AIOBIO

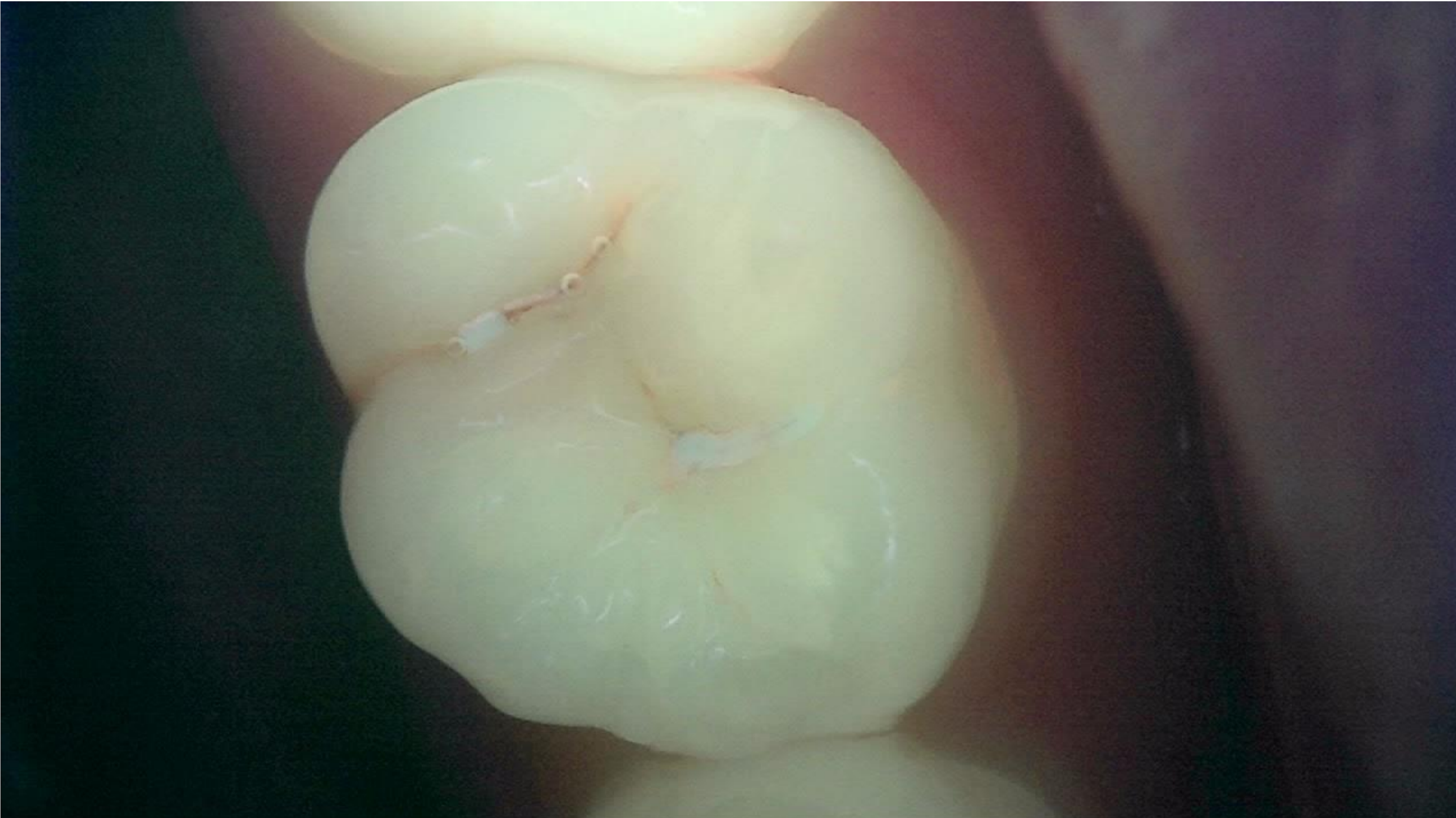
Dental Healthcare Service

Qraypen - C

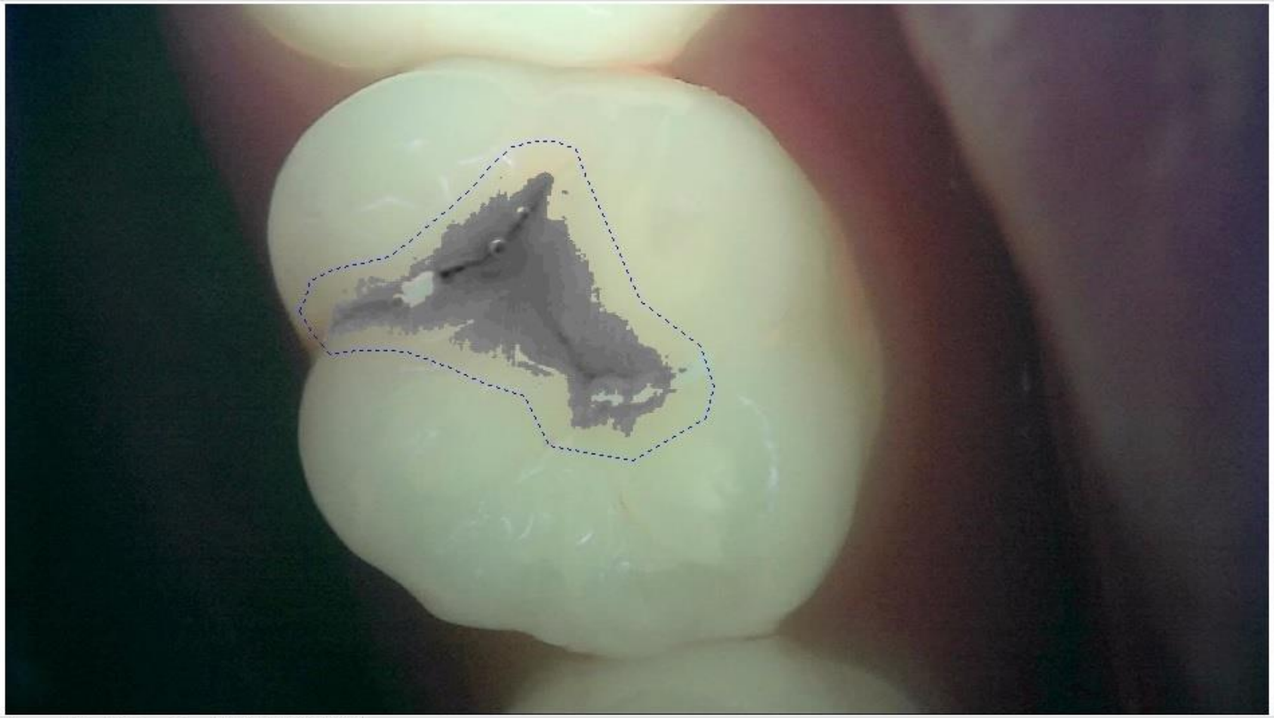
Caries

Craze line

Case
Resin Filling



Q-Ray v 1.34: All-In_One-Bio



Images | Simple Hygiene Score | White Spot Analysis

Patient: 34010804

2020-08-14

Send

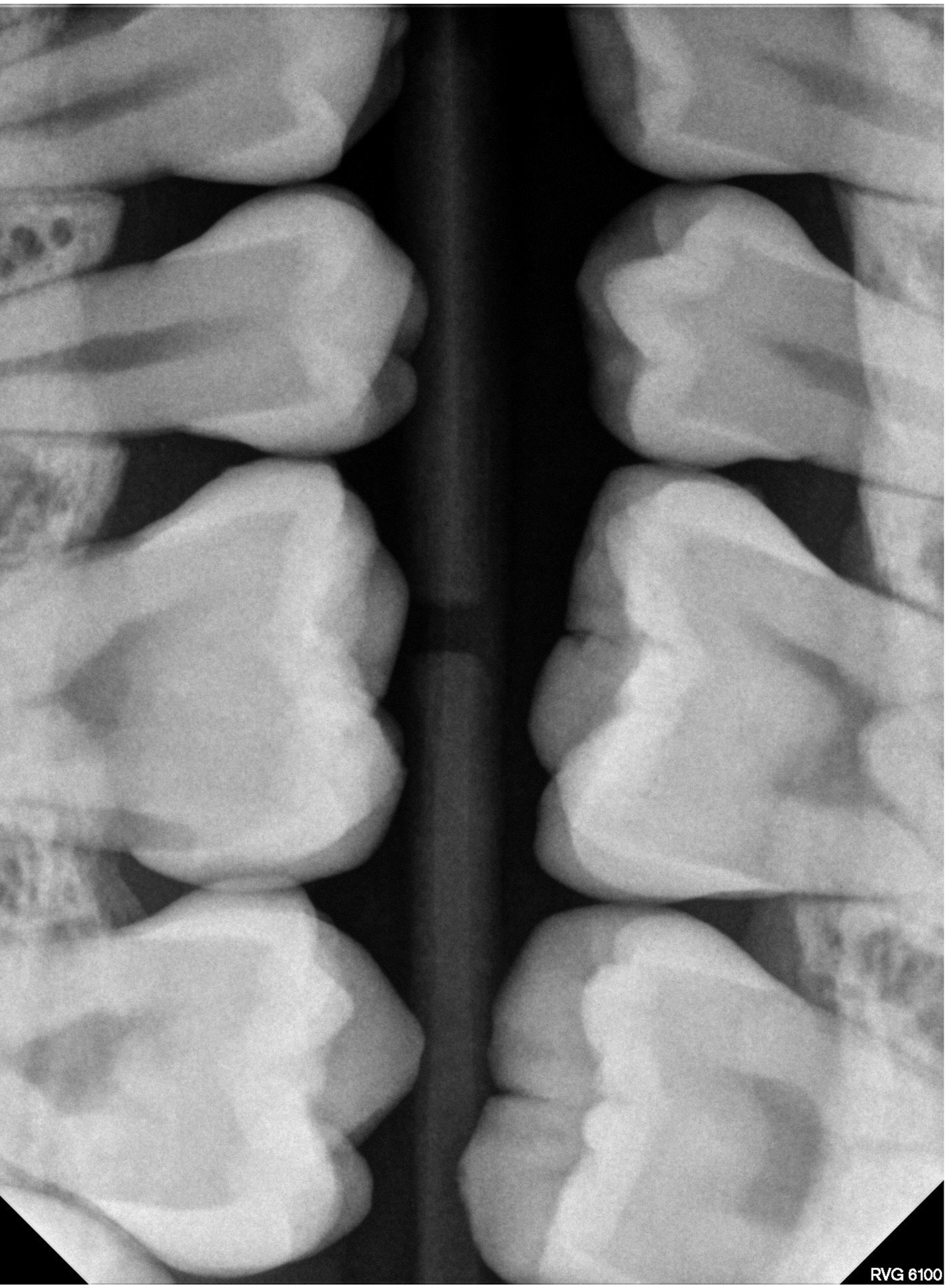
Patients

Patient | Results | QLF-D settings | Updates available | Options

Created on	2020-08-14 14:14:08
Calculated on	2020-08-14 14:19:28
Contour	1
Simple Hygiene Score	-
Area ΔR>30%	-
Area ΔR>120%	-
Tooth Area	-
ΔF max	-35.7 [%]
ΔF Average	-10.4 [%]
ΔQ	-194570 [%px]
White Spot Area	18688 [px²]
White Spot ΔR	23 [%]
White Spot ΔR Max	0 [%]
White Spot ΔR Area	24 [px]

검색하려면 여기에 입력하십시오.

