Class II lesion selection
NERB exam
Eligible Class II restorations tooth selected must have cusp-fossa occlusal relationship; there must be occlusion on the tooth selected

- Class II amalgam (with occlusal preparation)
- Class II composite (with occlusal preparation)
- Class II composite (slot preparation)
Radiographs Restorative

• Original periapical and bitewing radiographs of posterior teeth
• Original periapical radiograph of anterior teeth
• Radiographs must show the current condition of the tooth being treated
• Must be no more than 6 months prior to day of examination
Radiographs Restorative Class II

- Interproximal caries must be shown radiographically to at least penetrate to the dentoenamel junction or have evidence of equivalent depth clinically (transillumination especially for Class III)
Radiographs Restorative

**Radiographs.** The radiographs must demonstrate sufficient contrast to clearly reveal the extent of caries and other pathoses. Initial submission of radiographs (film or digital prints) of poor quality will result in a **request for a new radiograph**. If a subsequent required retake radiograph is not of diagnostic quality there will be a point deduction. If a third radiograph is not of diagnostic quality, the examination is stopped. Radiographs must be within last 6 months from date of exam.
Tooth selection – exclusions (p. 64)

Only one tooth may be assigned, prepared and presented for evaluation at any one time if planning approximating restorations. Careful clinical judgments should be used if planning approximating lesions.

Exclusions. The following will not be accepted for the Restorative Examination.

• Non-vital tooth, pulpal pathology or endodontic treatment
• Teeth with facial veneers
• Mobility of Class III or more
Tooth selection-exclusions

Other Recommendations
• Mandibular first premolars, distal surface acceptable for Class II amalgam, but not recommended
• Distal surface of cuspids allowed for Class III composite only, not Class II amalgam
• Avoid potential pulpal involvement (too large a lesion) or cuspal replacement
• Circumferential decalcification, contiguous with the lesion or proposed restoration is discouraged.
Restorative NERB Exam
Class II primary carious lesion

Can be:
- Class II amalgam
- Class II composite (with occlusal preparation)
- Class II composite (slot preparation)

p. 71, 72, 73 CIF manual
Class II amalgam

- At least one proximal surface primary caries no signs of previous excavation
- Radiographically or clinically extends to at least the DEJ
- Must be in proximal contact with sound enamel surface or permanently restored surface adjacent tooth
- No proximal lesion on adjacent tooth with breakdown that would jeopardize proximal contour or contact of restoration
- Centric occlusion, cusp fossa relationship; opposing teeth may be natural dentition, fixed bridge or any permanent replacement

p. 71 CIF manual
Class II amalgam

Other criteria:

• Other surfaces of tooth selected may have existing occlusal or proximal restoration as long as one proximal surface has qualified primary caries

• Pre-existing restorations and any base/liner must be removed completely

• Preparation recommendations must take into account a transverse or oblique ridge
Class II composite resin (conventional preparation)

- At least one proximal surface primary caries no signs of previous excavation
- Radiographically or clinically extends to at least the DEJ
- Must be in proximal contact with sound enamel surface or permanently restored surface adjacent tooth
- No proximal lesion on adjacent tooth with breakdown that would jeopardize proximal contour or contact of restoration
- Centric occlusion, cusp fossa relationship; opposing teeth may be natural dentition, fixed bridge or any permanent replacement

p. 72 CIF manual
Class II  posterior proximal occlusal composite (slot preparation)

- At least one proximal surface primary caries no signs of previous excavation
- Radiographically or clinically extends to at least the DEJ
- Must be in proximal contact with sound enamel surface or permanently restored surface adjacent tooth
- No proximal lesion on adjacent tooth with breakdown that would jeopardize proximal contour or contact of restoration
- Centric occlusion, cusp fossa relationship; opposing teeth may be natural dentition, fixed bridge or any permanent replacement

(MORE)
Class II  posterior proximal
occlusal composite (slot preparation)

