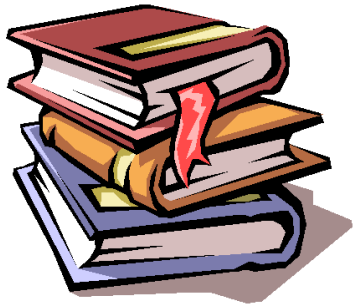


Treatment Planning

5. PHASE 2 DISEASE CONTROL AND PREPARATION

Get started!

42 slides, about 1.5-2 hour

JK Mitchell, DDS, MEd

Learning Objectives

Phase 2

1. Explain basic parameters for what to do in Phase 2 and which items should be done early in the phase.
2. List the sequence for periodontal therapy in Phases 1 and 2. Describe when gross debridement, D0180, or D0110 are indicated.
3. Explain the types of procedures that are referred to Oral Surgery and be able to write an appropriate referral.
4. List the basic requirements for planning implants- all items highlighted in blue.
5. Correctly prescribe for all risk categories of caries on home care and office fluorides
6. List which restorative materials to select for which situations
7. Explain how to treatment plan a Caries Control case.
8. Be able to write a clear, concise, and complete Diagnostic Summary.

Data Collection→ Tx Plan

Here's where we are in the process now…

Collect Data

- Radiographic Interpretation
- OM exam*
  - Make impressions

Develop Tx Plan

- Problem List
- Diagnosis List
- Develop Phase 1 Plan
- **Develop Phase 2 Plan and alternates if appropriate**
- Develop tentative Phase 3 Plan

Phase 1, 2 Approval

- DXR appt*
  - Eval casts
  - Review charting, dental exam
  - Get pt signature on Tx plan estimate

Phase 3 Simple

Approve at DXR*

Phase 3 Includes Fixed Pros

After Phase 2 completed, obtain approval from a Fixed Pros faculty member*

Phase 3 Tx Planning Board

If RPD planned, schedule for Tx Planning Board.*

Exception: C/RPD, which is approved by Removable Pros faculty member

*=Pt present

Gray= work done between appts

Phase 2 Goals

Phase 2

- We are now into the meat of the treatment plan- controlling this patient's disease and doing the preparatory treatment for the next phase.
- ***But there is a fine line in the preparatory side***. We don't want to get carried away and do treatment that, if the patient decides not to follow through on the Restorative Phase, actually leaves them in worse shape than if they had done nothing.
- On the other hand, there are some procedures that take so much time- implants and orthodontics come to mind- that if we don't get started on them, there will be a significant delay in the overall care. So with those thoughts in mind, let's look at where we are in the plan.

Let's focus on Phase 2 Treatments

Phase 2

3

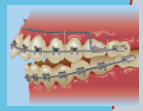
Orthodontics

Prep for restorative care:
Correct spacing, crowding, exposing margin, molar uprighting

Periodontics

Disease control:

1. Initial tx
2. Reeval
3. Surgery required for disease control

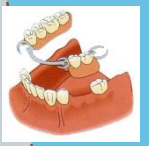


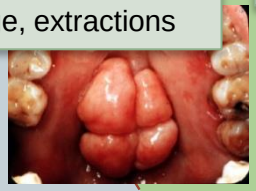
Oral Surgery

Disease control or prep:
Place implant, remove tori, reshape ridge, extractions

Endodontics

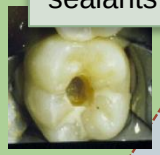
For pulpal pathosis





Caries

Control disease with education, Fl, xylitol, sealants, restorations.



Phase 1.
Urgent & Diagnostic

Phase 2.
Disease Control
Preparatory

Phase 3.
Rehabilitation

Phase 2 Treatment

PERIODONTICS

SURGERY

IMPLANTS

ENDODONTICS

ORTHODONTICS

CARIES

Overview: Phase 2

Phase 2

4

Generally, treatments in Phase 2 can be done concurrently. That is, you don't have to wait until all periodontal disease is controlled to start your direct restorations (thank heavens…). But there are some things that are sensible to do in some order, so here is a sort of sequencing:

1. **Clean up gross calculus first**. Full mouth debridement (D4355) You can't even get accurate probing depths until you do, but think about this one…you put a matrix band on and don't notice a chunk of calculus. The next bitewing you take, you realize you have an overhang sitting on top of that calculus! In the anterior, the gingiva will bleed and you can't do a decent composite until the calculus is out and the gingiva is healthy. Don't even *think* about it unless you enjoy misery and frustration.
2. **Take out non-restorable and hopeless teeth early on**. Usually you have better access to the remaining teeth when the hopeless ones are gone.
3. **Start any adjunctive orthodontics only after periodontal disease and caries are controlled** and the patient is on board with home care and diet control. Otherwise, they are doomed to worse periodontal attachment loss and caries.

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Periodontal Treatment

Phase 2

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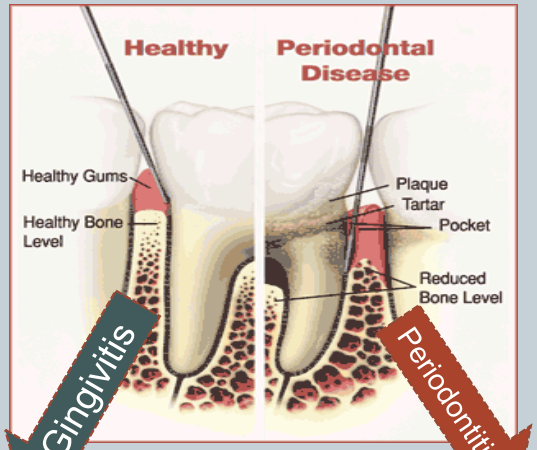

Supragingival calculus and/or Stain and/or Pocket depth <4mm

Prophylaxis D1110

Subging Calculus + Bleeding on probing and/or Pocket depth > 4mm in several areas + Radiographic bone loss

Comprehensive Periodontal Evaluation D0180

- You have learned this in your Periodontics course, so to review:
- Full mouth probing in OME
- Review at DXR appt
- Schedule:
  - Comprehensive Periodontal Evaluation D0180 in Phase 1 OR
  - Prophy D1110, other perio treatment to treat disease in Phase 2 based on findings
- Follow treatment plan developed with Perio faculty

Periodontics

Phase 2

6

- When patients have calculus and stain, the **prophy should be done before Operative treatment** is started.
- Why?
  - We already mentioned how **calculus can keep your matrix band from fitting**, giving you an overhang.
  - **Stain can also throw off your color match on** anterior restorations.
  - In general, it's best to start treatment on clean, polished teeth with **healthy gingiva** because your life will be so much easier!

Periodontal Therapy: General Overview

Phase 2

7

1. Initial therapy. Remove the calculus and toxin soaked cementum from all root surfaces.
2. Wait 6 weeks for healing.
3. Reevaluate healing.
4. At that point, if there are still deeper pockets, you may decide you need to do flap surgery to access the calculus, evaluate bone, consider grafting, etc.

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Oral Surgery: Extractions

Phase 2

Sample Consult Write-up

"This 30 year old Caucasian male presents with acute pulpitis #19. He is currently taking no medications and is in good health. BP 124/78. After evaluation, caries under the existing deep restoration has rendered it non-restorable per eval by Fixed Pros faculty (Dr. Furness). The patient has been offered sedation but is not interested. Please evaluate and extract #19 with local anesthesia."

When your patient needs to have a phase 2 extraction, do the following:

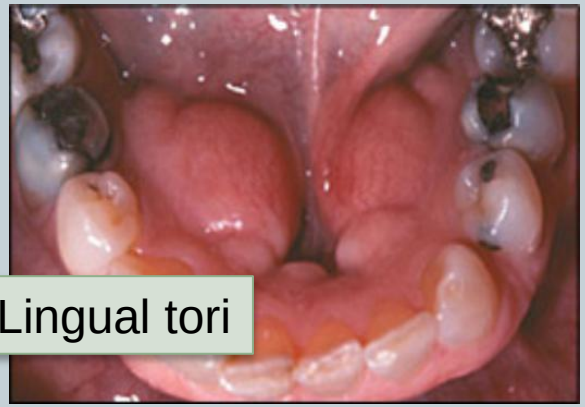
- **Write a consult to Oral Surgery.**
  - Present the patient (age, sex, race)
  - Outline pertinent medical history or issues that might affect tx like psychiatric or anxiety history
  - Explain what you want them to do *and why*. They do not do irreversible treatment on your say-so!
- Ensure adequate radiographs, usually a **panoramic that is less than a year old.**
- Explain to your patient that there will be **two appointments**- an evaluation appointment, and the treatment appointment. Evaluate their interest in **sedation** (usually costs several hundred dollars- may be less if there's a sedation course going on).

Oral Surgery: Adjunctive Surgery

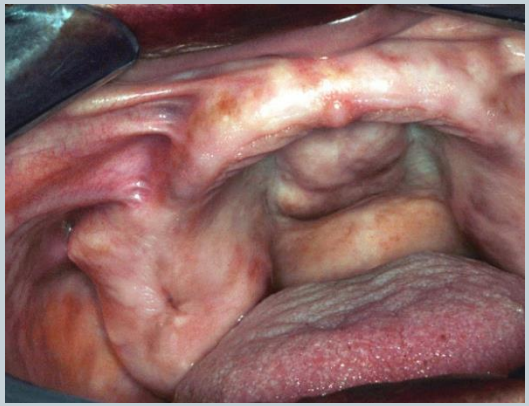
Phase 2

- Oral Surgeons can help you by reshaping supporting bone that would cause serious problems for certain restorative treatments, usually removable prosthetics.

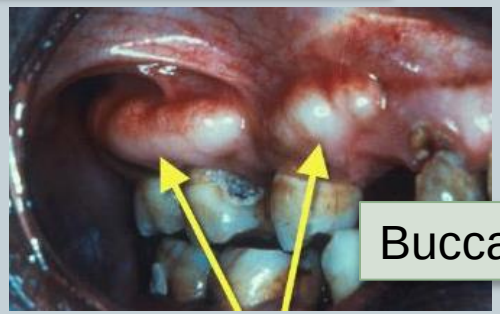
Palatal torus

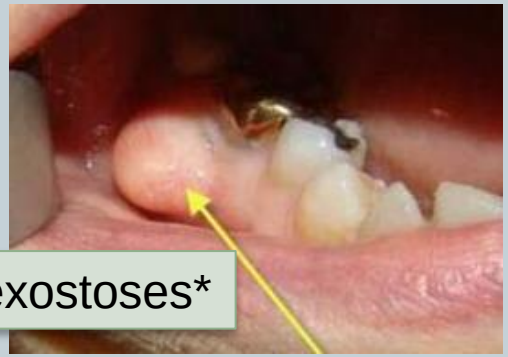


Lingual tori



Expanded tuberosity





Buccal exostoses*

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*exostoses= benign excess bone outside the normal location

Implants

Phase 2

10

Welcome to the branch of higher math that is implant treatment planning…

- The first thing to know is that there is a 1.5 mm "halo" around the implant that can't touch anything- root, edge of bone, or another implant "halo".
- That means there has to be at least 3 mm between the side of one implant to the side of the next implant.

Implants are placed by 3 departments: Oral Surgery, Periodontics, and GPR. You write a consult to Patient Services telling what implants you want, then they assign the case.

Implants

Phase 2

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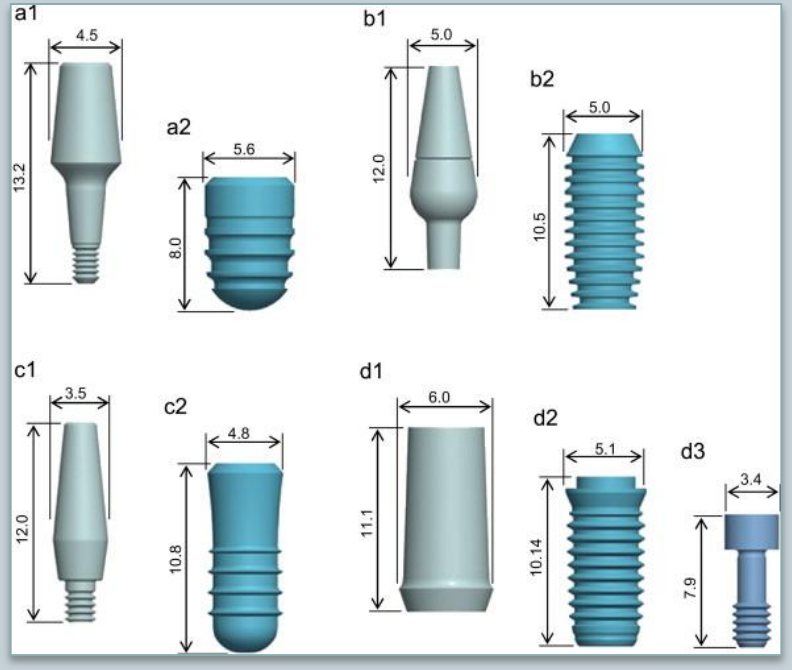


There is a mind-numbing variety of shapes, sizes, coatings, attachment types, thread arrangements, etc. For now, it's all in our "Too Hard" box.