오후 2:21
2020-08-14


RVG 6100

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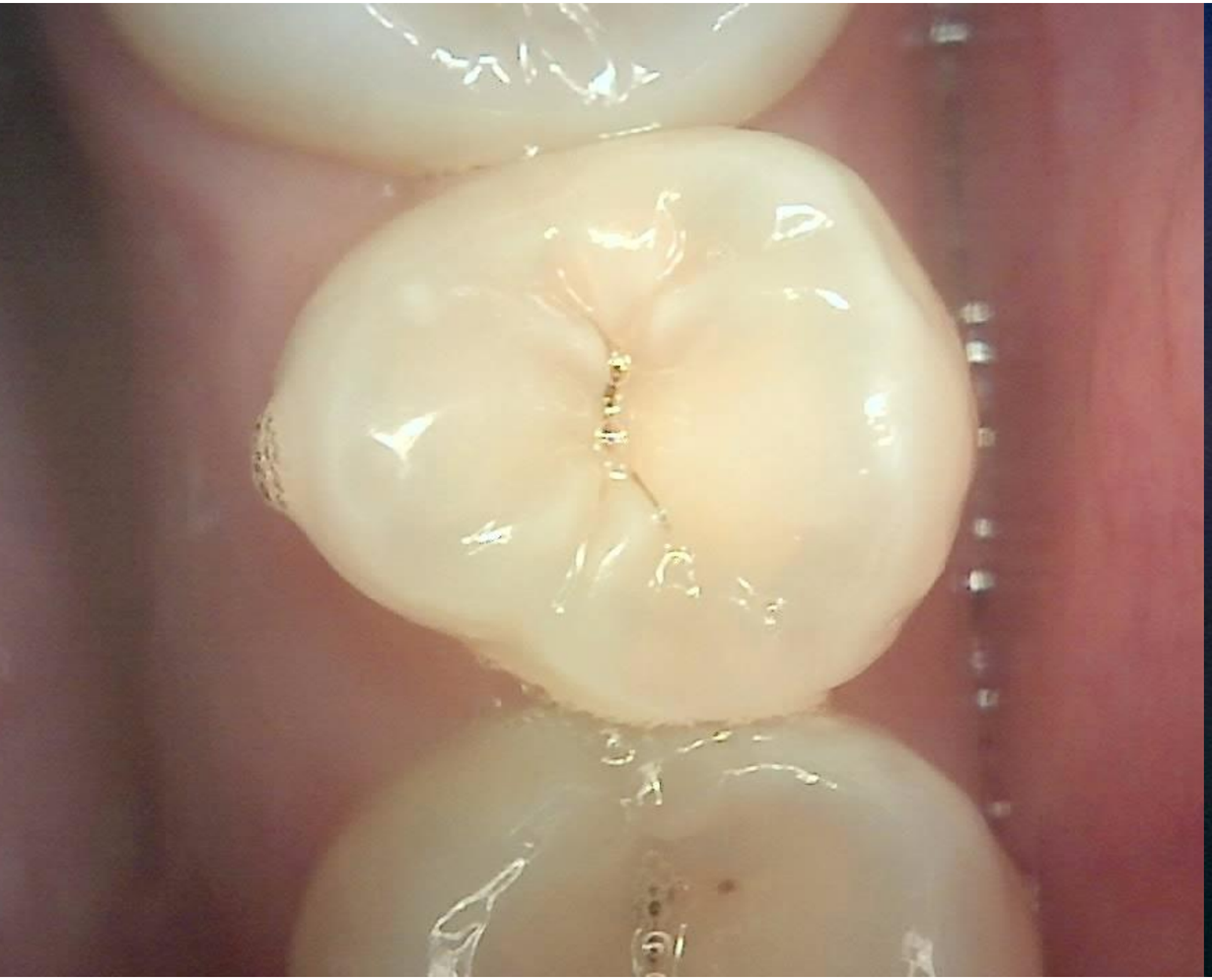

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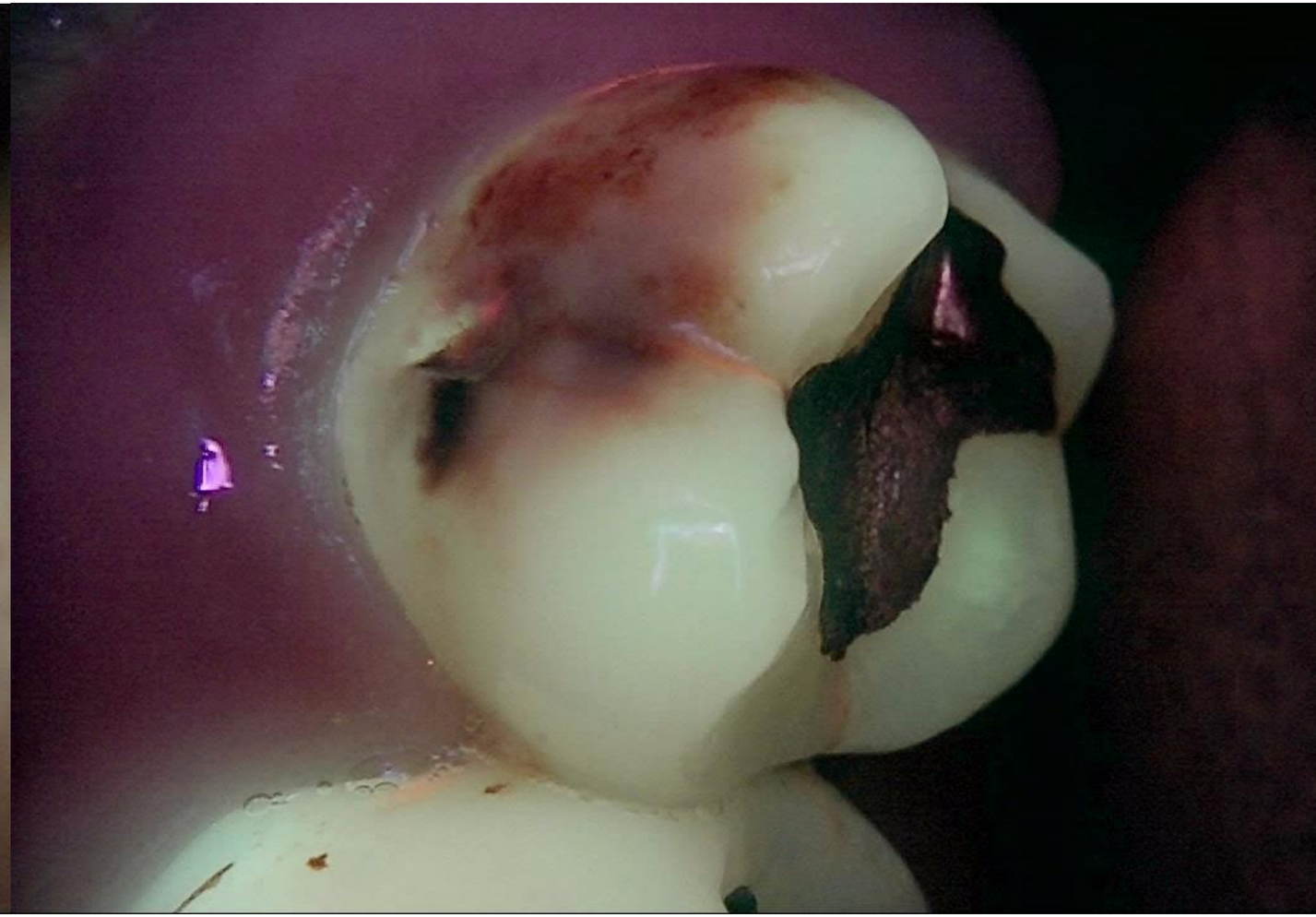

