characterized by inflammation and infection of the gums, which can result in gum recession, tooth loss, and bone damage if left untreated.
2. **Xerostomia:** Type 1 diabetes can cause dry mouth or xerostomia. Reduced saliva production can lead to discomfort, difficulties in swallowing, and an increased risk of tooth decay. Saliva helps to wash away food particles, neutralize acids, and fight bacteria in the mouth, so a lack of saliva can contribute to oral health problems.
3. **Slower wound healing:** Individuals with Type 1 diabetes may experience slower wound healing, including oral wounds such as mouth sores or ulcers. These can be more persistent and take longer to heal, providing an opportunity for infections to develop.
4. **Increased susceptibility to infections:** Poorly controlled diabetes compromises the immune system, making individuals more susceptible to infections, including oral infections. These infections can manifest as gum abscesses, fungal infections (such as oral thrush), or bacterial infections.
5. **Increased risk of tooth decay:** Diabetes can contribute to an increased risk of tooth decay. High blood sugar levels provide a favorable environment for bacteria in the mouth, promoting the production of acids that erode tooth enamel and lead to cavities.
6. **Burning mouth syndrome:** Some individuals with Type 1 diabetes may experience a burning sensation in the mouth, known as burning mouth syndrome. The exact cause of this condition is unknown, but it is more prevalent in people with diabetes.

Radiation Therapy on Oral Health

1. **Xerostomia:** Radiation therapy can cause damage to the salivary glands, leading to reduced saliva production and resulting in dry mouth or xerostomia. Saliva plays a crucial role in maintaining oral health by lubricating the mouth, neutralizing acids, and preventing tooth decay.
2. **Caries:** Reduced saliva flow associated with radiation therapy can contribute to an increased risk of tooth decay. Without sufficient saliva, the protective mechanisms against tooth decay are compromised.
3. **Gum disease:** Radiation therapy can cause changes in the gum tissues, making them more susceptible to infection and inflammation. This can result in an increased risk of gum disease, including gingivitis and periodontitis.
4. **Taste alterations:** Some individuals who undergo radiation therapy for thyroid cancer may experience changes in taste perception. This can affect the enjoyment of food and may result in dietary changes. It is important to maintain a balanced diet despite taste alterations to support overall health.
5. **Oral mucositis:** Radiation therapy can cause inflammation and ulceration of the oral mucosa, a condition known as oral mucositis. It can lead to pain, discomfort, and difficulties in eating and speaking. Proper oral hygiene practices and following the recommendations of healthcare providers can help manage oral mucositis symptoms.
6. **Osteoradionecrosis:** In rare cases, radiation therapy can cause damage to the jawbone, leading to a condition called osteoradionecrosis. It occurs when the bone does not receive sufficient blood supply and can result in pain, infection, and even bone loss. Dental procedures, particularly extractions, should be carefully planned and managed in individuals who have received radiation therapy.

Dental History

- ❖ Last dental cleaning was 6 years ago
- ❖ Patient cannot recall the date of his last radiographs (presumably 6 years ago)
- ❖ Patient brushes with a soft manual toothbrush 2x daily, with Crest dentifrice, and does not use mouth rinse or floss.
- ❖ Patient recalls having 1 wisdom tooth removed (but clinically missing 2)