- Implants come in several sizes:
  - Narrow platform (NP) 3.5 mm
  - Regular platform (RP) 4.3 mm
  - Wide platform (WP) 5.0 mm
- And a variety of lengths:
  - 8.5 mm (don't like!),10 mm
  - 11.5 mm, 13 mm, 15 mm, 18 mm
- And basically, **it's the total area in bone that matters**.
- **Rule of thumb:**

Go as long and wide as possible, but:

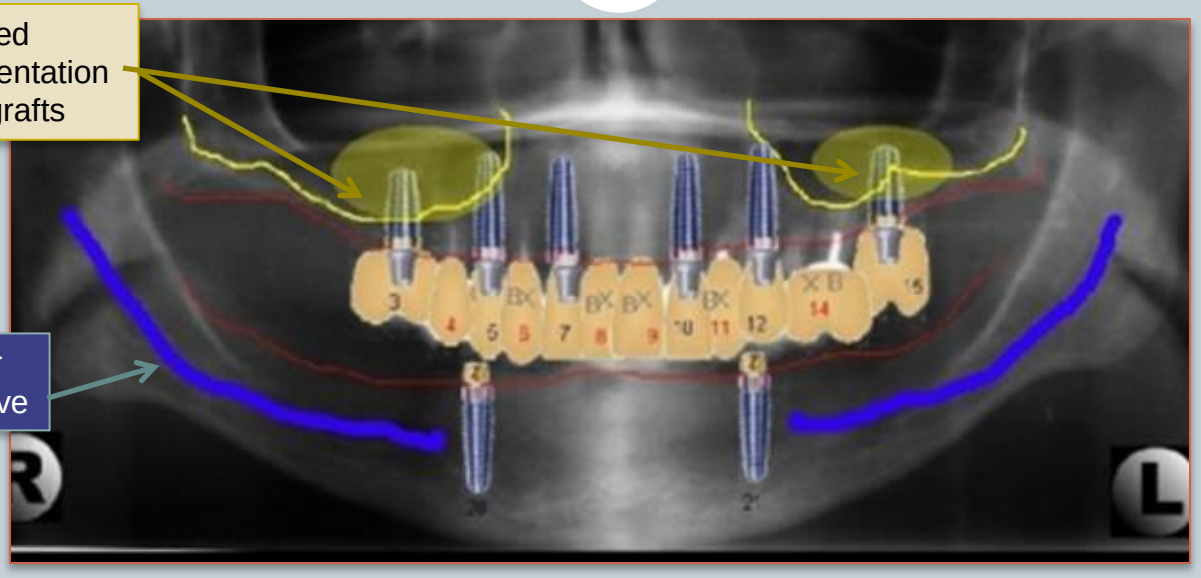
If you can't go wide, go long.

If you can't go long, go wide.

Implants: Useful Planning Tidbits

Phase 2

12



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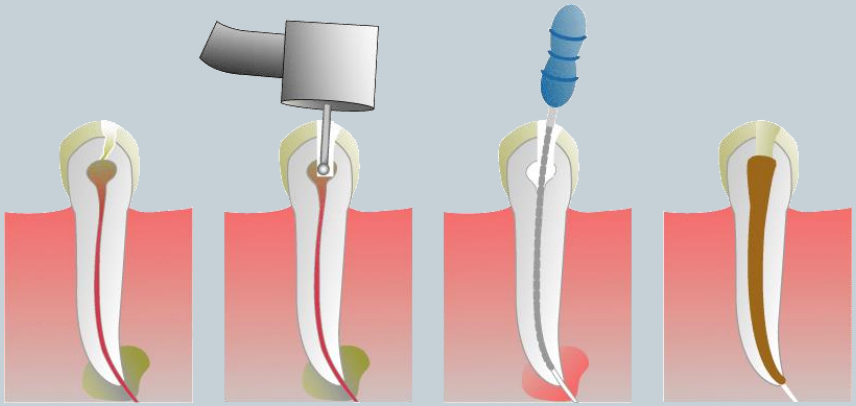
- We would not usually advocate this treatment plan, but it's a useful radiograph. Here, they are planning a fixed upper FPD against a lower complete denture. Look where they put the mandibular implants to avoid the Inf Alv. Nerve.
- Maxillary bone isn't as good as mandibular bone, **so in the maxillary arch, plan 1 implant per tooth** replaced unless you are doing the whole arch as a unit (like above). **In the mandibular, you can do 3 unit FPD's on 2 implants.**
- You can **push up the maxillary sinus about 2 mm, after that, you need a sinus graft**. You **always need 3-4 mm of good bone**, though, even with a graft.
- You **cannot fabricate an FPD with an implant as one abutment and a natural tooth as the other**. EVER. NEVER! (Please memorize this so we don't look stupid in treatment planning board…)

Endodontics

Phase 2

Generally:

1. Decide if you can do the endo in one appt or need two (you'll learn the reasons in Endo class)
2. Clean out the pulp tissue with rotary and hand files with irrigating solutions
3. Fill the root canal space with gutta percha and sealer.



Caries Treatment Planning

Phase 2

First, you figure out the caries risk, then you develop a preventive and restorative treatment plan with that in mind.

In the Operative Manual, there is a copy of the questions in the axiUm form, but there is a **guide** (on the left) to what questions to ask to get the information you need to score it correctly.

*Be really **familiar with these questions** before the appt. Even better, print out a copy. It should help you develop a script so you won't sound like you're reading off the screen!*

This is the left hand part of the form, where you determine the patient's risk. Use this form as an informational tool for you to discuss, in a non-threatening way, the factors that increase your patient's risk of caries. Ask the questions in brown and jot down answers before you glove up to do the exam. Then do your exam, keeping the questions in blue in mind, and answer them after the exam is complete.

	Questions to ask patient Questions in brown- ask before the exam Questions in blue- answered from the clinical exam	Caries Risk	Low 0	Moderate 1	High 10
Contributing Conditions					
I.	"Do you drink tap water or bottled? How many times a day do you brush your teeth? Do you use a fluoride mouthwash or rinse? When was the last time you had a fluoride treatment at the dentist? " 3-4 exposures is YES=low risk, 1-2 is NO=1 point.	**Fluoride Exposure** (through drinking water, toothpaste, supplements, professional application)	**YES**	**NO**	
II.	"Let's talk about sweet things… do you drink juice, sweet tea, soda? How often? (then tease out other sources of possible sugar exposures- how many, how often, how long) Any liquid meds with sugar? " **In order of damage**: sticky sweets >slow dissolving (hard candy>liquids> solids >2-3 between meals= HIGH (10)	**Sugary or Starchy Foods or Sweetened Drinks** (juices, carbonated or non-carbonated soft drinks, energy drinks, sweet tea, coffee with sugar or flavored creamers, medicinal syrups)	**Primarily at mealtimes**		Frequent or prolonged between meal exposures/ day
III.	Skip	**Caries Experience of Mother or Caregiver and/or siblings** (for patients ages 6-14) Not pertinent to Junior Clinic	**No new carious lesions in last 24 months**	**Carious lesions in last 7 to 23 months**	**New carious lesions in last 6 months**
IV.	"In the past two years, have you had a regular dentist?" "When was your last dental visit?"	**Dental Provider** (Is an established patient of record and receiving regular care in a dental office)	**Yes**	**No**	
General Health Conditions					
I.	Does this patient have any mental or physical impairment that would affect their ability to care for their teeth or comply with your instructions? Ex: Arthritis, Parkinson's, dementia. Anything causing xerostomia? Ex: renal disease, diabetes, AIDS, bone marrow transplant	**Special Health Needs**	**No**	**Yes (over age 14)**	**Yes (ages 6-14)**

Caries Treatment Planning

Phase 2

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You've evaluated the Caries Risk, so now you need to know what to do with that information. Here's where the rubber meets the road. The major components are:

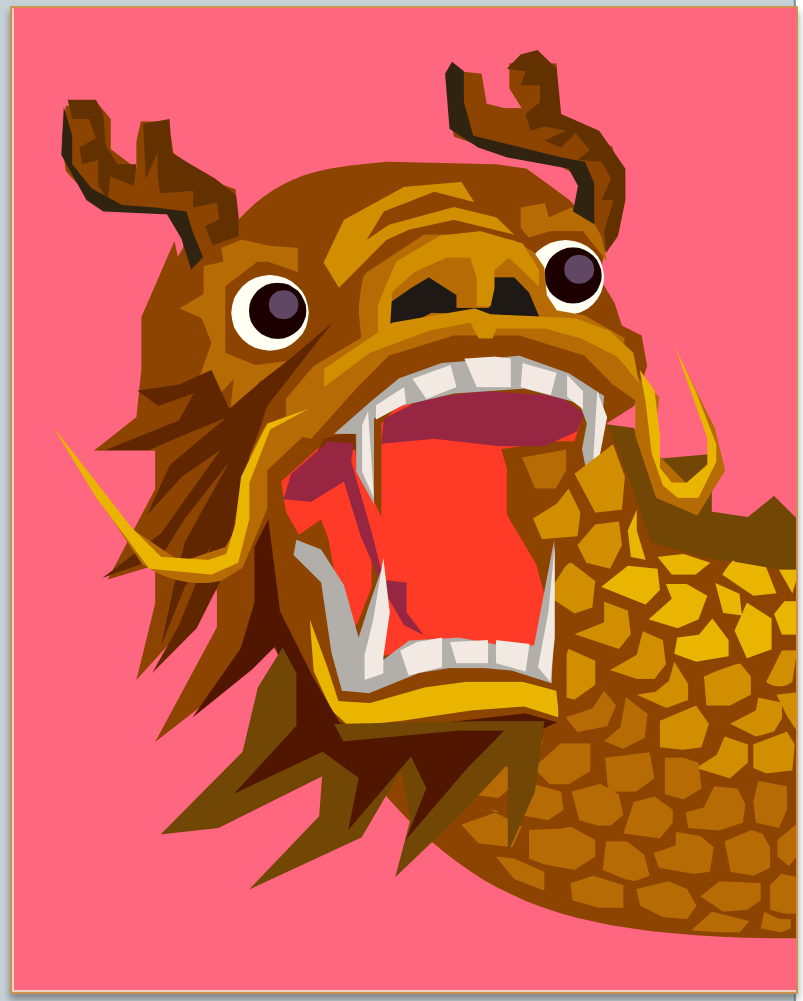
Strategy	Low Risk	Moderate Risk	High Risk
Patient Education	Sugar isn't good for anyone, and risk can change, so <5/day is good advice.	The patient needs to understand that carbs are the source of their caries, that without modification, little that we do will stop the process. Help them find the sources of carbs in their diet and suggest substitutes.	
Home Fluorides	Fluoridated water Brush with ADA approved toothpaste 2x/day- tell pt "Spit, don't rinse"	All Low Risk items + Add 1 brushing (3x/day) + Add at bedtime: ACT rinse 0.05% NaF (buy small bottle ACT)	Same as Mod Risk, but at bedtime, substitute Rx for NuPro 5000 ppm F toothpaste. "Spit, don't rinse"
Xylitol	Can't hurt…	Gum or mints 2 pieces 3-5x/day	Gum or mints 2 pieces 3-5x/day
Office F	Probably not helpful	Every 6 months	Every 3 months
Other items		Evaluate for salivary flow if indicated as a risk above. If low, treat as high risk.	• If low salivary flow, consider use of Biotene products. • Consider fluoride in custom tray • Consider sealing all uncoalesced grooves

Back to Revie w

Caries Treatment

Phase 2

- **Finally! Something you know how to treat! Yea!**
- In general, you want to do:
  - **Worst (deepest) caries first**
  - **Posterior teeth before anterior teeth** to establish stable occlusion and because long term, they are more important.
  - Besides, when the front ones look good, some patients stop coming in! (*Priorities…*)



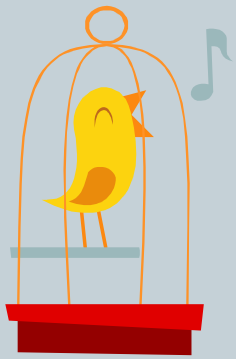
Caries Treatment

Phase 2

- But sometimes, you want to start on something simple to build the patient's (and your!) confidence, especially if they are anxious.

"It's a good idea to slay a few canaries before you take on the dragons."