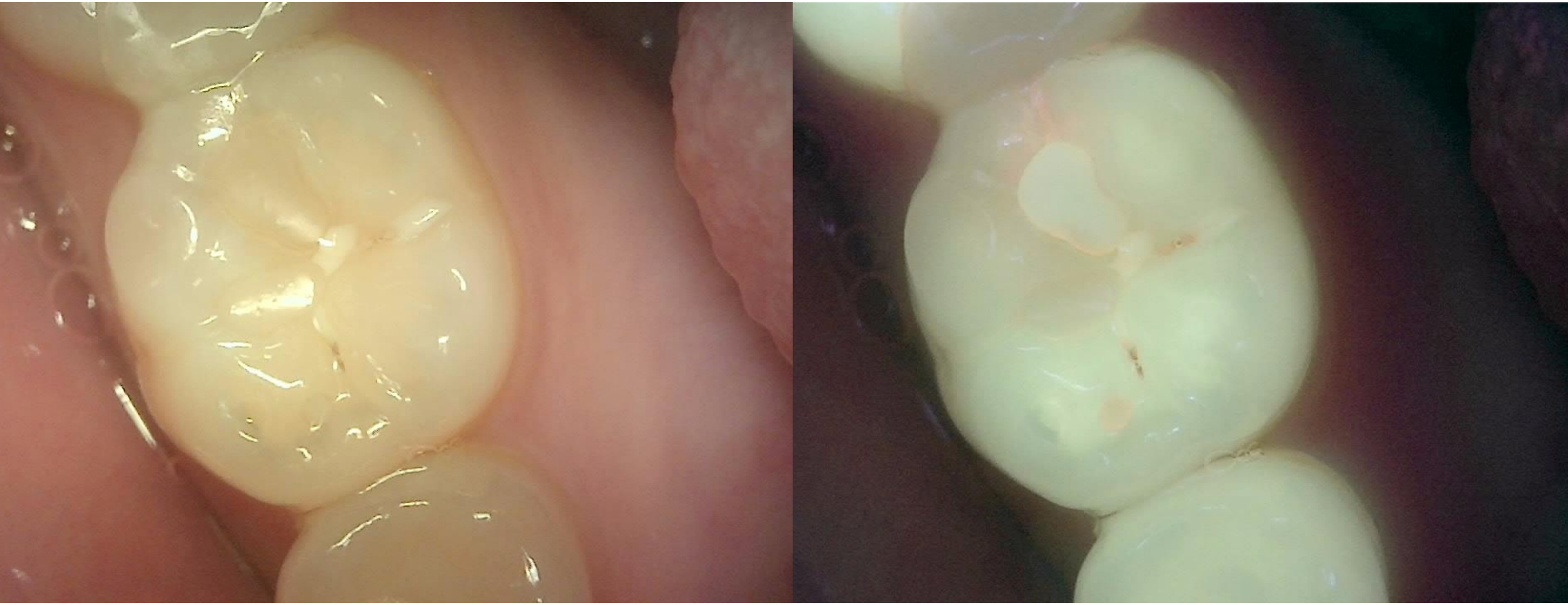

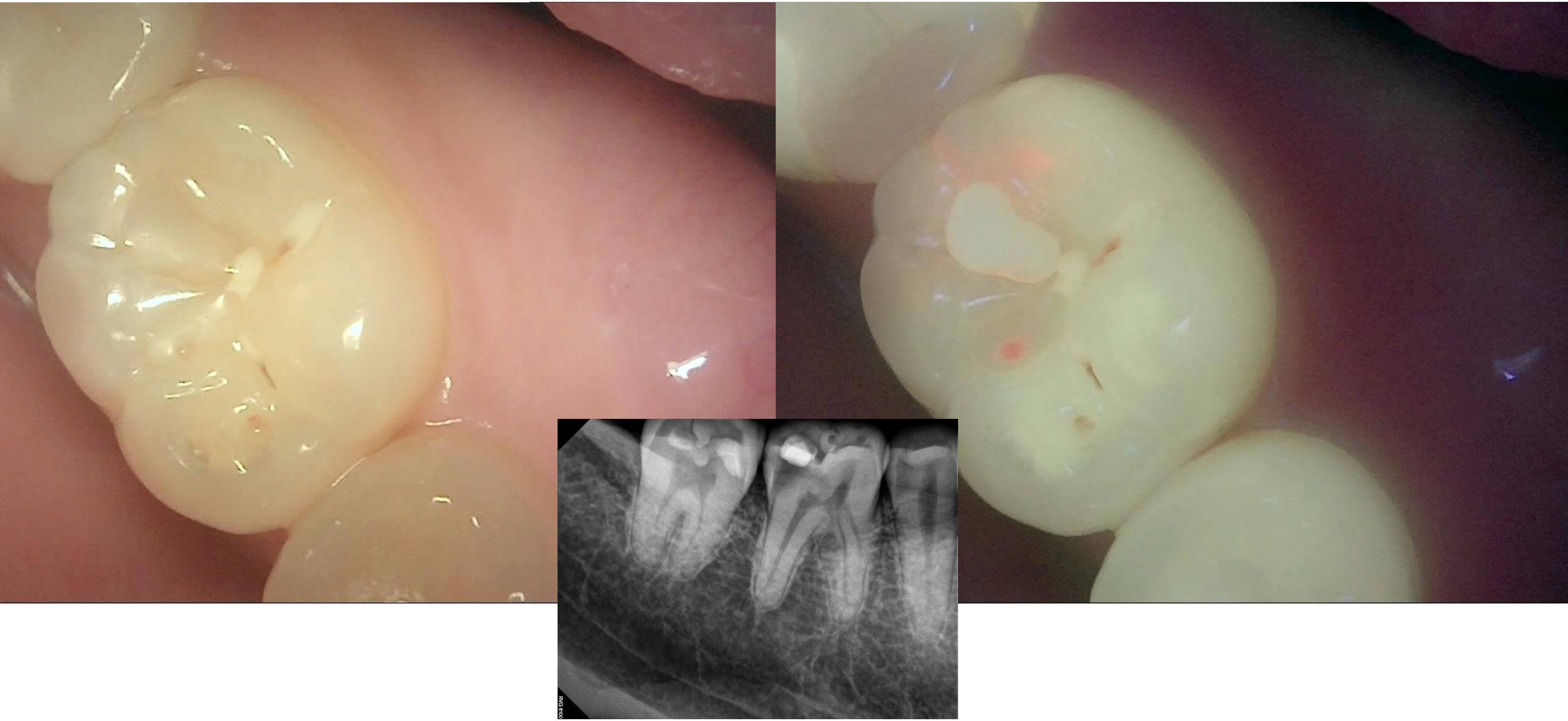

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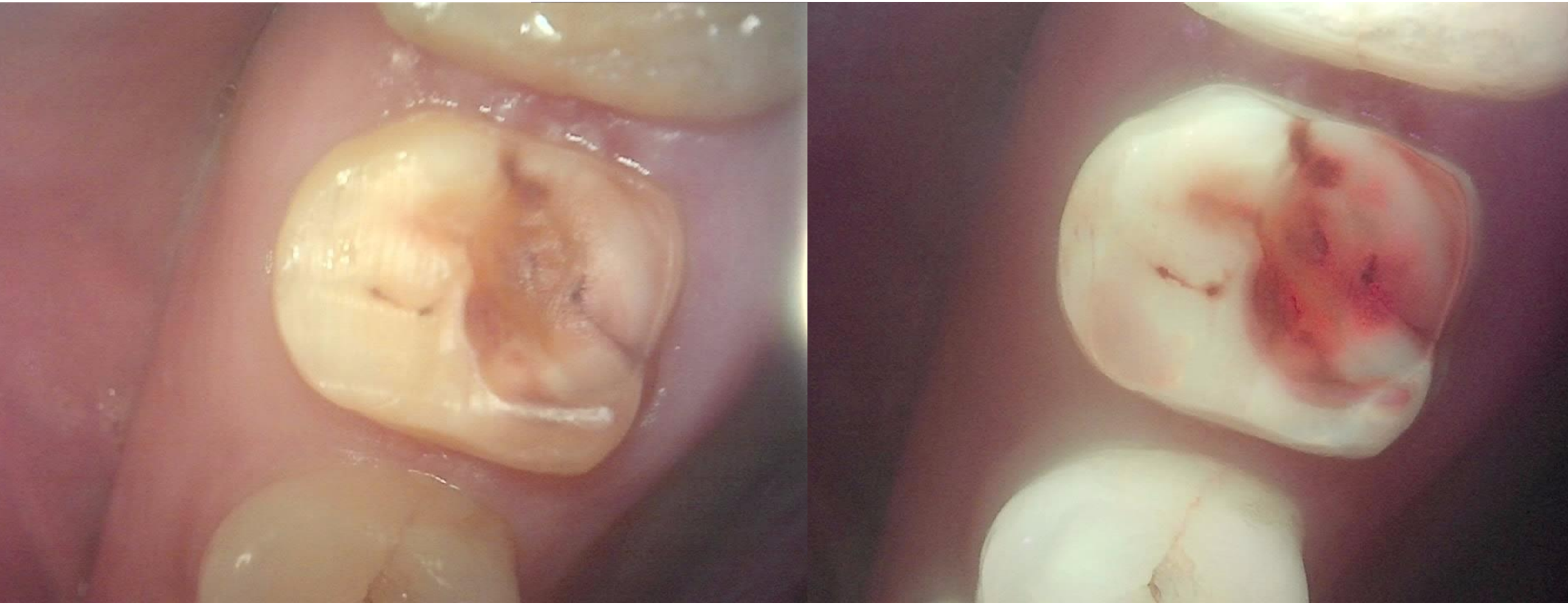