Extraoral/ Intraoral Findings

EO: Linear 3 inch scar near thyroid
IO: WNL



Gingival Statement

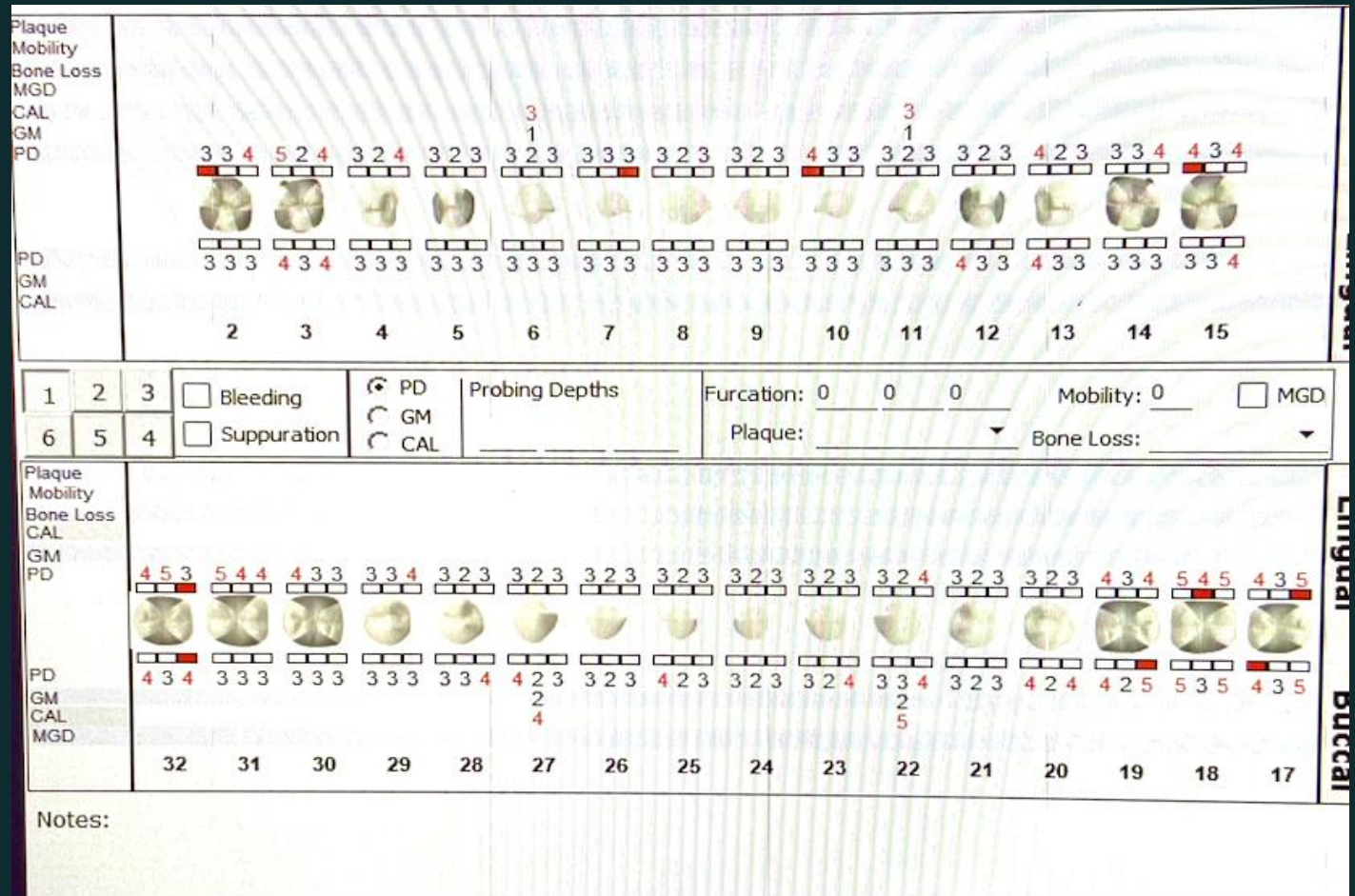
Gingiva is dark pink,
bulbous, flaccid in texture,
with inflamed margins that
are slightly coronal to the
CEJ.