Dr. D. Snyder



Caries Treatment Planning

Crucial questions:

1. Esthetic demands (anterior vs posterior)

2. Caries risk- some materials are better in high risk pts than others.

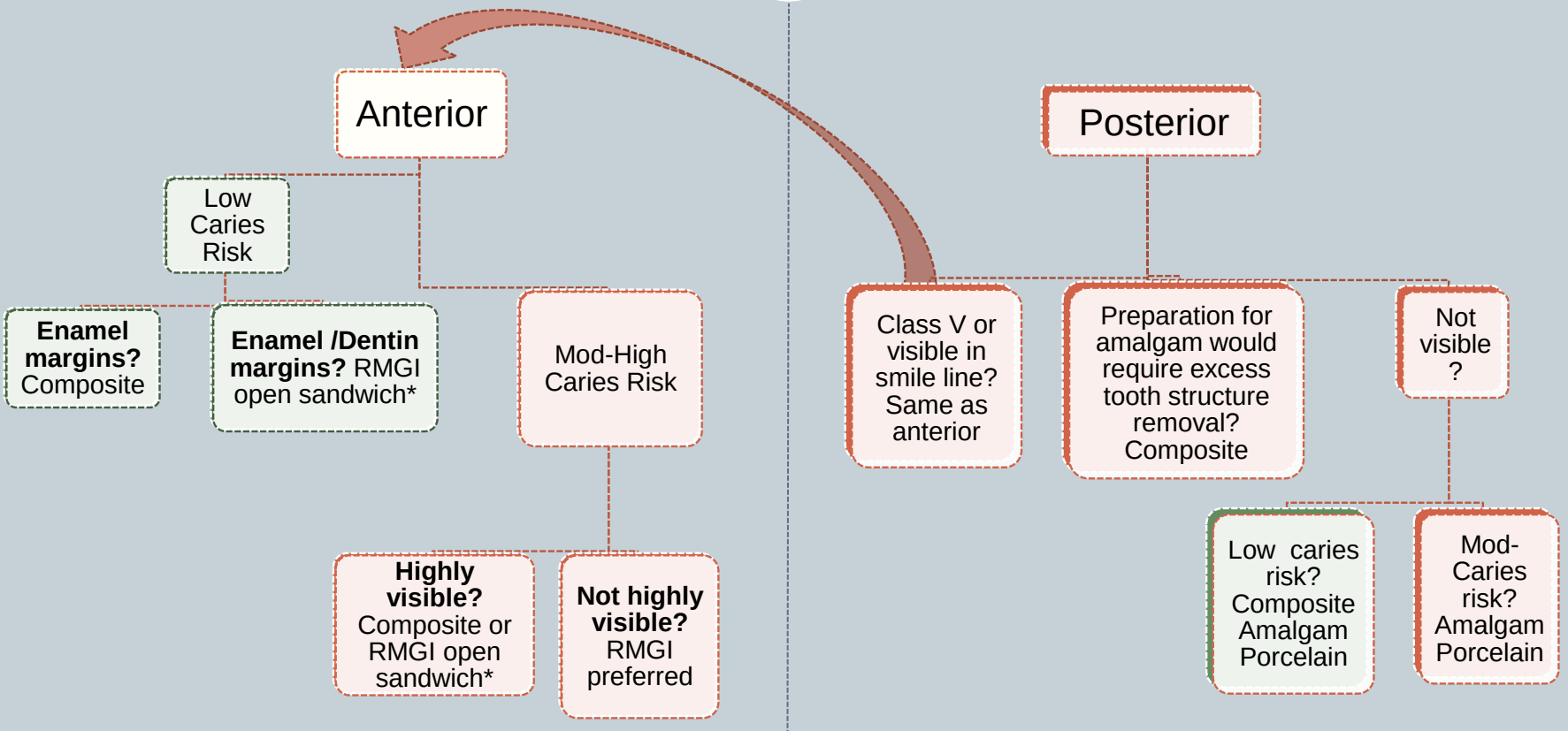
3. Contours of defect- some materials require less preparation than others and can save tooth structure

- For each lesion, you will choose which material you think would be best.
- How do you pick? Well, if you go back and look at your notes from Operative, we gave you lots of advantages and disadvantages of each material.
- Now it's time to turn that around and think we can make best use those characteristics for any particular lesion.
- There is no perfect material for all situations!

What material do I pick?

Phase 2

19



Open sandwich= RMGI left exposed to mouth with composite on occlusal

Closed sandwich= RMGI completely covered by composite

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"Caries Control"

Phase 2

- In patients with **rampant caries** (extensive, fast-moving caries) you may wish to give yourself some working time by stopping the active disease and removing the bacterial reservoir.
- When possible, do a quadrant or sextant at a time. This overlaps with Phase 1, where you were dealing with symptomatic teeth and determining restorability. To repeat, **priorities** are:
  1. **Symptomatic teeth**
  2. **Deep lesions threatening the pulp**
  3. **Asymptomatic teeth**
- Glass ionomer is your best provisional.
- Don't worry about removing all the deep decay, just make sure you **have clean margins**, which translates to removing all caries to leave 2 mm of clean dentin.

Picture & text from Axel Ruprecht, University of Iowa College of Dentistry. http://hardinmd.lib.uiowa.edu/ui/dent/toothdecay3.html

Note the extensive Class V caries, and multiple white spot lesions. Many of the carious lesions are very light in color, indicating quickly moving, very active caries. It will be crucial to help the patient understand how sugar is causing this and help them find alternatives. Then you might approach it by:

1. Caries control
2. Fabricate custom trays for Fluoride gel
3. Replace provisional restorations with final restorations one by one (or more, as you get faster).

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Break time!

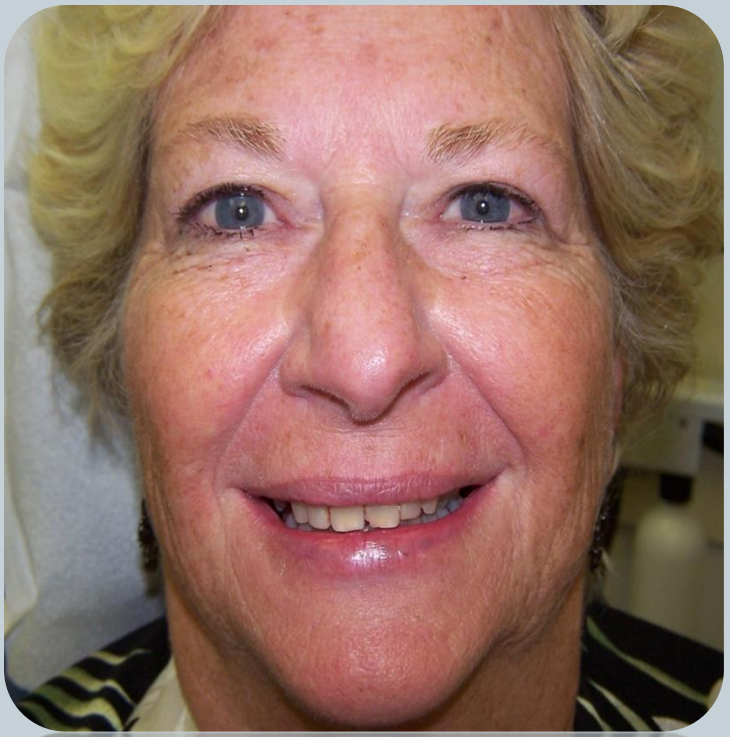
Rhodes, Greece

Its' very strategic location ensuring a colorful history, Rhodes has been important since it's days as a Greek naval power (the Colossus of Rhodes stood at the mouth of the harbor) to the middle ages, when it was the headquarters of the wealthy order of the Knights Hospitaller. It's got minarets from Ottoman ownership and Italian food from, you guessed it, Italian colonial times, but now it is a very popular beach resort with a fantastic medieval center.

Ready to stop for lunch? This is the original "hero"- that's how "gyro" is pronounced. The roast meat is delicious, and it's served with tzaziki sauce (Greek yogurt, cucumber, garlic) and grilled vegetables.

Case 1: Allison

Allison currently lives in Atlanta. She is 66 years old and the married mother of four children. She is very nice, but has high expectations of the final results and is an esthetically demanding patient. Does not drink or smoke.



Special thanks to
Dr. A Kious for the case!

Chief Concern, Med Hx

CC: ” I have broken and missing teeth” which she wishes to have fixed.

History of Present Illness: Pt gives a history that her teeth broke when she was chasing her granddaughter at the skating rink. She fell on her rear end and her teeth banged together causing them to break.

Medical History: Pt takes one baby aspirin a day because she “heard it was good for you” and takes a multi-vitamin. Pt describes her health as excellent. Vitals- BP 145/96 Pulse 82 Temp 98.0 Resp 14 Pain 1/10

Head and Neck Exam: All findings within normal limits

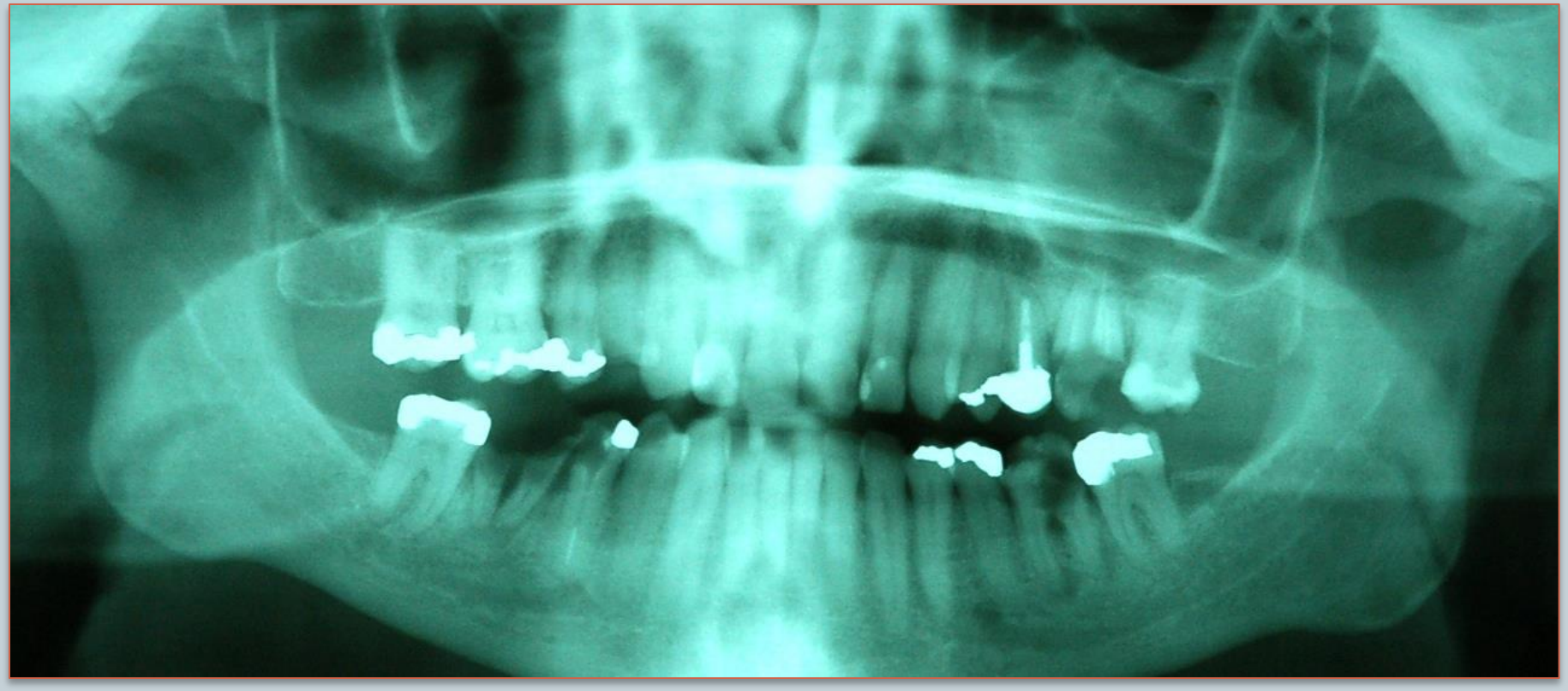
Dental Exam

- Treat this as if it was a patient and do an exam from the photos and radiographs. Take notes from the next four slides:
  - Missing and Impacted teeth
  - Conditions
  - Materials (existing restorations- from radiographs and pictures)
- Then note obvious caries (I know they aren't the best radiographs so don't sweat it), non-restorable teeth and periapical pathosis. Decide which teeth you aren't sure about restorability…which might you need a consult on?