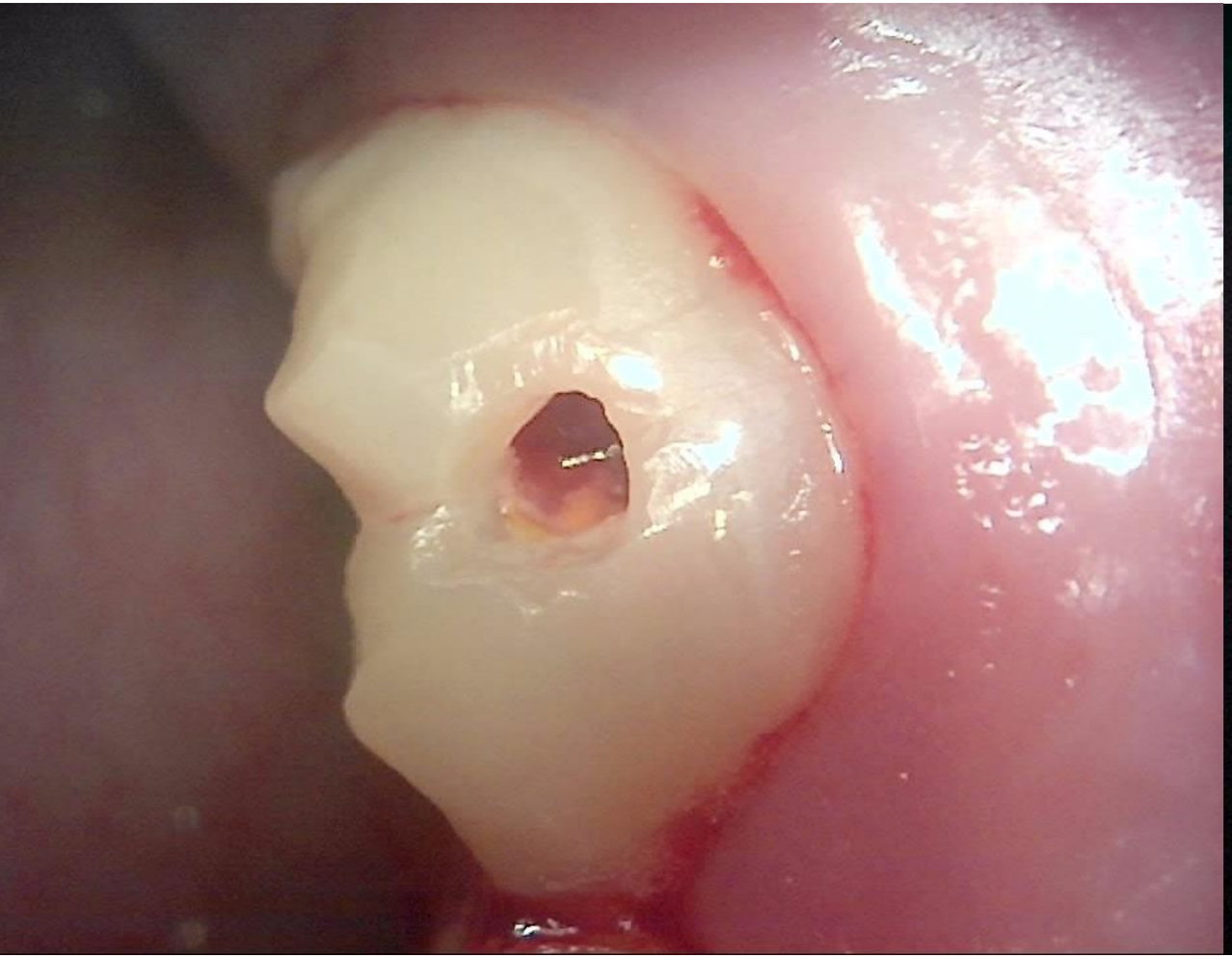
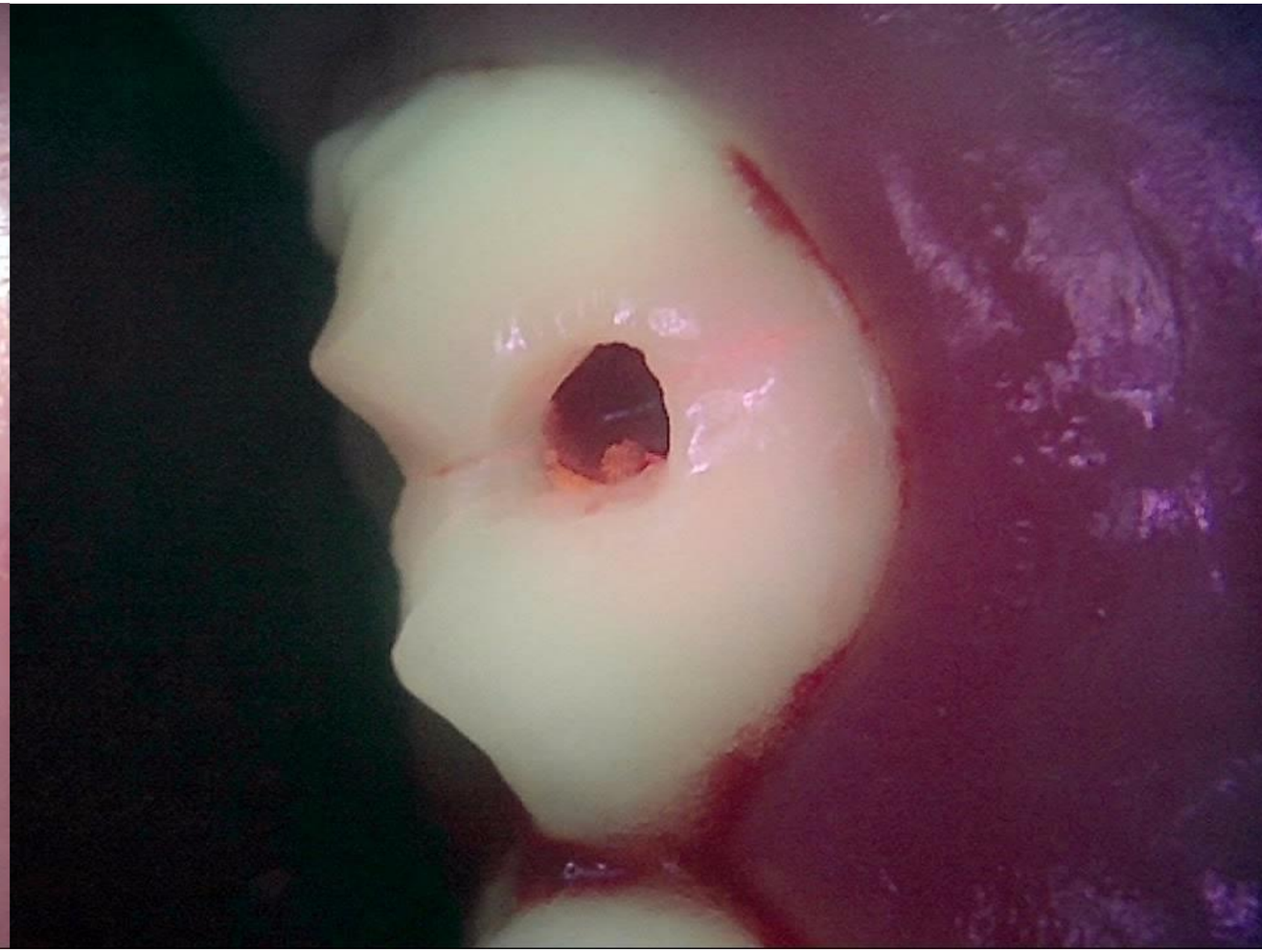
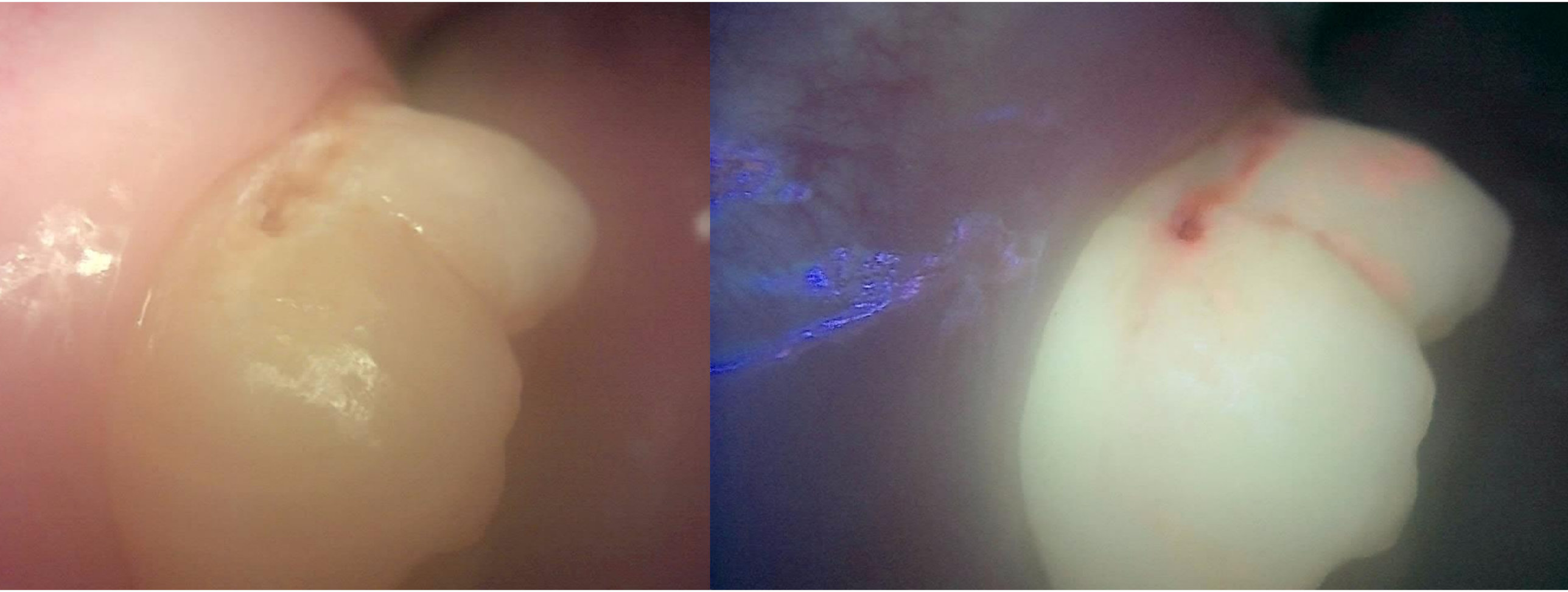
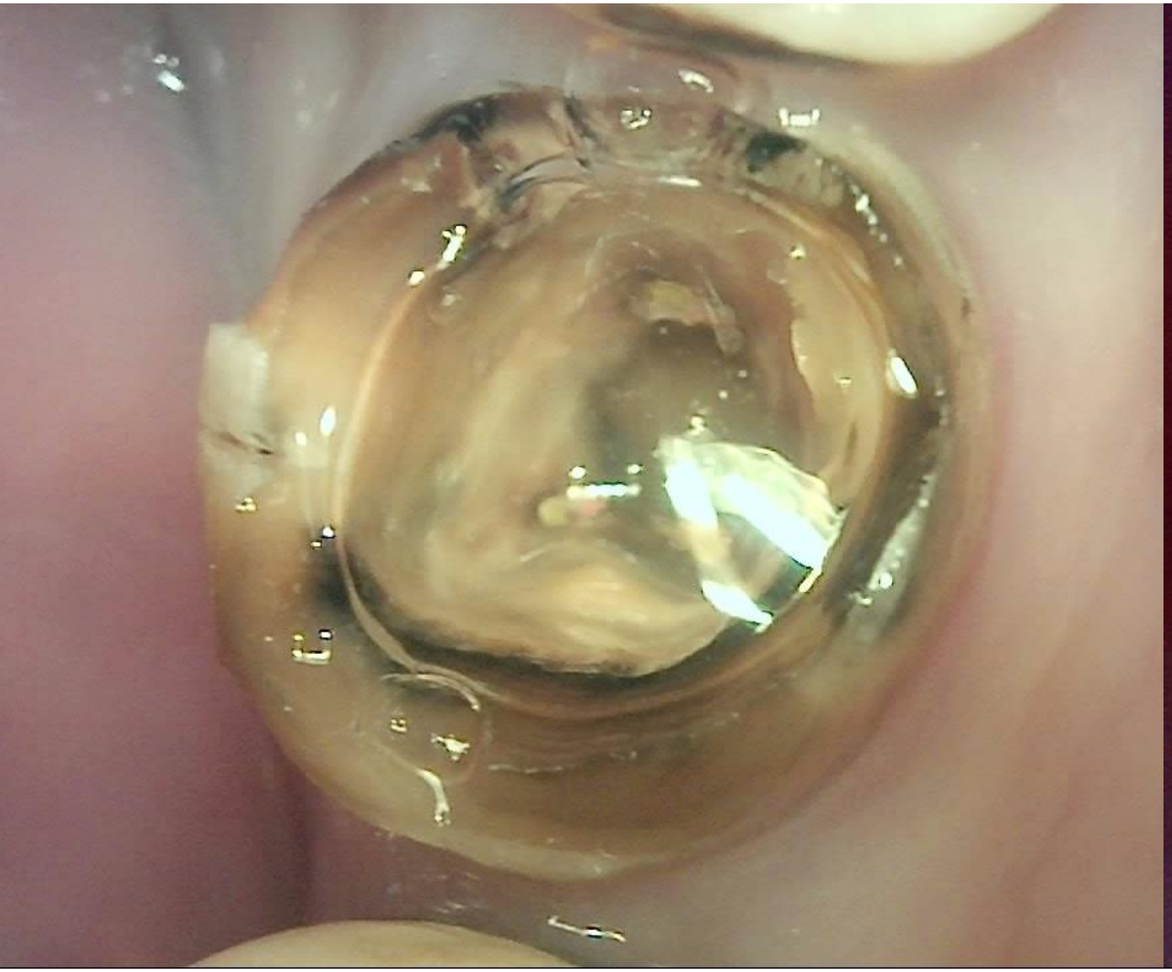
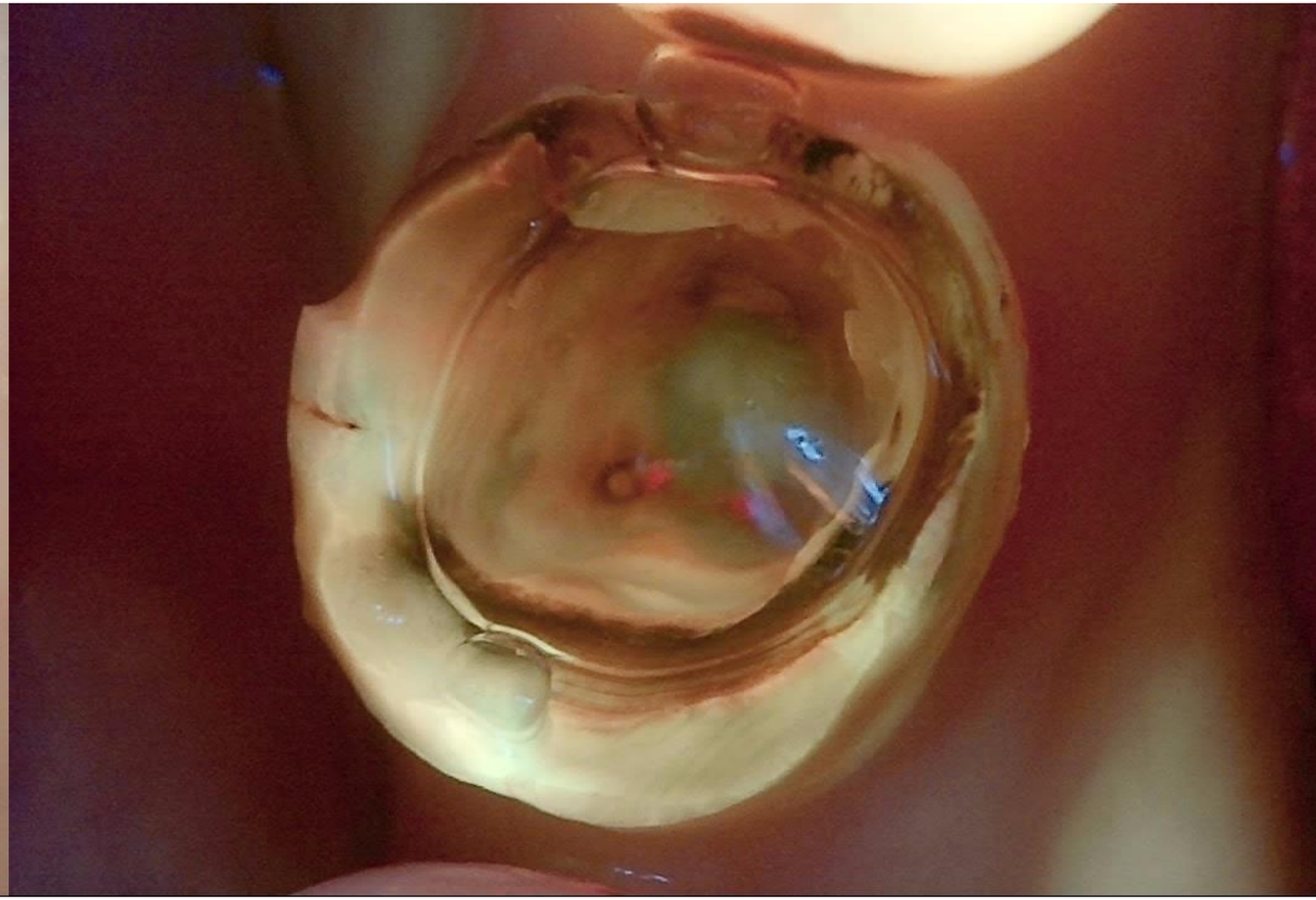