Occlusion: Right side Class I
Left side Class II

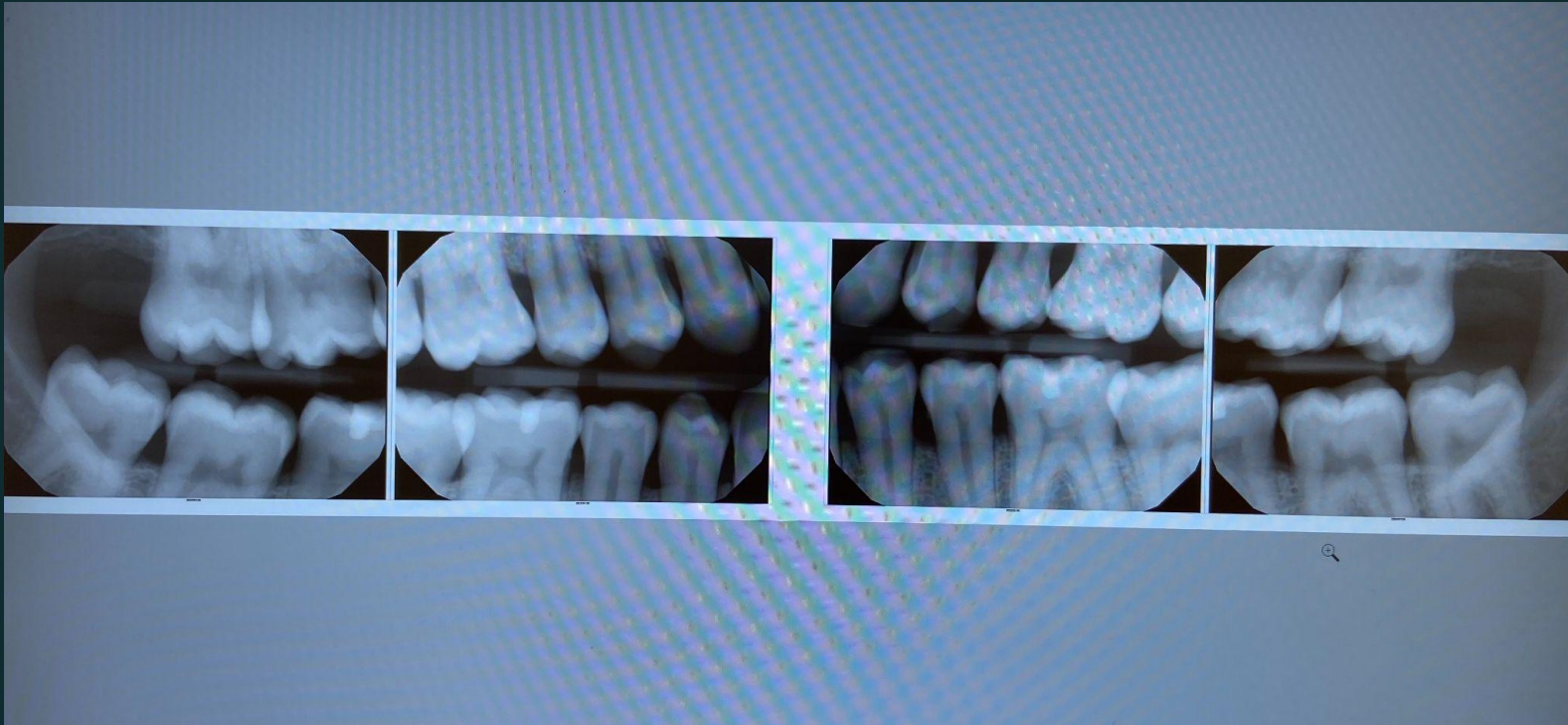
Edge to edge

Periodontal Charting

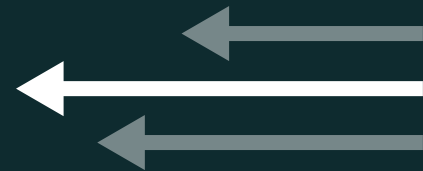
Periodontal findings reflects generalized probing depths ranging from 2-5mm. Higher readings evident in the posterior regions. Slight recession noted on the canines. Moderate BOP noted.