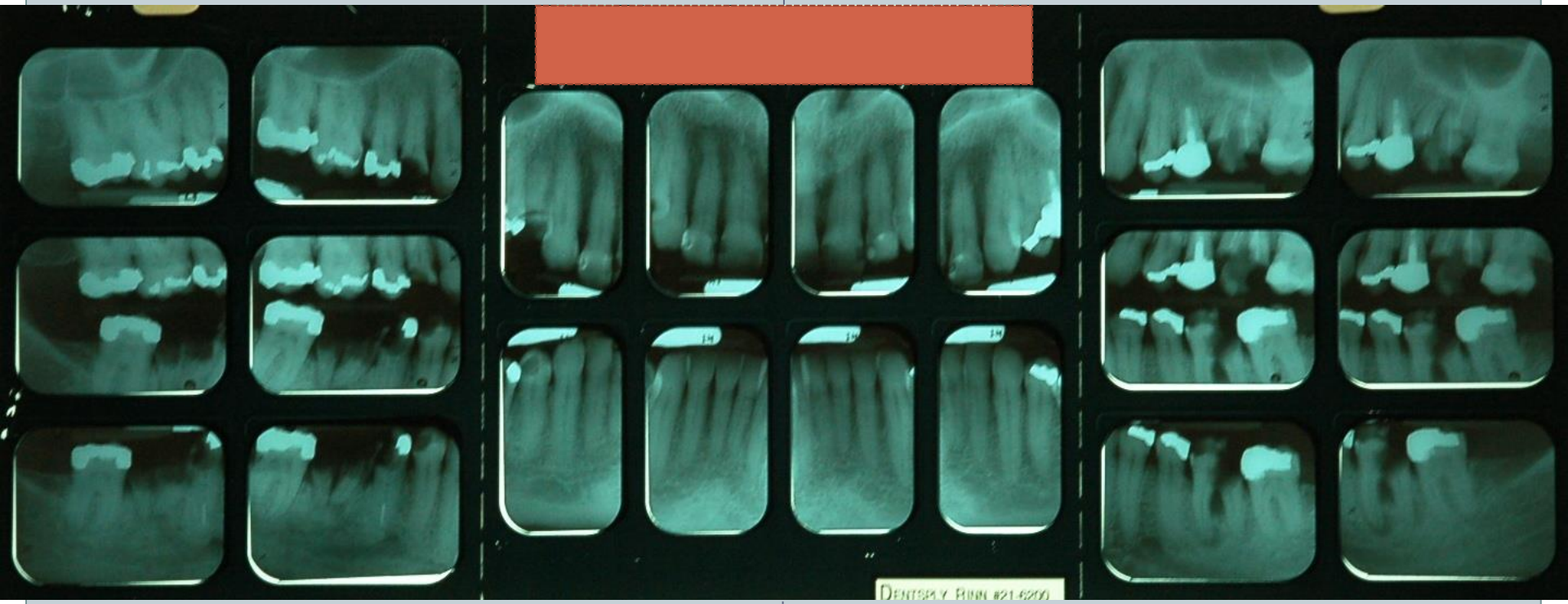
Initial Exam

Initial Exam

Panoramic Radiograph



Full Mouth Radiographs

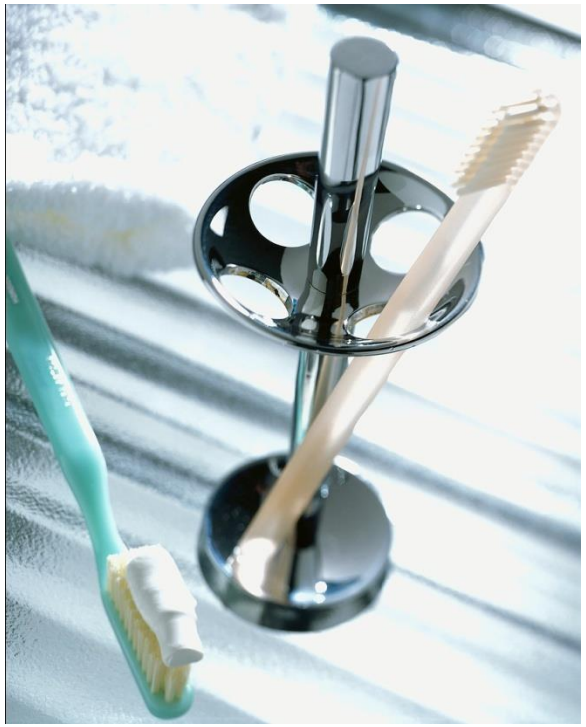


Caries Risk

- Allison loves to drink fruit juice…she keeps it around for the grandchildren and is sure it's very healthy. She squeezes her own. "It's all natural" she assures you. *Sigh.*
- You go through her Risk Assessment and it is 26. Although she broke her teeth in an accident, they were weakened by decay- this did not happen from that event.
- You have a lot of tactful educating to do. Think how you might approach this- practice on a friend if you can.

Periodontal Findings

- Gingival Inflammation= 68%
- Plaque Accumulation=75%
- Two quadrants have pockets > 4mm with subgingival calculus.



Case 1: Allison. Start Tx Plan

OK, let's get started. First thing….create a problem list. Remember the mnemonic? *See more…*? You remember.

- Chief Concern…that's easy. Broken teeth. We'll get to that no matter what. Check. So you'd pull up the Treatment Plan tab and start two new plans. Call them Phase 1 and Phase 2, since we will have some questions to answer before we can finish Phase 2. List the Chief Concerns as she said them.

Case 1. Allison. Develop Problem, Dx List

- M= Med hx. Anything there? No, it's clear Yes, need a consult
- O= Oral lesions. We didn't see anything of concern.

Pull out your print out of Problems and Diagnoses, take a look at the options and see what applies in this case.

Case 1: Allison. Med-Oral Les

Problem List	Diagnosis Quick List
TM Joint pain/masticatory muscle pain	524.6 TMJ Disorders (details- Full List) *Temporo Mandibular Joint. Complex pain cluster of the face and joint. Usually not caused by occlusion unless iatrogenic.*
Reduced salivary flow Xerostomia	527.7 Dist salivary secretion
Halitosis	784.99 Halitosis
Alcohol use Autoimmune Disease Bleeding disorder/Anticoagulation medication Cardiovascular disease Diabetes Head and Neck pain Neurological disease Respiratory disease Tobacco use	*No specific codes that correspond as a diagnosis. Just note in the problem list so you take it into account, and document that you noted it.*

Looking at the list under Medical History, there aren't any problems on this list for this patient. In fact, **there are a lot of specific medical problems NOT on this list (**including hypertension) because they already show up in the Medical History tab.

This problem list was rather carefully selected as those that are **likely to affect your treatment planning**, or that should prompt you to look further for a diagnosis (like halitosis →lung problems).

What effect will her borderline hypertension have on her dental treatment? Other than your taking her BP at each appointment, not much.

BUT- if she starts taking anti-hypertension medications, her salivary flow will probably be affected, changing her Caries Risk Status…course, it's already High, but it will still be an issue.

Case 1: Allison. Rest

- R= Restorative. There's plenty of work here! Let's start with the big ones: do you think there are any teeth that are non- restorable?

No | Yes, one | Yes, two | Yes, more than two

Which teeth do you think will need to be evaluated for restorability?

#3 | #5 | #13 | #28 | #29

Then go tooth by tooth and see which have restorations, and which of those need to be replaced. That should be pretty straightforward for you now, but there is one wrinkle. Those radiolucencies on the anterior teeth- when you look at the pictures, there are restorations there…what's up? Those are old composites which are radiolucent. They are unesthetic, and with her decay rate, probably should be replaced.

Case 1: Allison. Rest

White spot enamel lesions	521.01 Caries- only in enamel *(white spot lesion)*
Cavitated lesions Radiographic lesions of hard tissue *(Visible on exam vs visible on radiograph)*	521.03 Caries- extending into pulp *(think of vital pulp therapy)* 521.06 Caries- pit and fissure 521.07 Caries- smooth surface 521.08 Caries- root surface 521.09 Caries- unspecified *We are going to use this code to describe non-restorable caries*
Non-carious cervical lesion	521.2 Abrasion- Wedge defect NOS (Non-carious cervical lesion) *NOS=Not otherwise specified*
Erosion	521.3 Erosion (ie acids, vomiting)
Cracked tooth	521.81 Cracked tooth- incomplete fx *Used for symptomatic or asymptomatic cracks into dentin.*
Fractured tooth *(missing tooth structure)*	521.9 NOS-Fx, missing tooth structure
Defective restoration	525.61 Open restoration margins 525.62 Unrepairable overhang 525.65 Poorly contoured restoration
Fractured restoration	525.63 Fx restoration *Fracture seen but no lost tooth structure or restorative material* 525.64 Fx restoration, lost rest. material
Unesthetic restoration	525.67 Unesthetic restoration
Dentin hypersensitivity	521.89 Dentin hypersensitivity, NOS
Provisional restoration Previously endodontically treated tooth Mod-High Caries Risk	*No specific codes that correspond as a diagnosis. Just note in the problem list so you take it into account, and document that you noted it.*

So look closely at the photos and radiographs and see which problems and diagnoses apply, then click on the box below to see if they line up with our ideas.

Those that need to have restorability determined go into the Phase 1 treatment plan.

Those you are sure of can go into your Phase 2 treatment plan.

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That's all!

Case 1: Allison. Endo

- E=Endodontics. Look at #29. IF you've decided to keep it, what are you going to do?

Determine restorability

Plan to redo the Root Canal

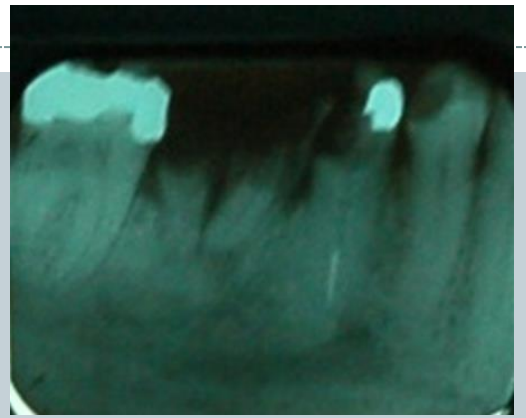
Plan a post, core, crown

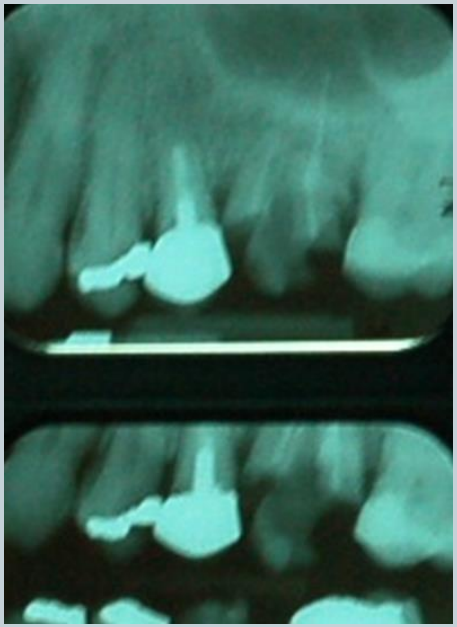
Now lets look at #13. What do you think of the endo?

Don't like the fill

Don't like the post

Don't know without an exam





Case 1: Allison. Endo

Now- are you ready to list any of these?
Or do you want to wait until we have determined restorability and have done the final endo exam?

Best answer is to wait a bit and get an opinion from Endo first. More on that later.

Spontaneous pain Pain to thermal stimulus Pain, patient unable to specify Pain to biting/percussion Palpation tenderness Periapical radiolucency Sinus tract *(These problems are evaluated together with test findings to develop a precise diagnosis from the list on the right)*	522.0 Pulpitis 522.1 Pulp necrosis 522.4 Acute apical perio. pulpal origin 522.5 Periapical abscess w.o. sinus 522.7 Periapical abscess w sinus tract
Swelling of suspected endodontic origin	528.3 Cellulitis and abscess
Discolored tooth	521.7 Post eruptive color changes *(Those changes attributable to a history of trauma)*
Failing endodontic therapy *You need a series of past radiographs to be sure the lesion is staying the same or getting worse, or it needs to be symptomatic.*	526.6 Pathosis of previous endo tx
Radiographic evidence of tooth/root resorption	521.4 Pathologic resorption *Either internal or external evidence lost tooth structure not caused by caries.*

Case 1. Allison. Perio

Plaque Supra-gingival calculus Sub-gingival calculus Bleeding on probing Suppuration Probing depth 4-6 mm Probing depth >6 mm Gingival inflammation Furcation involvement Radiographic evidence of bone loss Mobility Gingival hyperplasia *All of these problems, signs are synthesized into one of the diagnoses on the right. You will give a more specific diagnosis in the narrative of the chart.*	523.6 Calculus, extrinsic stain *This is not really a diagnosis, but if you need to do a full mouth debridement before you do your perio probing, this is the code that corresponds to that treatment.* 523.0 Acute gingivitis 523.1 Chronic gingivitis 523.31 Aggressive periodontitis, localized *(periodontal abscess)* 523.32 Aggressive perio generalized 523.41 Chronic perio localized 523.42 Chronic perio generalized
Gingival recession Inadequate zone of attached gingiva	523.2 Gingival recession *(Miller class in narrative)*
Implant failure	525.71 Implant failure-integration ***Pre-integration failures**: complications of surgery, iatrogenic, systemic disease, poor bone quality, any other reason.*
	525.72 Implant failure-biologic ***Post integration failures** from: lack of attached gingiva, occlusal trauma (poor pros design), parafunctional habits, peri-implantitis, poor oral hygiene, iatrogenic, complications of systemic disease.*
	525.73 Implant failure-mechanical ***Post-integration failures** from: failure of dental prosthesis causing loss of dental implant, fracture of dental implant.*
Acute necrotizing ulcer gingivitis	101 ANUG Acute Necro Ulcer Ging

P= Perio. Pick out Allison's problems and give a best guess on diagnosis (they really aren't very specific on this list- the periodontists will want something better from you later).

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That's all!