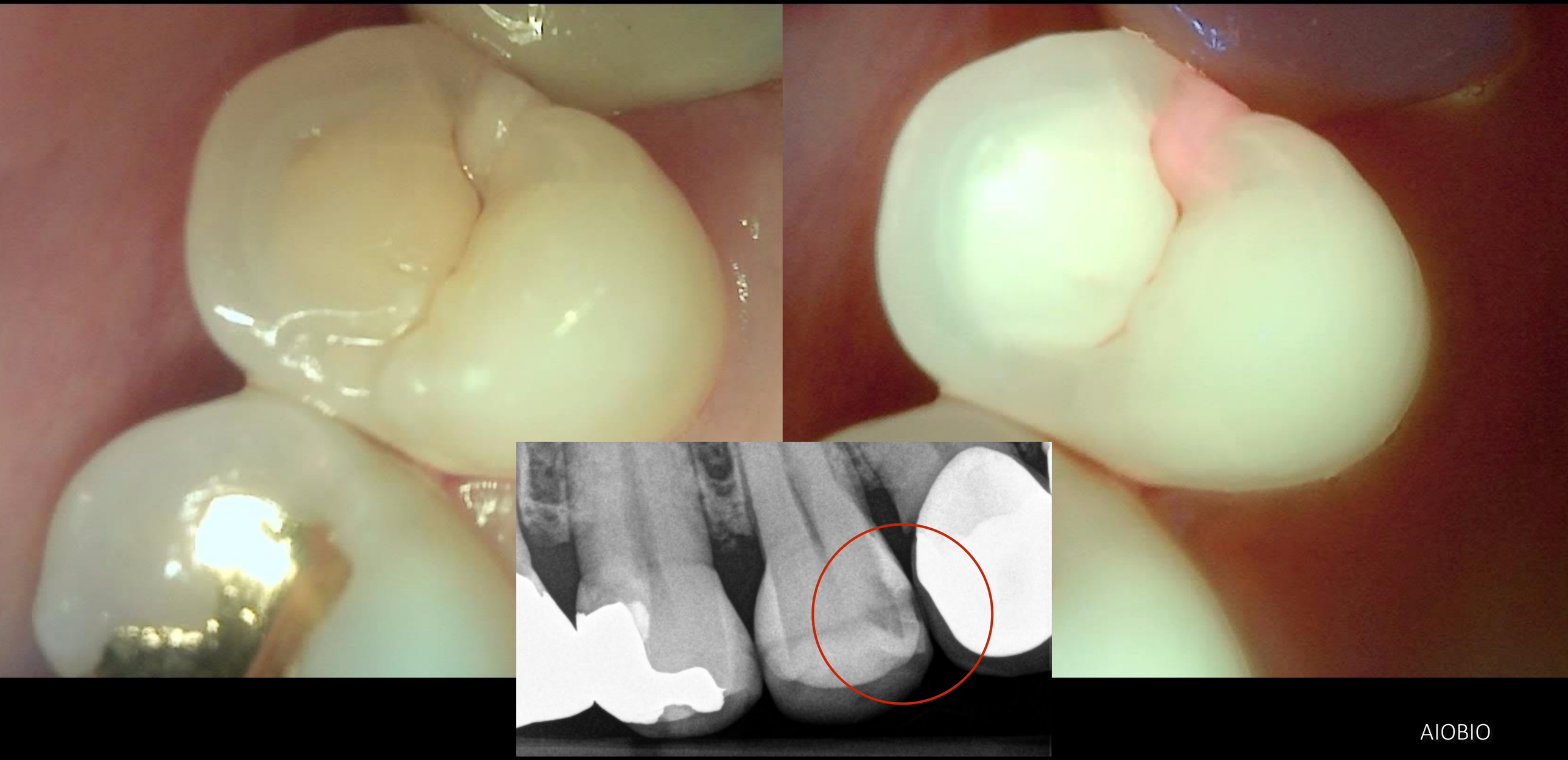












AIOBIO

5Y, M #84

Photo

Q-ray

X-ray

AIOBIO

4Y, M #54

Photo

Q-ray

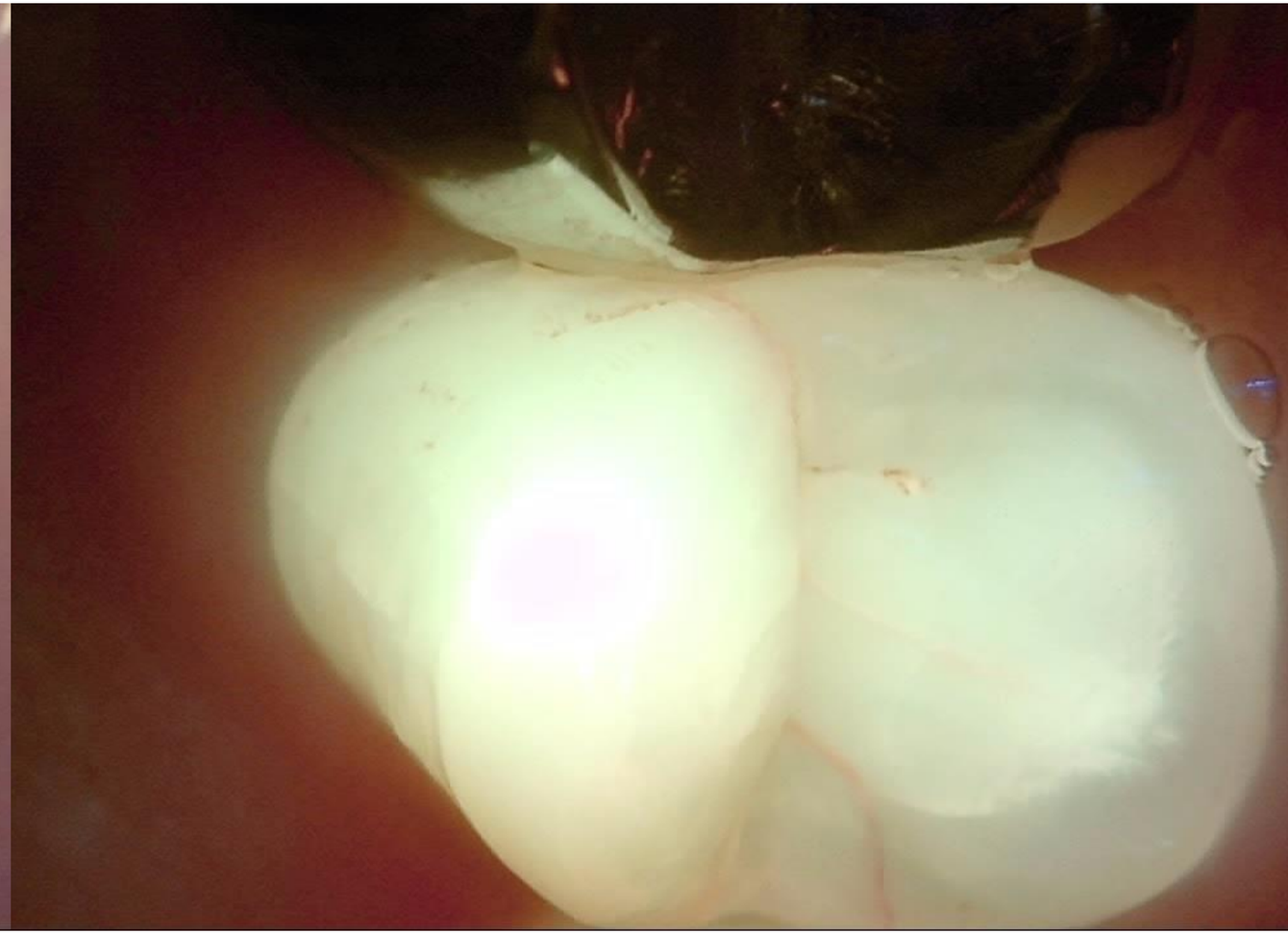