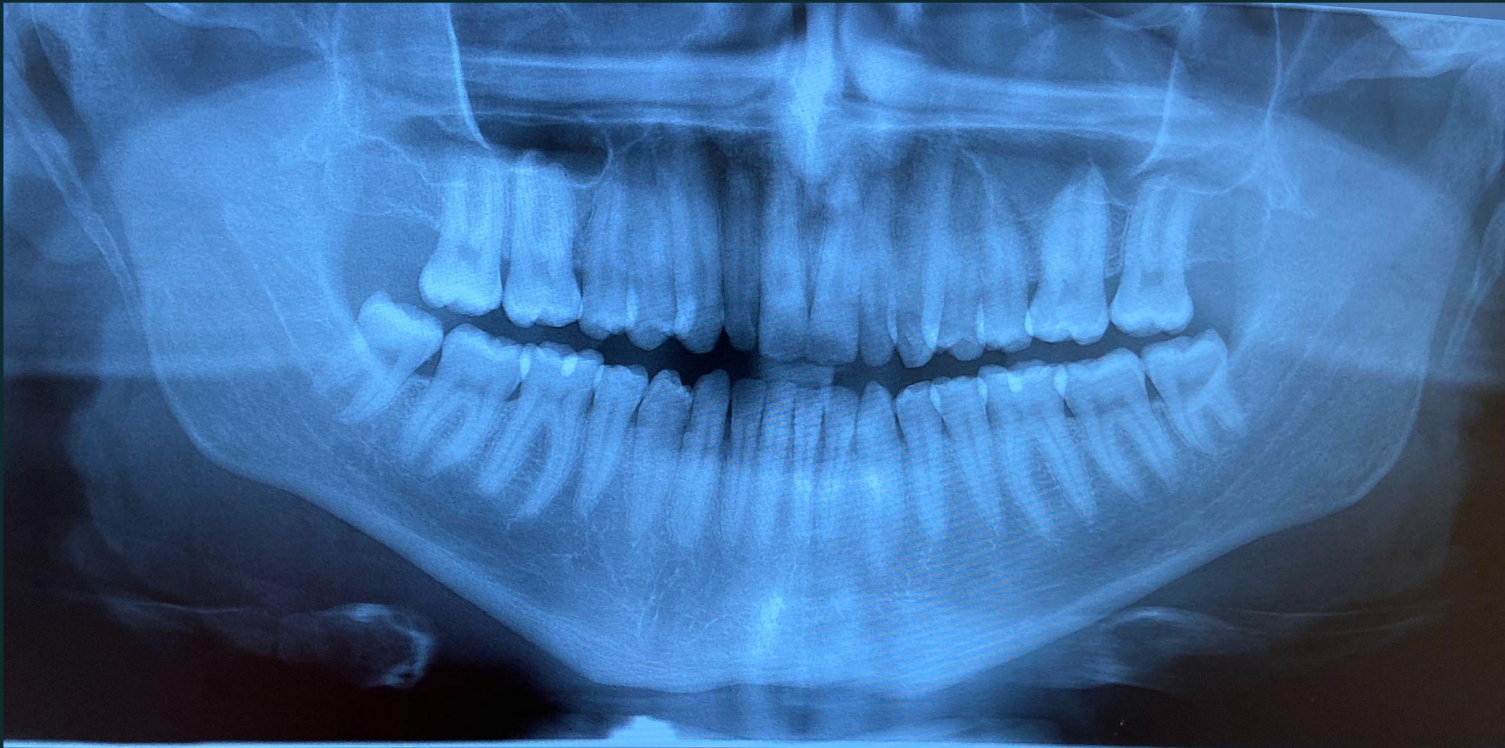
Radiographs



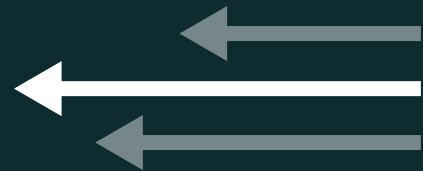
Radiographic Statement: Exposed 4 HBW's at 7mA and 70kV, which shows 15-33% horizontal bone loss, calculus on 20M, 29D, 31M, 32D, and no visible caries.



Radiographs



Radiographic Statement: Exposed PAN, which shows missing teeth #1 and #16 (confirmed extraction), and no PAP's.



TREATMENT PLANNING



Periodontitis Stage II Grade B
Case Value: Heavy
Caries Risk: Low

Visit 1

- Assessments
- 4HBW's & PAN
- OHI- Tooth brushing
- Scale Q1 w/ Oraqix

Visit 2

- OHI- Flossing
- Re-eval Q1 & rescales
- Scale Q4 w/ Oraqix

Visit 3

- OHI- Proxy brushes
- Re-eval Q4 & rescales
- Scale Q2 & Q3 w/ Oraqix
- Apply 5% Sodium Fluoride varnish
- Establish 3 month recall

Photos Mid Treatment

Gingiva is
bulbous



Photographs depict treatment performed on right side after a week of healing. Gingiva has become more firm and less inflamed, compared to left side without treatment.

Patient Outcomes



Margins are less inflamed



All supragingival & subgingival calculus has been removed, and the gingiva is beginning to heal.



Tissue is less red, bulbous, and presents with more firmness