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Are you going to schedule a:

D1110 Prophy

D0180 Comprehensive Perio Exam

Case 1. Allison. OSurg

- O= Oral Surgery. We know we want to extract #14, 19, 30, but which diagnoses will apply?
- Here at GRU, we have decided to use the code 521.02 Caries-unspecified as the code for non-restorable caries- that's the code we'll link to 14 &19. It's under the Restorative list, because that is where you diagnosed it.
- But #30 is now just root tips, so we will call it 525.3 Retained dental root. Not a big point, just using it to make the distinction.
- **BUT** there are other questionably restorable teeth, so we have some Phase 1 work to do before we send our consult to Surgery.

Supernumerary teeth	520.1 Supernumerary teeth
Impacted teeth	520.6 Impacted teeth *Not erupted at the normal time-crown still in bone.*
Pericoronitis	523.3 Pericoronitis
Retained root	525.3 Retained dental root
Implant failure	525.71 Implant failure- integration *Pre-integration failures: complications of surgery, iatrogenic, systemic disease, poor bone quality, any other reason.*
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Fascial space infection of odontogenic origin	528.3 Cellulitis and abscess
Traumatic wound	*Codes for this are under medical codes, which gets really complicated…*

Case 1. Allison. O-O-P-E

These all really feed into **Phase 3** planning, which is the next tutorial, but lets give it a quick once over:

- O= Occlusion. You do an initial occlusal exam and notice a slight posterior crossbite on the right side. Otherwise, there are no concerns.
- O= Ortho. No concerns.
- P= Pros. Once the non-restorable teeth are extracted, we will have questions on whether to replace them, and if so, how. Since there will be short spans (1-2 teeth), the best choices are either FPD or implants.
- E=Esthetics. Since she has fair coloring, her shade B3 teeth appear fairly dark. Always offer bleaching to patients (tactfully!!) and if you bleach ***always bleach before starting operative,*** so put it early in Phase 2!

Case 1. Allison. Diagnostic Summary

- Once you determine the basic outline of the patient's problem list, you create a "diagnostic summary" in Forms-Dental Exam at the top of the form. It says:

  "Summary of findings to include CRA, perio assessment, occlusal problems, missing teeth to be replaced, and patient and provider esthetic concerns"

- Think in terms of our three diseases. If they don't have it, you don't need to mention it, of course.

- **This should be written so that someone not familiar with the case (like a faculty member) can get a quick overview of the key concerns at the diagnostic stage.**

Allison's Diagnostic Summary

- High caries rate with numerous non-restorable teeth, periapical radiolucencies, questionably restorable teeth, fractured restorations, and secondary caries. Previous endodontic treatment will need to be evaluated as well.
- Probing depths >4mm and subgingival calculus requires a Comprehensive Perio exam and further evaluation.
- Teeth #14, 19, 30 will be extracted, possibly 5, 13, 29. A number of older restorations are unesthetic as well as leaking, and will be replaced after vital bleaching, which patient has requested.

Back to Revie w

Case 1. Allison Treatment Plan

Phase 1

- Determine periapical status #13. Have results of tests and radiographs evaluated by Endo to determine if a patient consult indicated. Question: is patient a good risk for “disassembly” (taking out the post). If so, add it to your list of teeth to determine restorability. If not, add to extraction list.
- Determine restorability #5, 29

Phase 2

- D0180- start perio tx with scale/root planing. Prophy
- Extract non-restorable teeth
  - List teeth in Tx Plan
  - List Consult in Tx Plan
  - Write consult to Oral Surgery
- Vital bleach
- Restorative
  - Posterior
  - Anterior

Learning Objectives

Phase 2

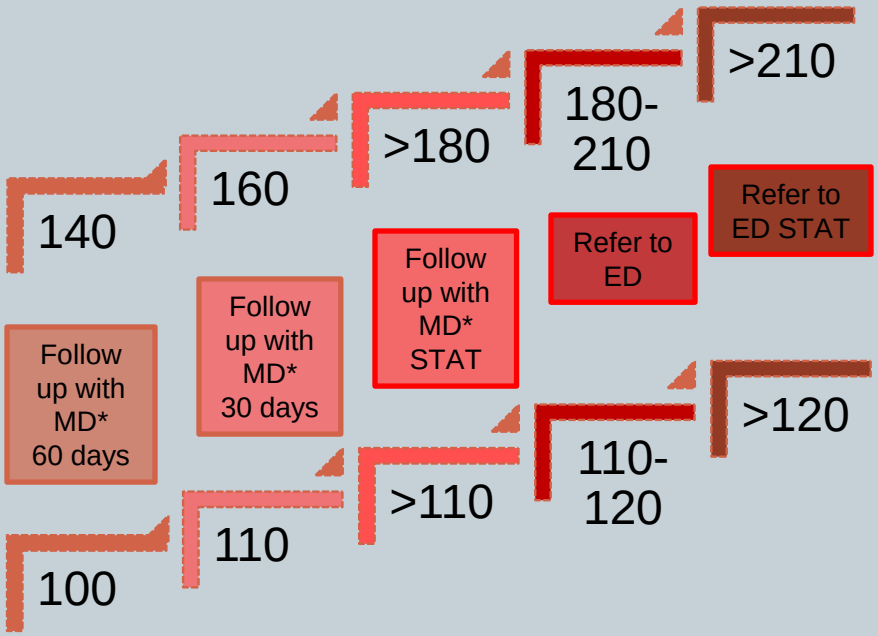
1. Explain basic parameters for what to do in Phase 2 and which items should be done early in the phase.
2. List the sequence for periodontal therapy in Phases 1 and 2. Describe when gross debridement, D0180, or D0110 are indicated.
3. Explain the types of procedures that are referred to Oral Surgery and be able to write an appropriate referral.
4. List the basic requirements for planning implants- all items highlighted in blue.
5. Correctly prescribe for all risk categories of caries on home care and office fluorides
6. List which restorative materials to select for which situations
7. Explain how to treatment plan a Caries Control case.
8. Be able to write a clear, concise, and complete Diagnostic Summary.

Now that you have the basics…

- Read Chapter 7: pgs 138-159, 182-191 (including "What's the Evidence?" boxes) The Disease Control Phase of Treatment. This will give you a really good feel for how and why we treat caries and periodontal disease the way we do, and help you get a feel for how long our restorations can be expected to last.


Good job!
Finish

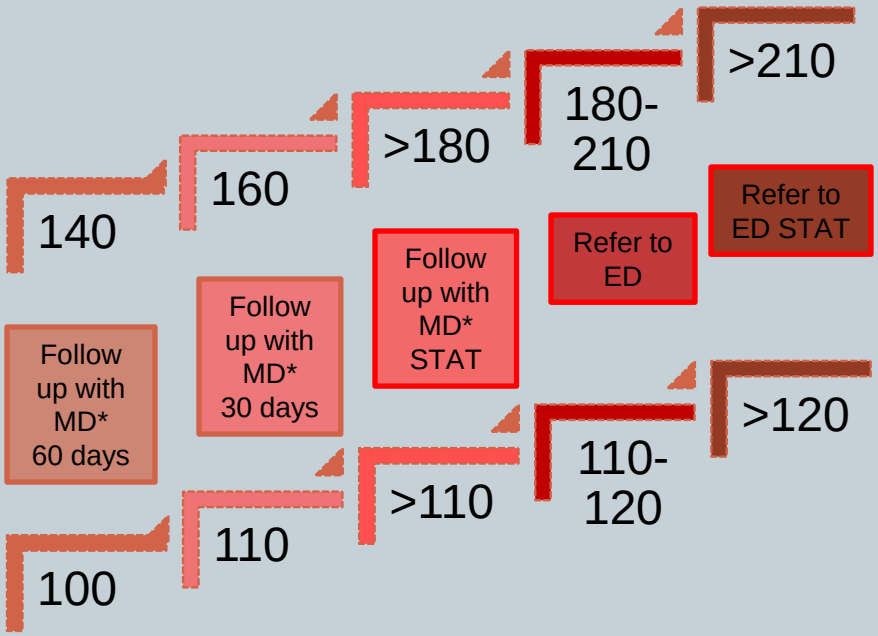
You said No Need for Med Consult



- Allison's blood pressure is a little high. You should take it two more times over the about 15 min and see if it's still high. Maybe it was the traffic from Atlanta, and maybe it just makes her nervous to see a dentist (or a student!), but if it stays this high, she should see her physician within 60 days.
- It would not stop us from treating her, however.

Return

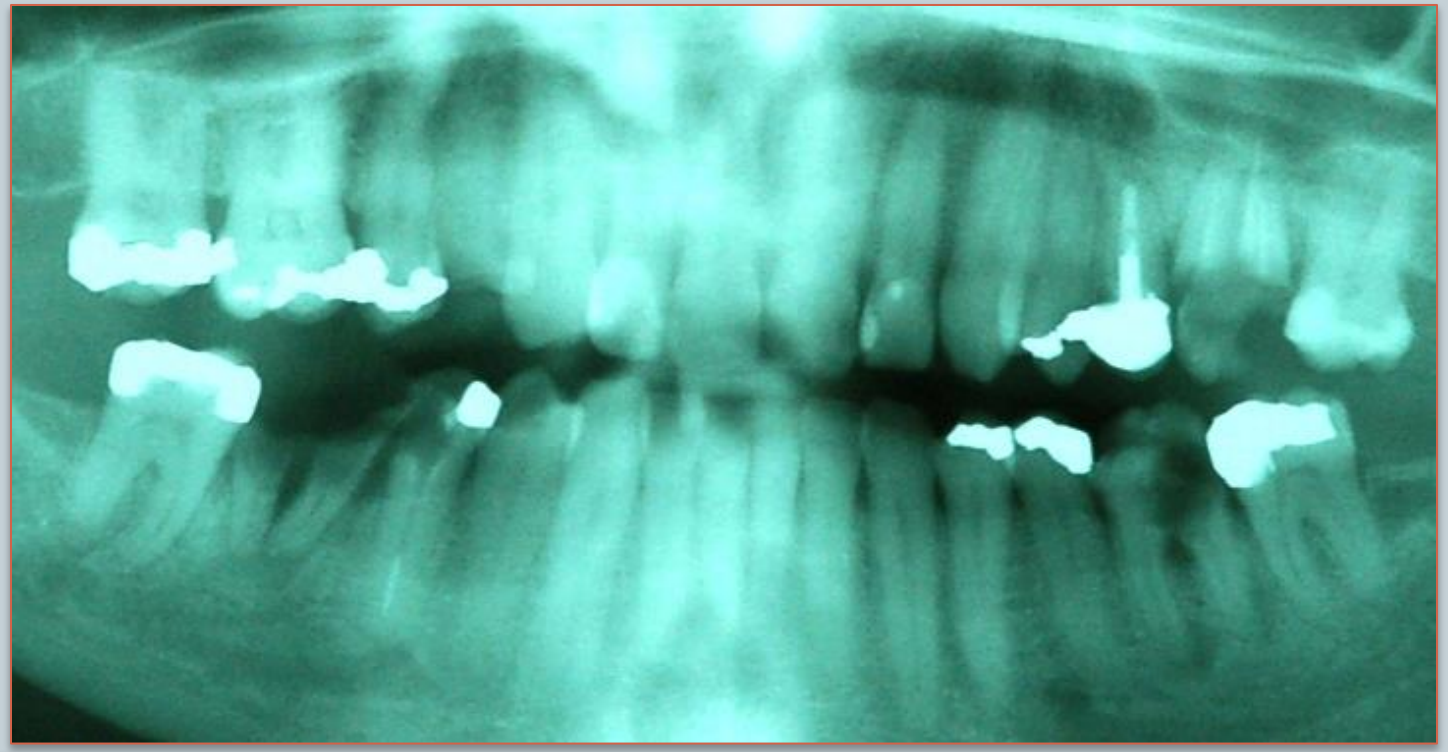
You said Yes to Med Consult



- Correct! You noticed that Allison's blood pressure is a little high. Maybe it was the traffic from Atlanta, and maybe it just makes her nervous to see a dentist, so take it three times over the appointment, but if it's still high, she should see her physician within 60 days.
- It would not stop us from treating her, however.
- Nice work!