X-ray

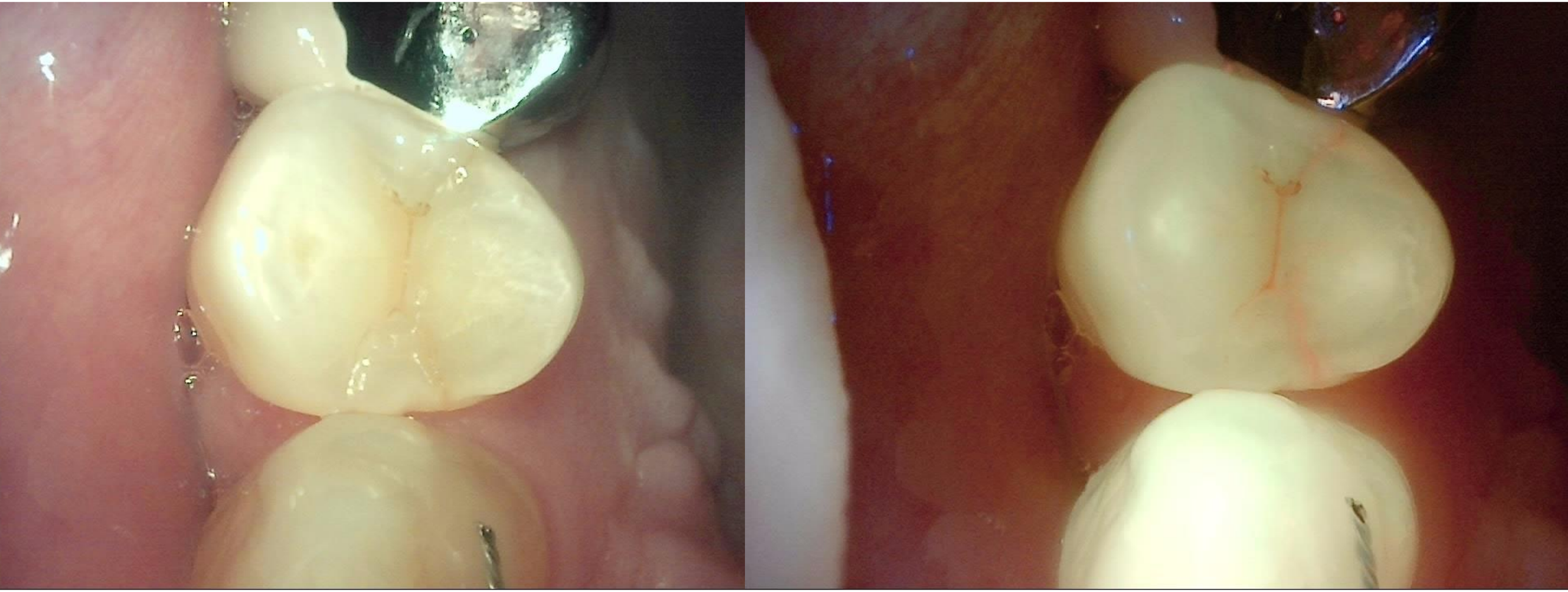
AIOBIO

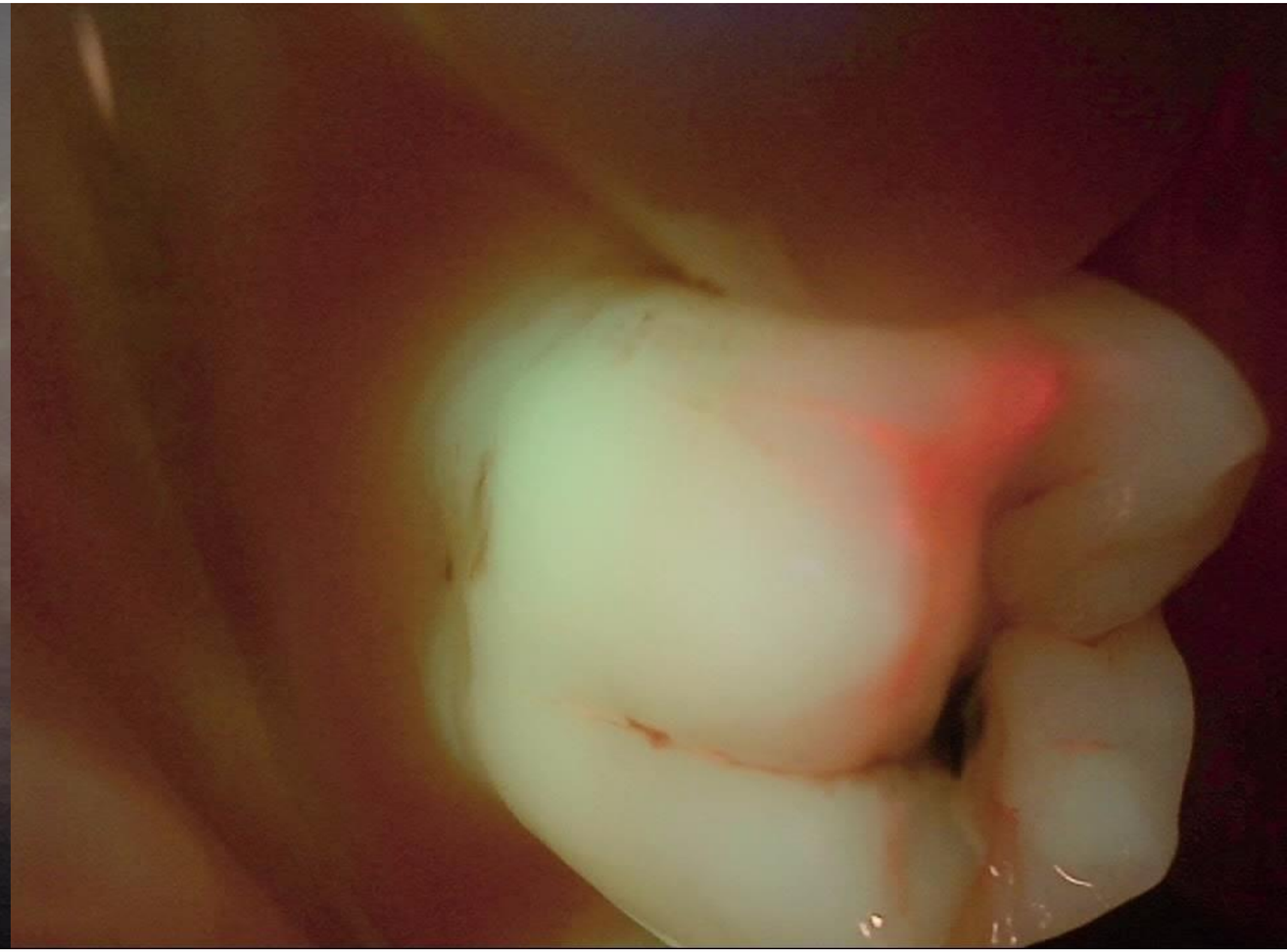
Qraypen - C

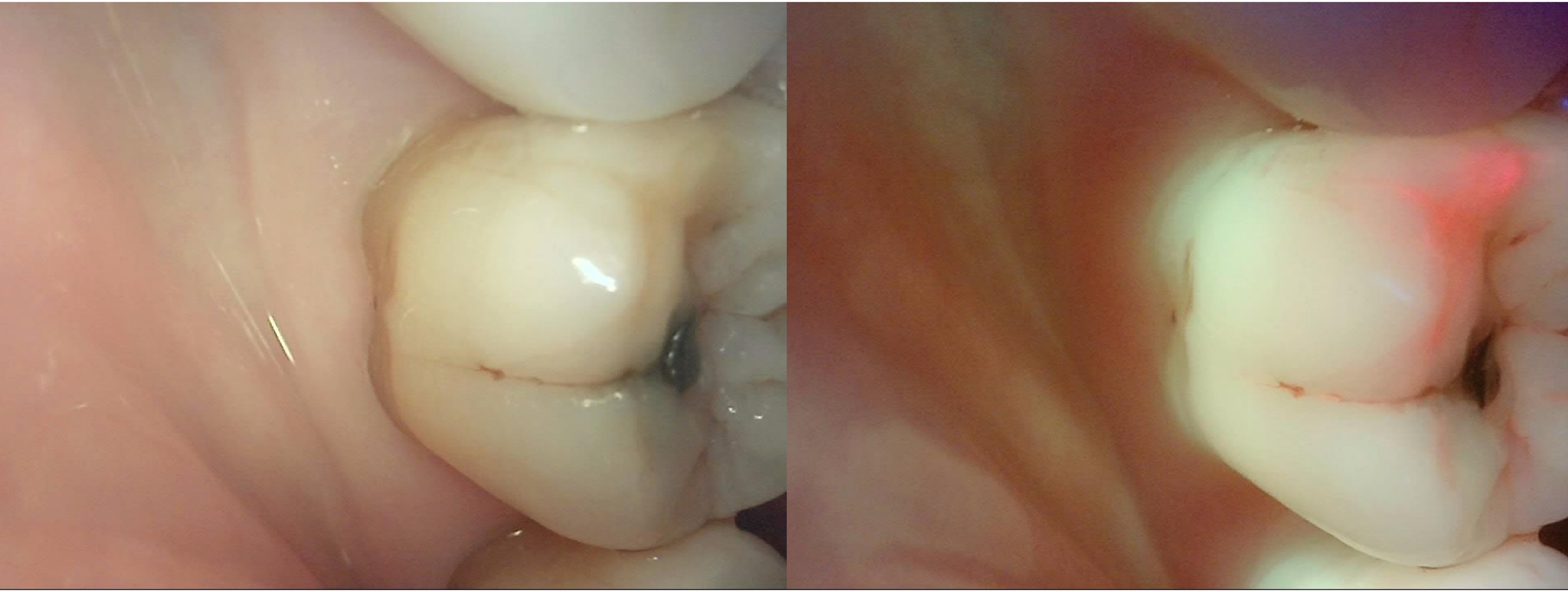
Caries