• The occlusal surface of the tooth HAS NO CARIES AND/OR PREVIOUS RESTORATION (that would include no sealant on occlusal) and does not require restoration.

p. 73 CIF manual
Selection of carious lesions/defective restorations

Class II - EXCLUSIONS

• EXCLUSION: teeth that have decalcification/fluorosis extending to the facial and lingual of areas selected to be restored or with labial veneers will not be accepted for treatment
• EXCLUSION: no occlusion on tooth; occlusion not cusp-fossa
• EXCLUSION: Teeth selected will not have mobility classification of Class III or higher
Classification radiographic carious lesions

- D0. No caries
  - D1. Caries lesion limited to the outer half of the enamel
  - D2. Caries extending into inner half of the enamel, but not to dentinoenamel junction
- D3. Caries limited to the outer half of the dentin
- D4. Caries involving the inner half of the dentin.

Only D3 and D4 lesions qualify for NERB
Calibration exercise
For each radiograph tooth (teeth) will be listed to diagnose as acceptable or unacceptable

Each radiograph will be listed with a Dx # for your answer key. Using pen and paper for each radiograph with tooth numbers note the tooth surfaces that you would diagnose as acceptable based upon a radiographic diagnosis. In some cases teeth are listed that do not have acceptable lesions.
To be acceptable must follow the NERB criteria of being to the DEJ
Radiographic diagnosis is an art not a science. Disagreement with the assessments in this calibration exercise would not be unusual. Please share with Dr. Strassler any of the answers presented that you disagree with.

Thank you for your participation!
Dx #1

#29 unacceptable
#30 unacceptable

See next slide for enlarged view
Neither are to the DEJ as per NERB criteria
Caries must extend radiographically at least to the DEJ or be evidently of equivalent depth clinically or by transillumination.
BW unacceptable because of distal overlap, new BW must be taken and hope the caries looks the same on the new BW
Caries past the DEJ but need to take a new BW to eliminate the distal overlap and make sure it is not an MOD

Distal caries?
Dx 3

#19 unacceptable
#20-D acceptable
#20-D caries to DEJ
Dx 4
#3
#4
#5
Dx 4

#3 unacceptable
#4-D unacceptable
#5-D acceptable
#4-halway in enamel
#5-D to the DEJ
Dx 5  #4  
#29  
#30
Dx 5

#4 unacceptable
#29 unacceptable
#30-M acceptable
#30-M \(\frac{3}{4}\) through enamel
#29-D \(\frac{1}{2}\) through enamel
Can’t diagnose - BW digitally overprocessed too much noise on the image - see next slide for correct image.
Correct digital portrayal of this BW note the differences in appearance
Dx 5

#3-M acceptable
#4-D acceptable (flip a coin)
#5-D acceptable (flip a coin)
#29 unacceptable
#30 unacceptable

See next slide for enlarged #3-5
#4-D; #5-D to the DEJ
Need new BW to show mesial Surface of #5
Dx 6    #13-D acceptable
Dx 7

#12 unacceptable
#13-D acceptable
#14 unacceptable
#20 unacceptable
Dx 8

#2-M acceptable
#3-MOD acceptable
#29-MOD acceptable

if there is an existing restoration all restorative material must be removed
Dx 9    #4-M acceptable
Dx 10  #4
overprocessed image
Dx 10 digital image reverted not overprocessed #4-D acceptable (to the DEJ) need to show more of mesial of #5 on BW
Dx 11  #19 unacceptable
No opposing occlusion; BW has mesial and distal overlap and can’t diagnose
With overlap removed #19
No radiographic evidence of proximal caries
Dx 12  #4 not diagnostic due to overlap of distal- needs new BW (next slide for new BW)
Dx 12- new BW no overlap
#4 unacceptable
Dx 13  #4  #29
Dx 13  #4 unacceptable
#29 unacceptable
THINK. COMMUNICATE. DO.