Return

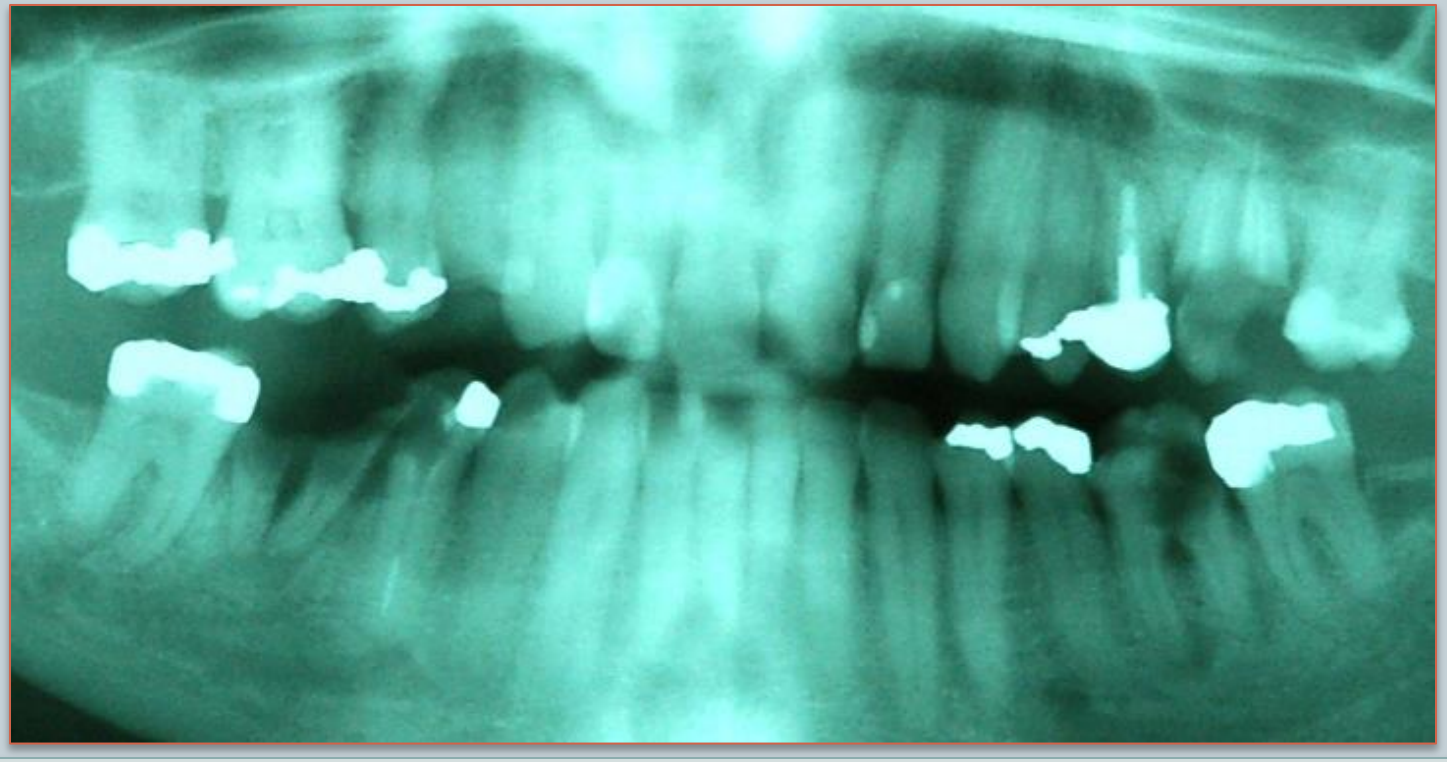
You said No Non-restorable teeth



Well, it's flattering that you think we're good enough to fix some of these, but once the caries is below the level of the bone, or through the furcation of a molar, it cannot be restored. Try again!

Return

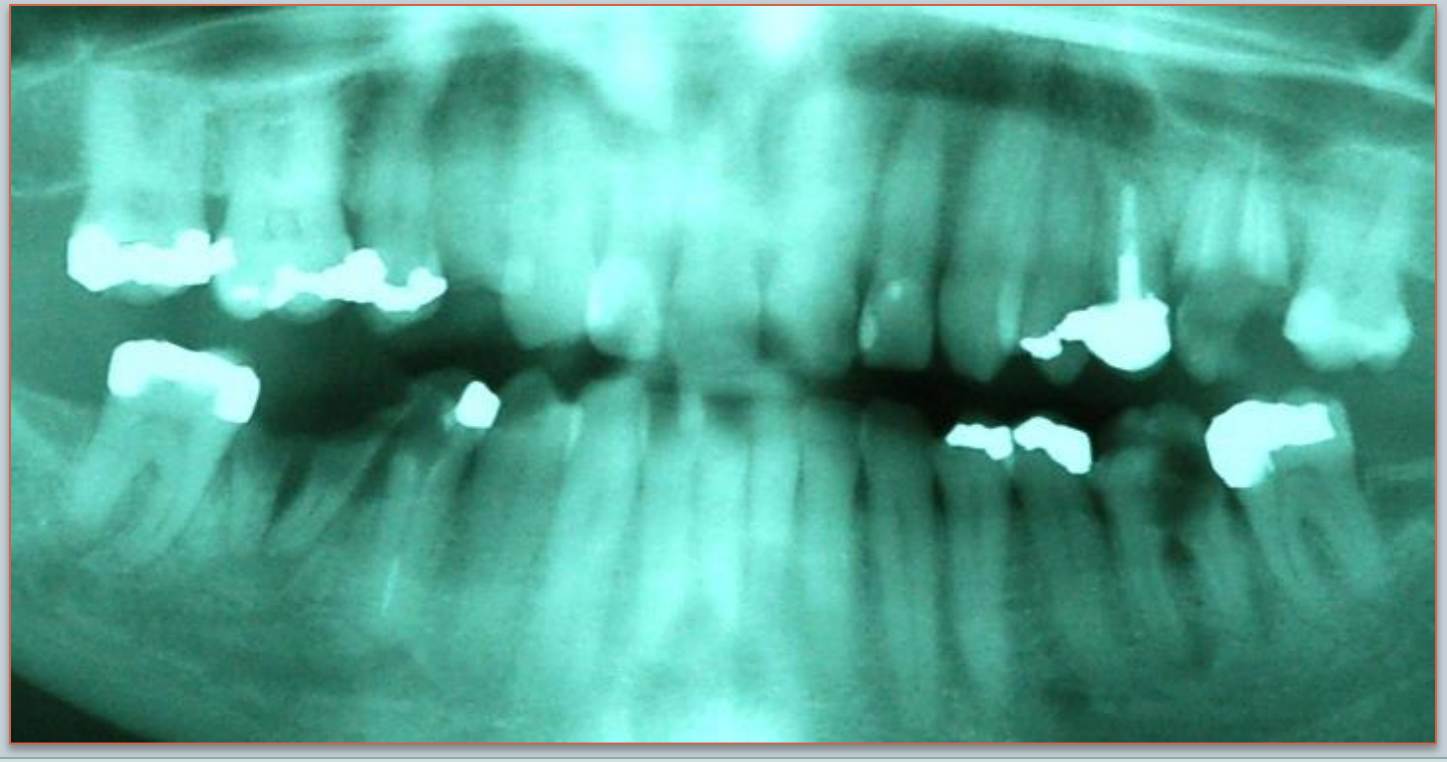
You said One Non-restorable Tooth



#30 is clearly beyond hope, but if the caries is below the level of the bone, or through the furcation of a molar, it cannot be restored. Try again!

Return

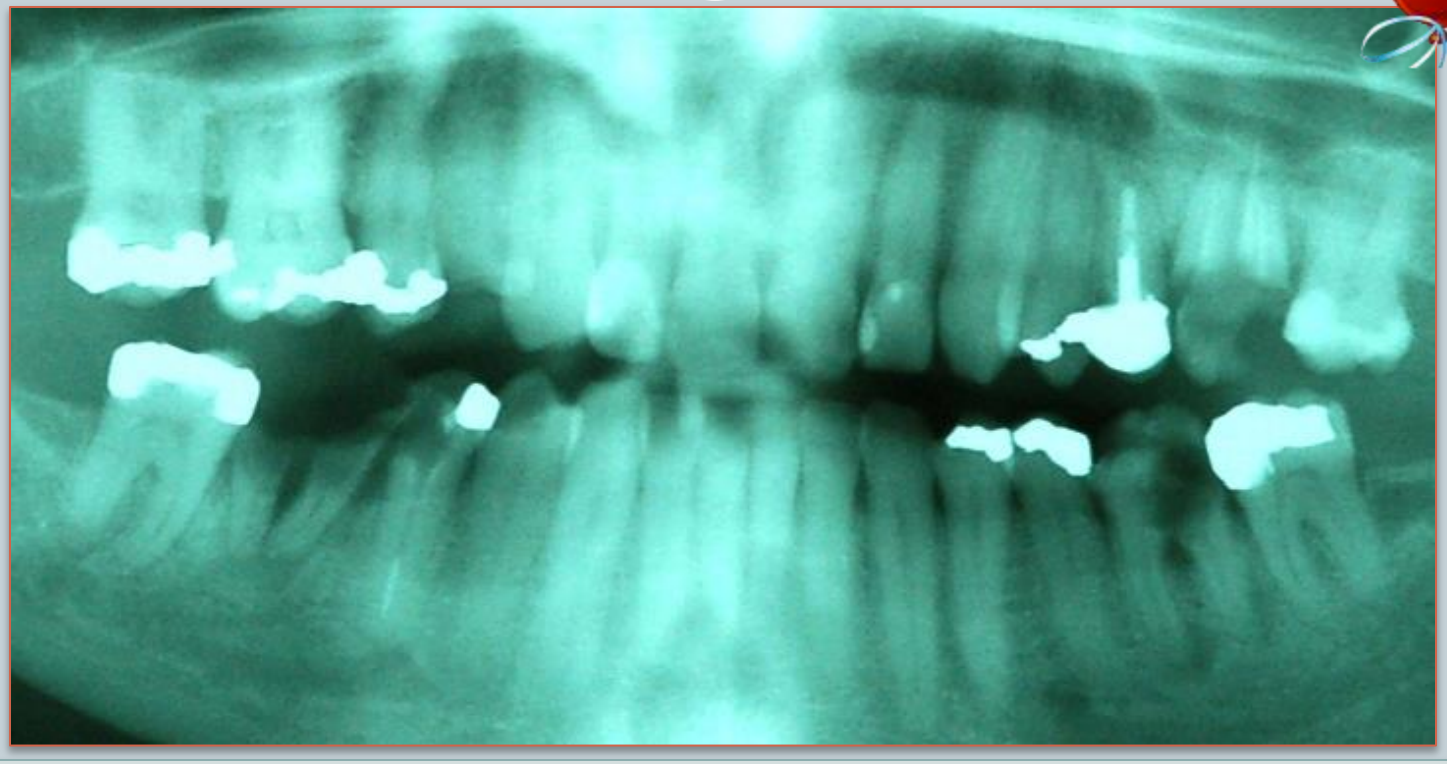
You said Two Non-restorable Teeth



Which two? Probably #30 and #19 look the worst, but #14 is also decayed through the furcation, so it cannot be restored. Try again!

Return

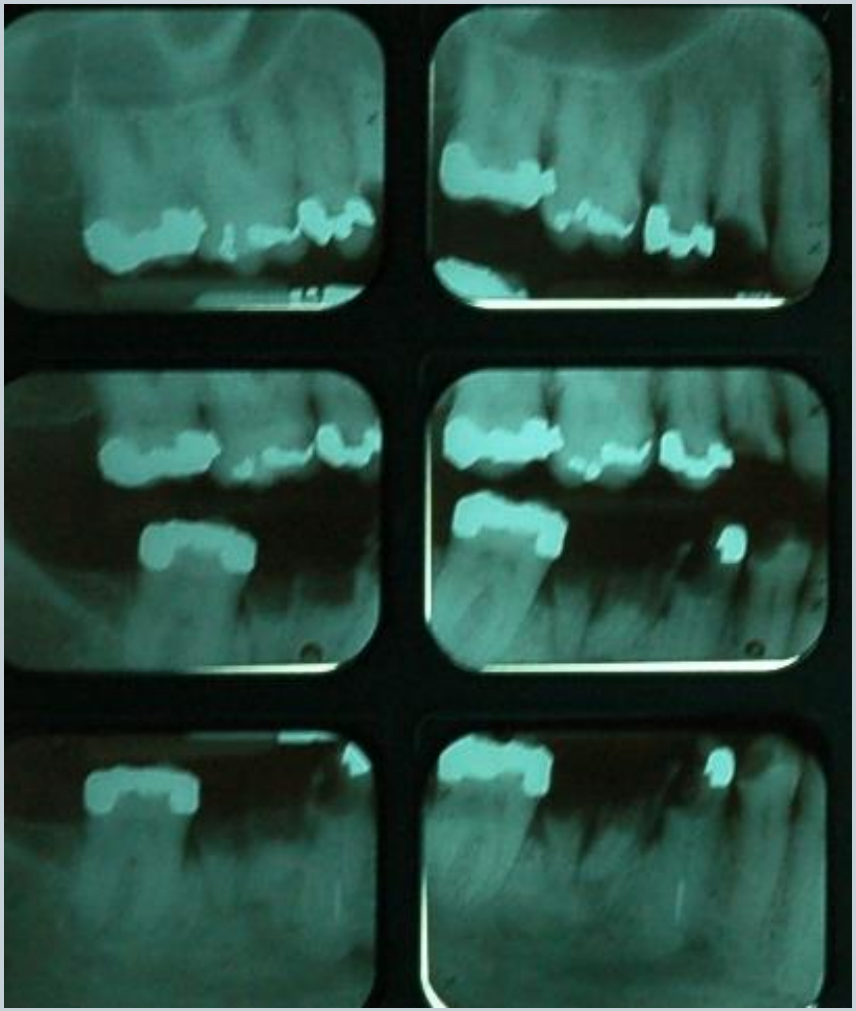
You said More Than Two Non-restorable Te



Correct! #14, 19, and 30 are all decayed through the furcation, so they cannot be restored and will have to be extracted. Good diagnosis!