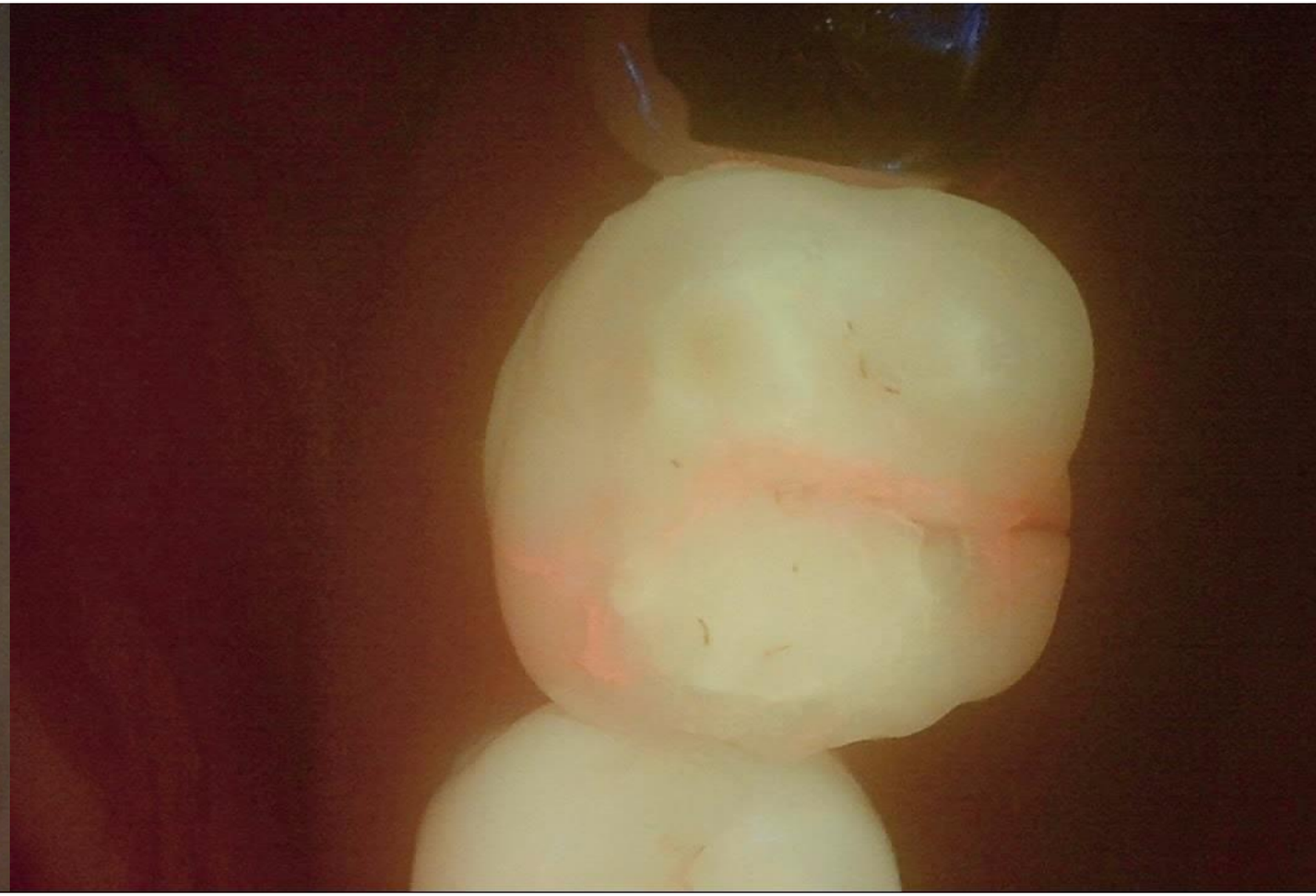
Craze line

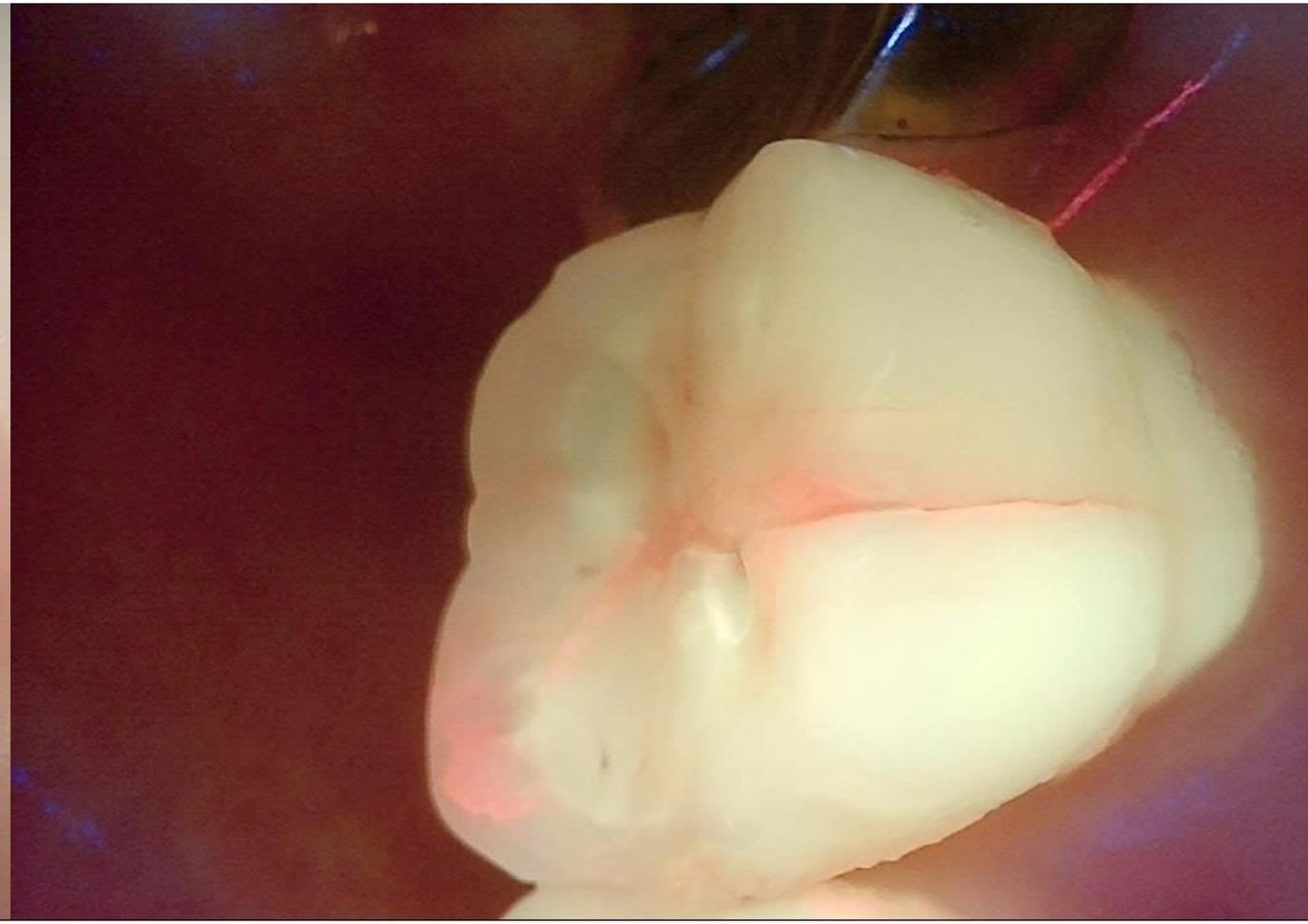


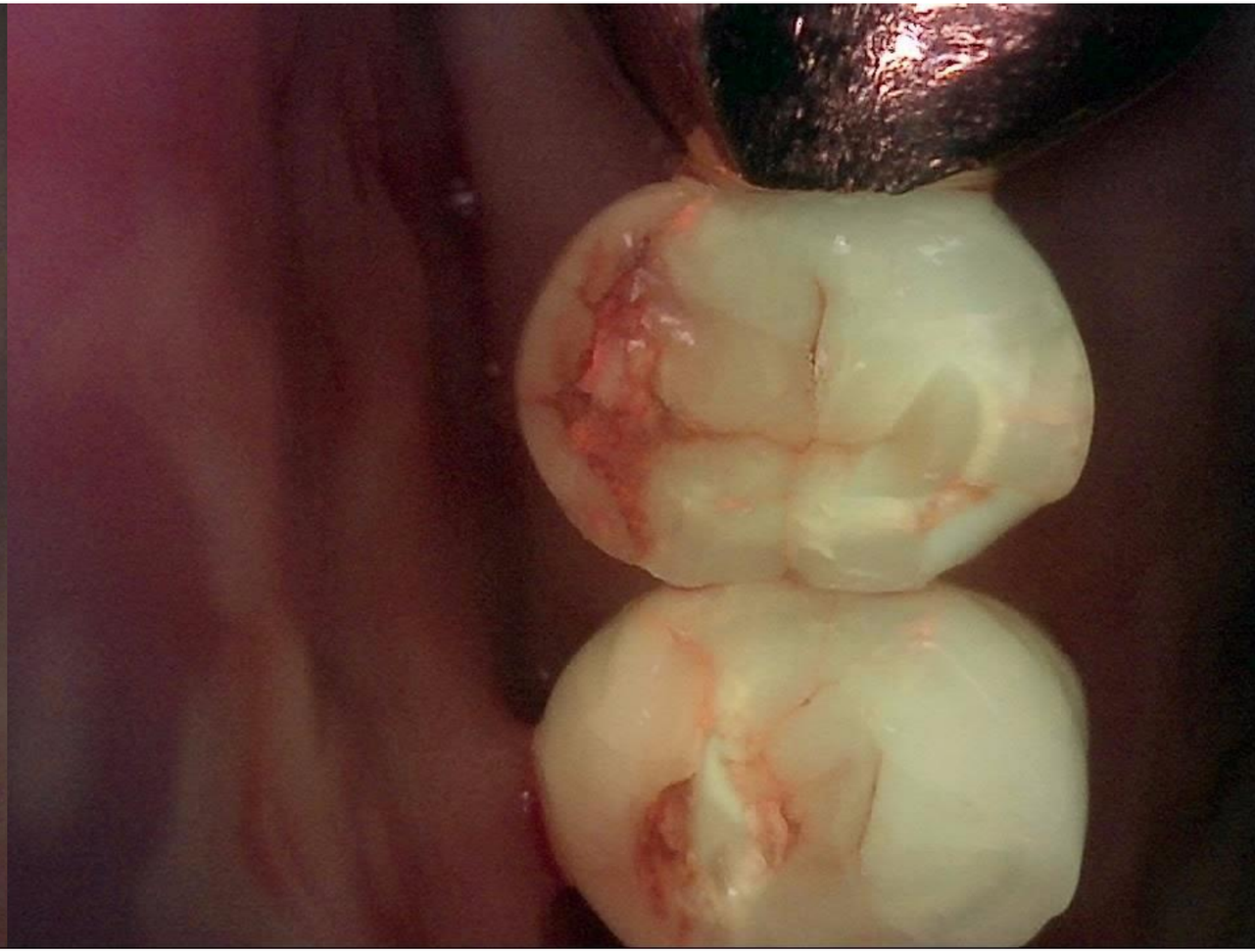


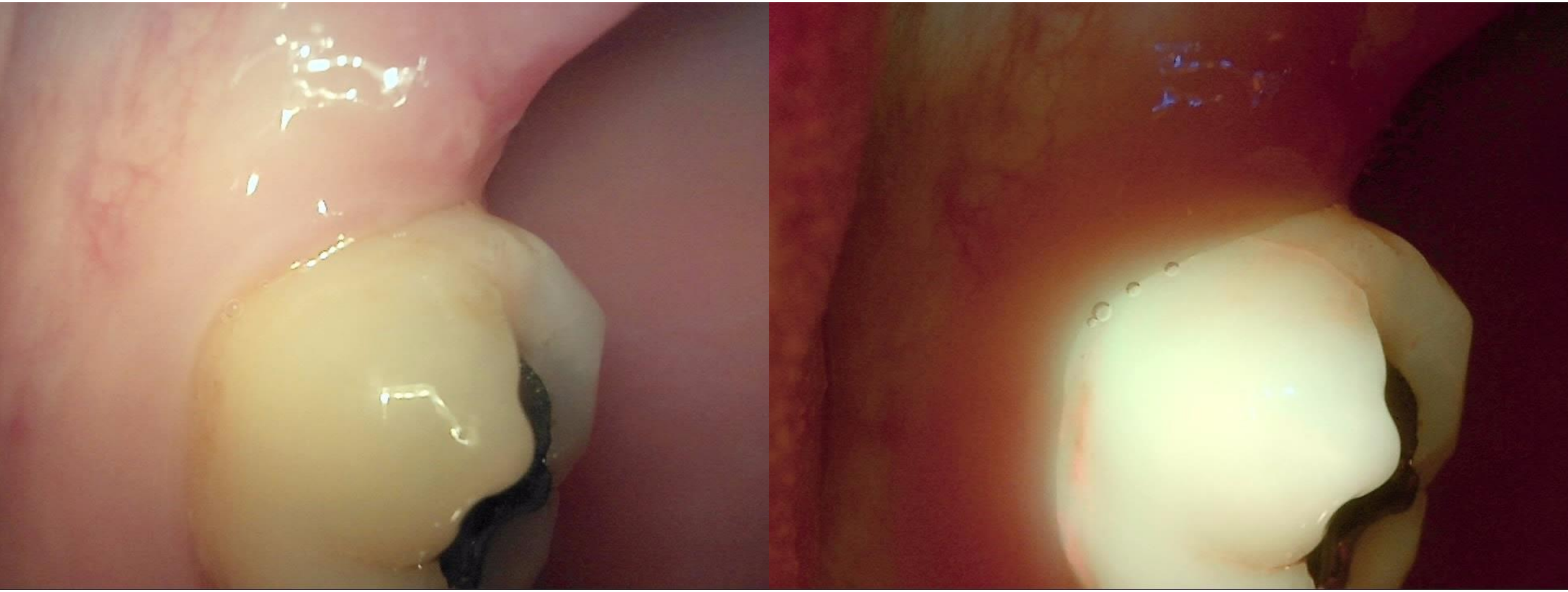