Return

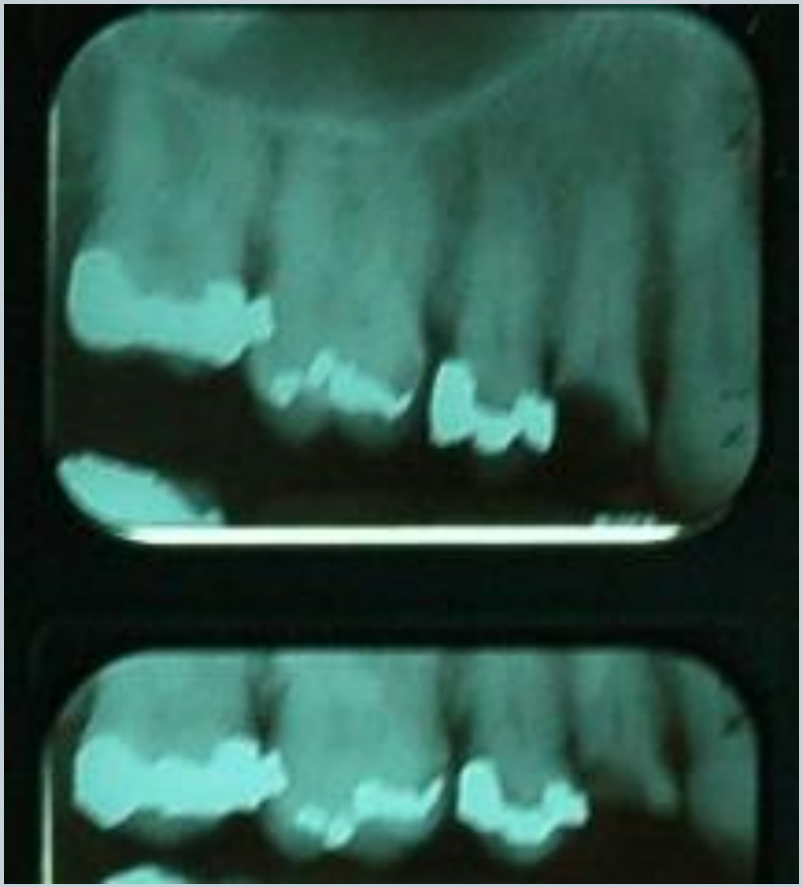
You chose #3



- Well, there's definitely decay there on the mesial, but it's pretty garden variety.
- No real concern here.
- Try again!

Return

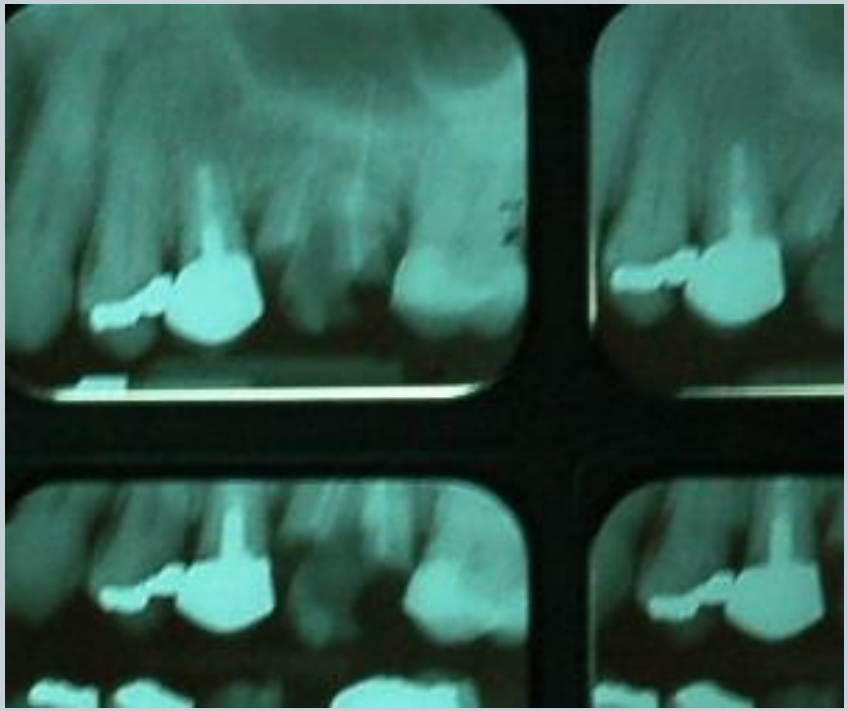
You chose #5



- Absolutely right.
- There are two concerns here:
  - How much tooth structure is above bone on the distal?
  - Since #4 has drifted mesially (that's what teeth do!) into the broken tooth space…is there enough space to put a restoration? And if so, what would the contour be?
- The best plan might actually be to replace the broken #4 first so you know what the final contours are, then see if #5 is restorable.
- Good thinking! Special kudos if you thought to do vitality tests on #5 before you restored it!

Return

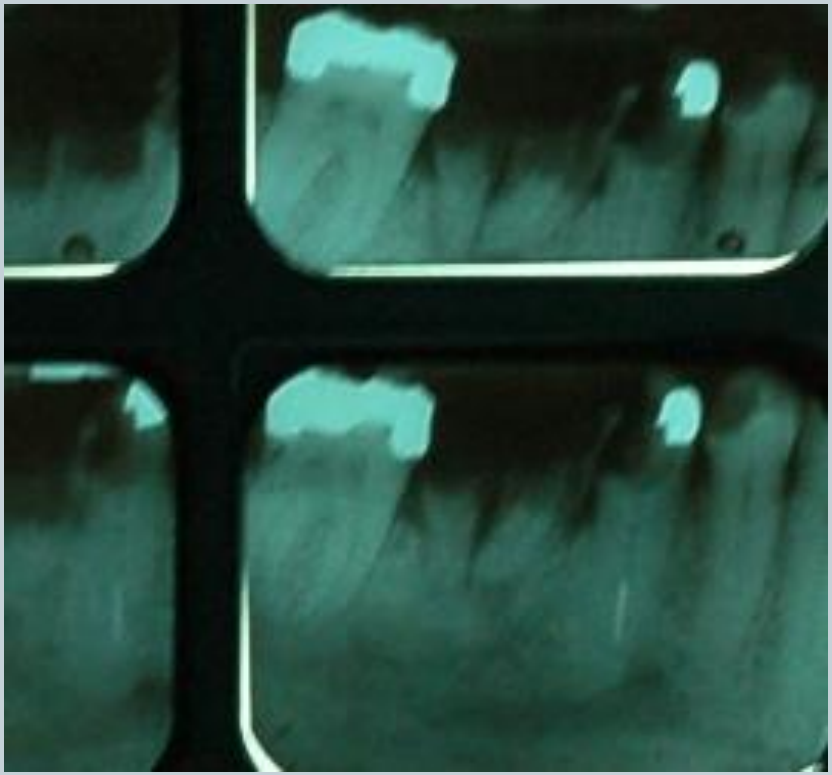
You chose #13



- Absolutely right.
- The major concern is whether there is caries under the crown or not. Considering her decay rate, it's a good bet. That means you have to take the crown off and excavate the decay and see what's left. That would leave you with two options:
  - Redo the endo, post, core and crown, perhaps as the anterior abutment for an FPD 13-15 and hope for better caries control
  - Extract it with #14 and place two implants.
- Both options should be presented to the patient and see what her preferences are.
- Very good!

Return

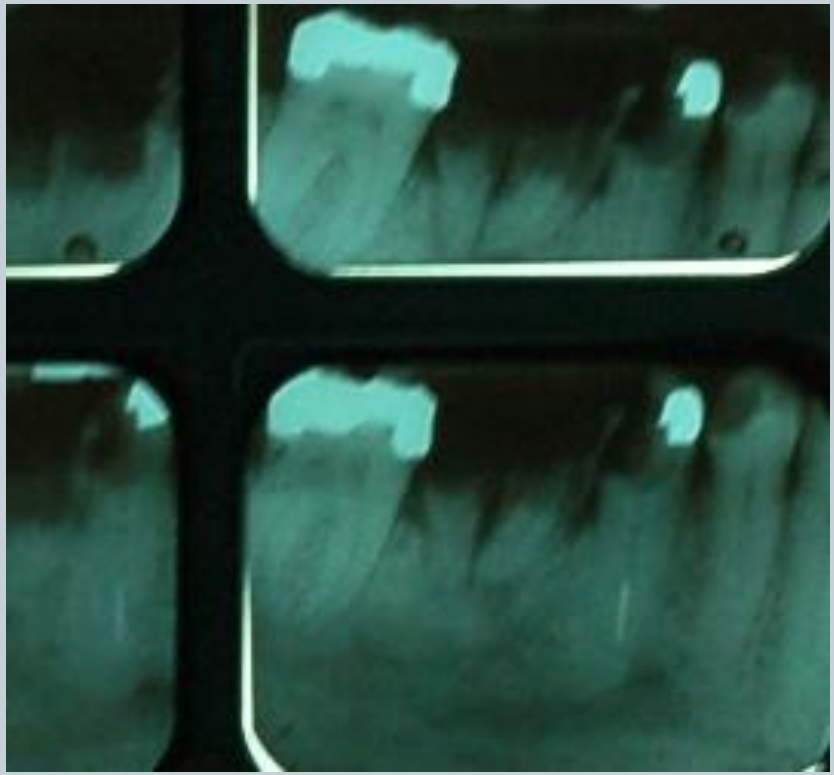
You chose #28



- Well, there's definitely decay distal, and it's going to be tricky to restore, but not really questionable restorability.
- No real concern here, except to remember to test vitality before you start.
- Try again!

Return

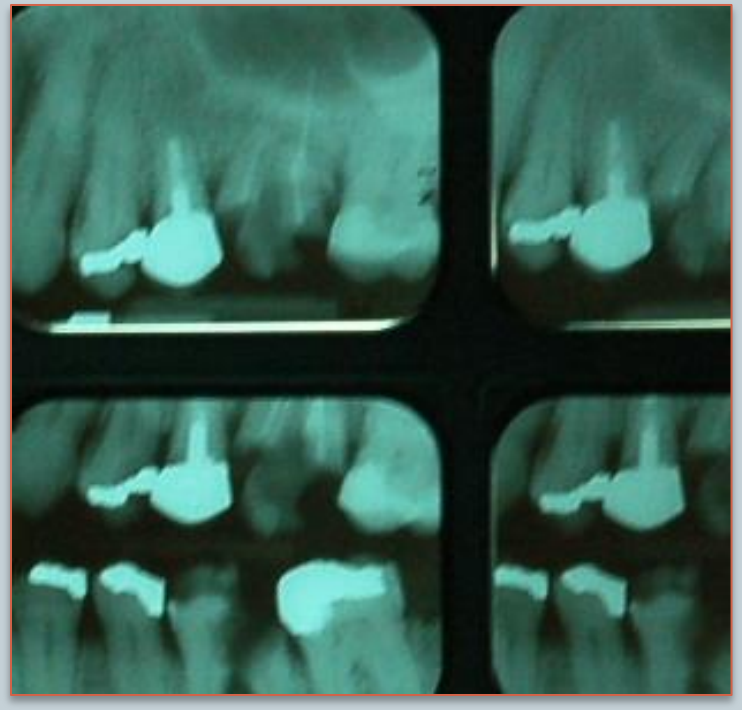
You chose #29



- Correct. This tooth has a lot of strikes against it. It's the poster child for considering implants:
  - Borderline restorable
  - Even if you can restore it, it won't be strong enough to support a FPD or RPD predictably (you'll learn this next year…)
  - Endo prognosis isn't great because of long term contamination
  - If it requires periodontal surgery to place a crown on it, then an implant becomes less expensive
  - With this decay rate, unless her habits change significantly, an implant has a better prognosis because it can't decay.
- We'll have to take all that into account, and we'll also give the patient these options and see what she prefers. After all, if we're going to replace #30 with an implant, it would be easier to just do both of them together.

Return

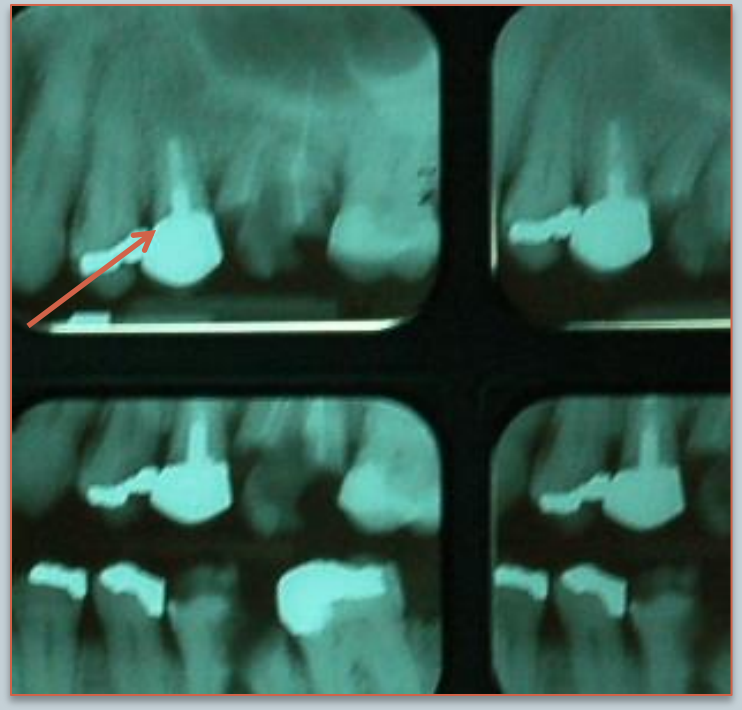
You answered "Don't know without an exa



- Correct!
- You can't diagnose an existing endo without a clinical exam. Of course there is no pulp, so no cold test is needed, but the status of the periapical tissue is very important, so percussion and palpation would be crucial, as would a clinical evaluation of the caries at the margin.
- Old radiographs would also be very useful for comparison.
- Very good…but keep looking…

Return

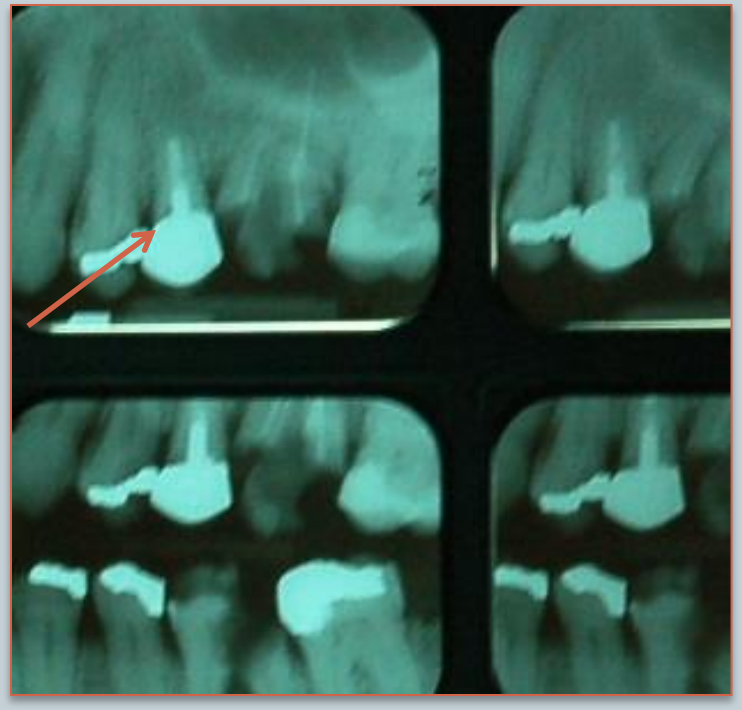
You answered "Don't like the fill"



- Well…the radiographs aren't great, but neither is the fill. There is a void just below the post, but worse, it looks like there is decay below the mesial crown margin. That would mean the fill is probably exposed to bacteria since the seal is compromised.
- On the other hand, we don't diagnose on the basis of radiographs alone!
- Good thinking…but keep looking…

Return

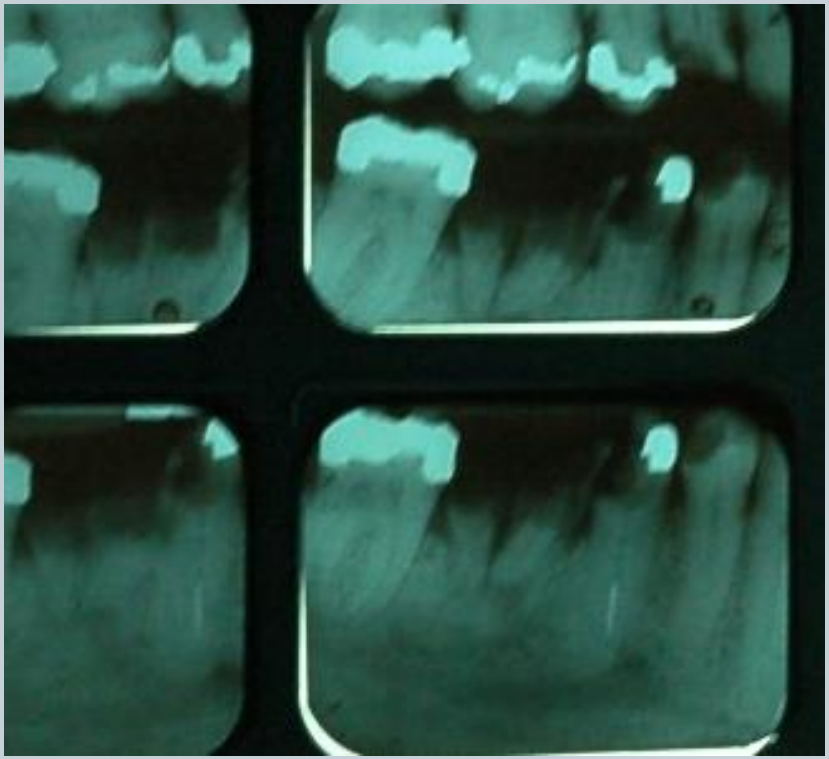
You answered "Don't like the post"



- Correct! The post is seriously short. Of course, the root is seriously short, too, but the rule is the post should be 2/3 of the length of the fill, and this isn't close.
- And then there's that decay on the mesial below the crown…very worrying.
- Good thinking…but keep looking…

Return

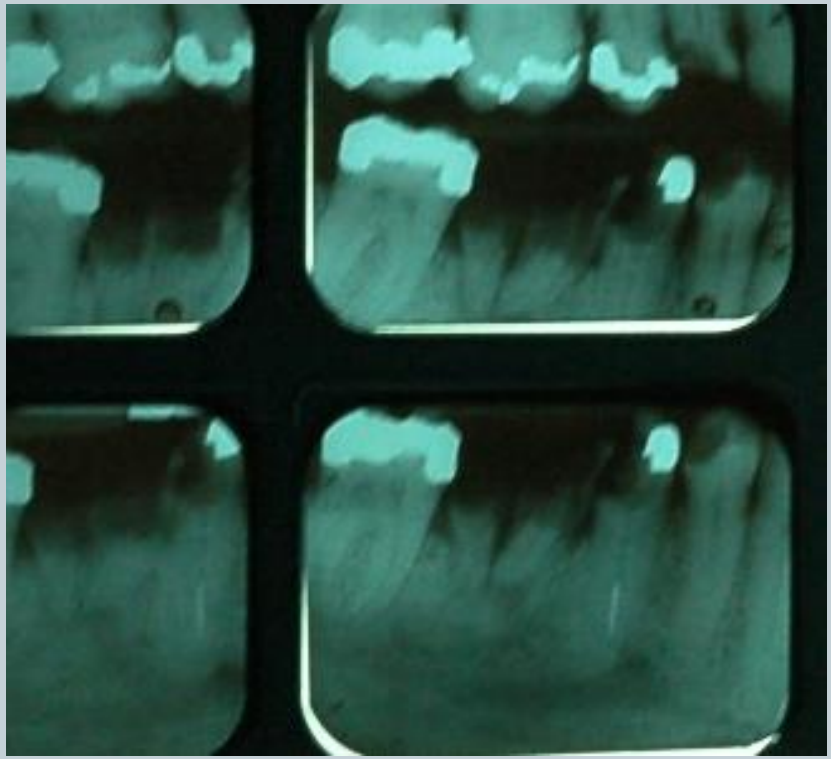
You answered “Determine Restorability”



- Well, that’s always a good plan before doing endo, so it’s not wrong.
- But this tooth looks reasonably restorable from this radiograph- there is approximately 2-3 mm of of tooth structure above the level of bone. It will be easier to determine after #30 is extracted and the tissue heals.
- There’s another answer as well- keep clicking.

Return

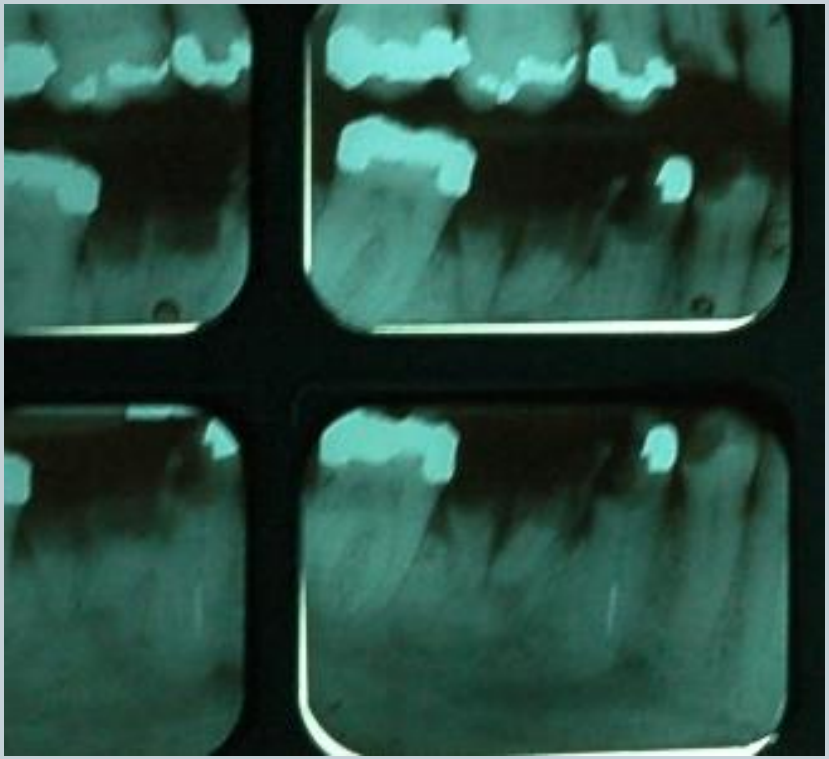
You answered “Redo Endo”



- Correct!
- The tooth looks like it should be restorable, but we’ll need to confirm that for sure.
- But the endo fill has been exposed to oral bacteria for who knows how long, and must be redone before any restorative is done!
- Excellent answer. There is another correct component, though. Keep clicking.

Return

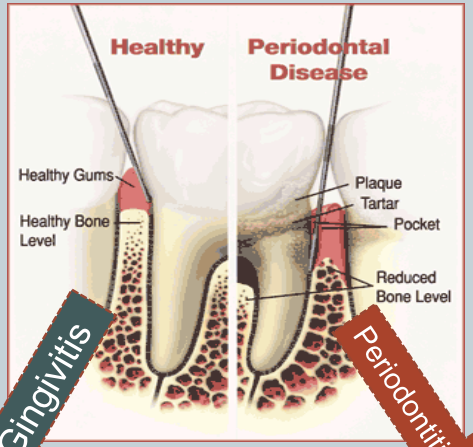
You answered “Plan post/core crown”



- True, but we might want to think of some other components first!
- Make sure you’ve got them all!

Return

You answered D1110 Prophy



Supragingival calculus and/or Stain and/or Pocket depth <4mm

Prophylaxis D1110

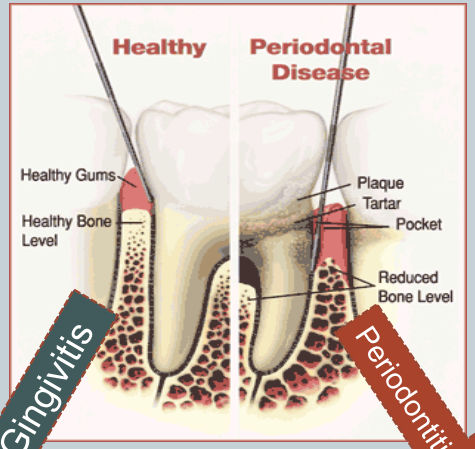
Subging Calculus + Bleeding on probing and/or Pocket depth > 4mm in several areas + Radiographic bone loss

Comprehensive Periodontal Evaluation D0180

- No, with pocket depths > 4mm in two areas (that doesn't really count the distal of second molars, by the way…don't count those) and subgingival calculus, a Comprehensive Periodontal Exam is appropriate.
- Study the chart on the left and memorize the criteria.

Return

You answered D0180



Supragingival calculus and/or Stain and/or Pocket depth <4mm

Prophylaxis D1110

Subging Calculus + Bleeding on probing and/or Pocket depth > 4mm in several areas + Radiographic bone loss

Comprehensive Periodontal Evaluation D0180

- Correct! With pocket depths > 4mm in two areas (that doesn't really count the distal of second molars, by the way…don't count those) and subgingival calculus, a Comprehensive Periodontal Exam is appropriate.
- Excellent!

Return