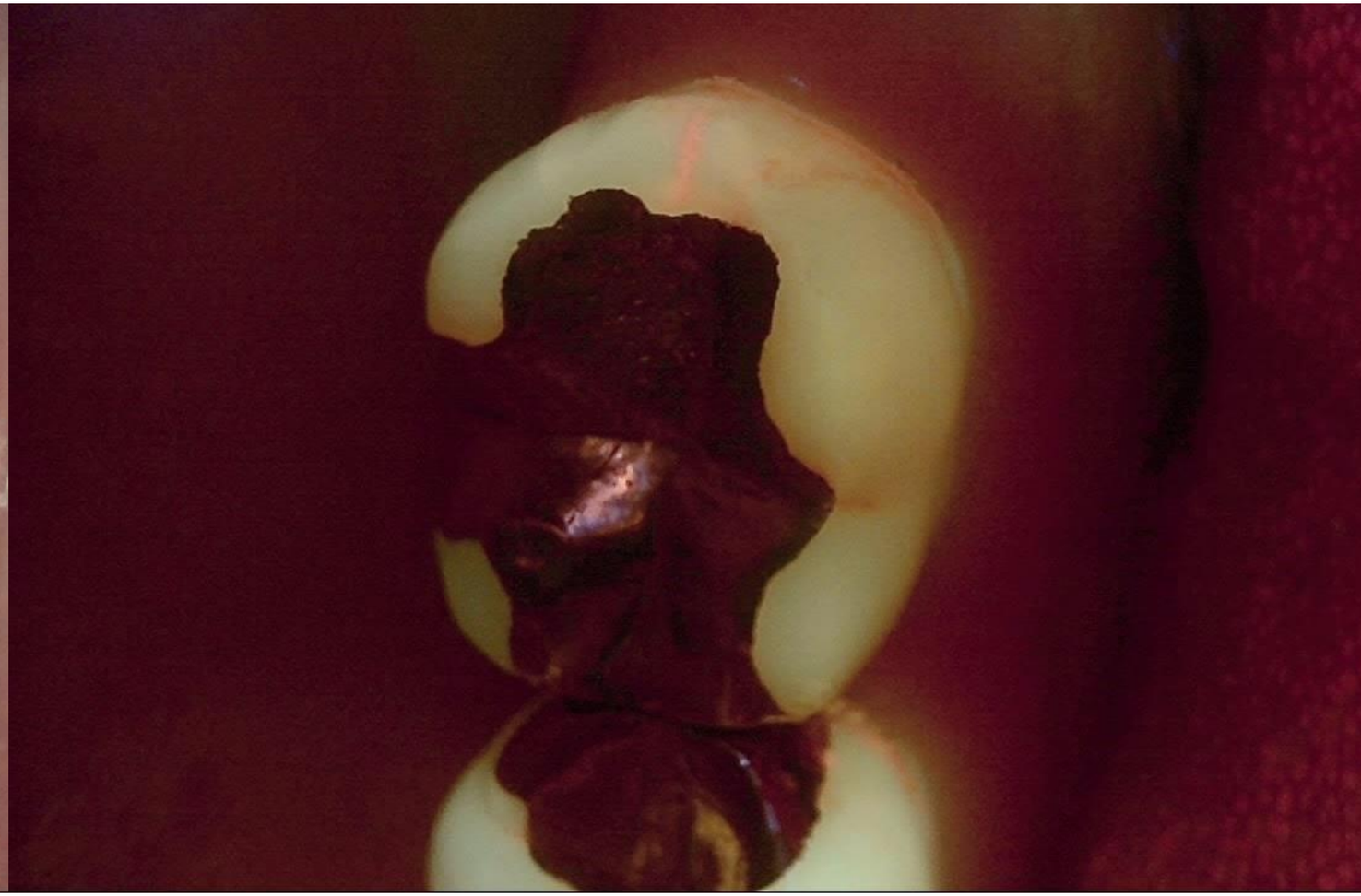


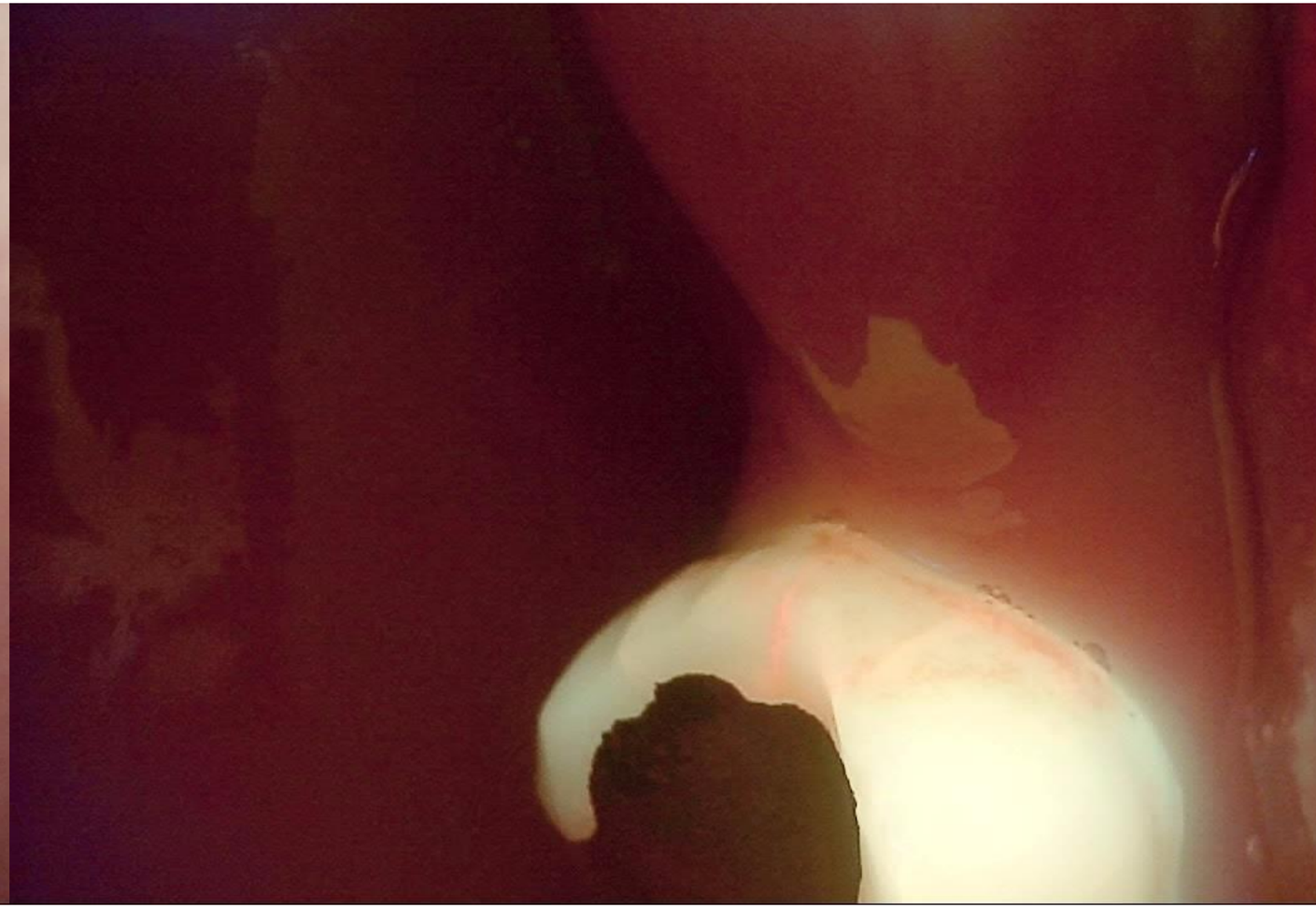


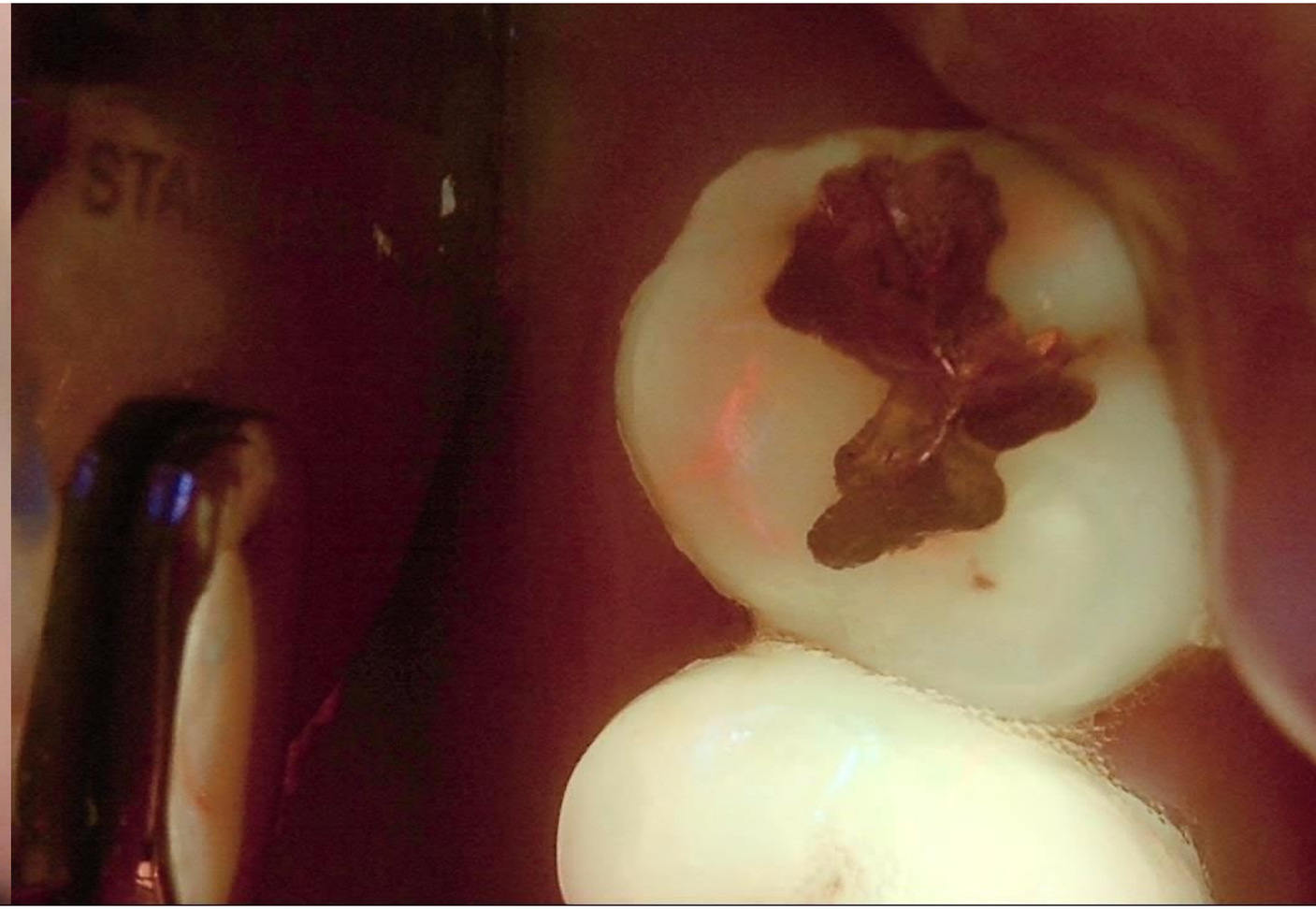


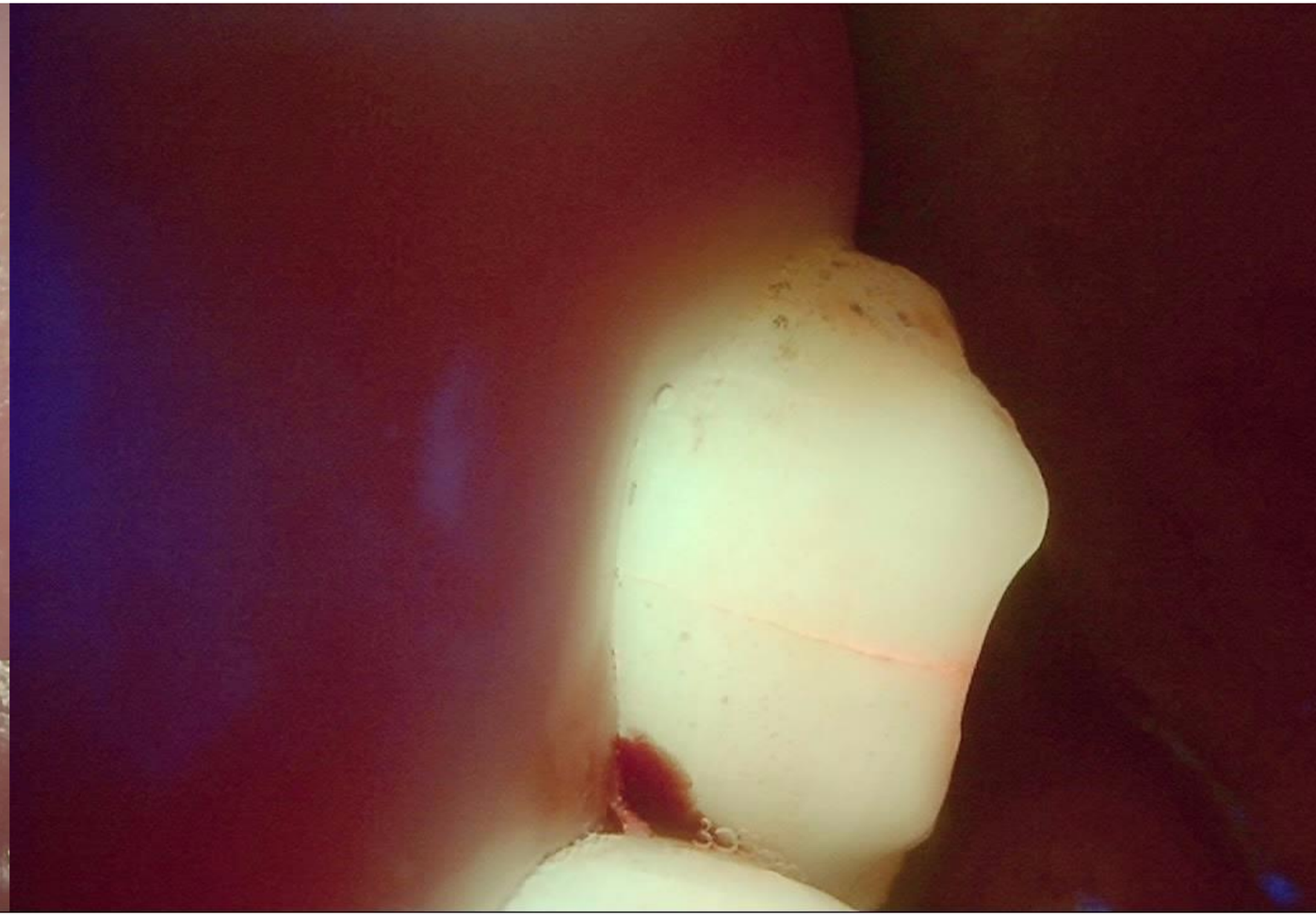


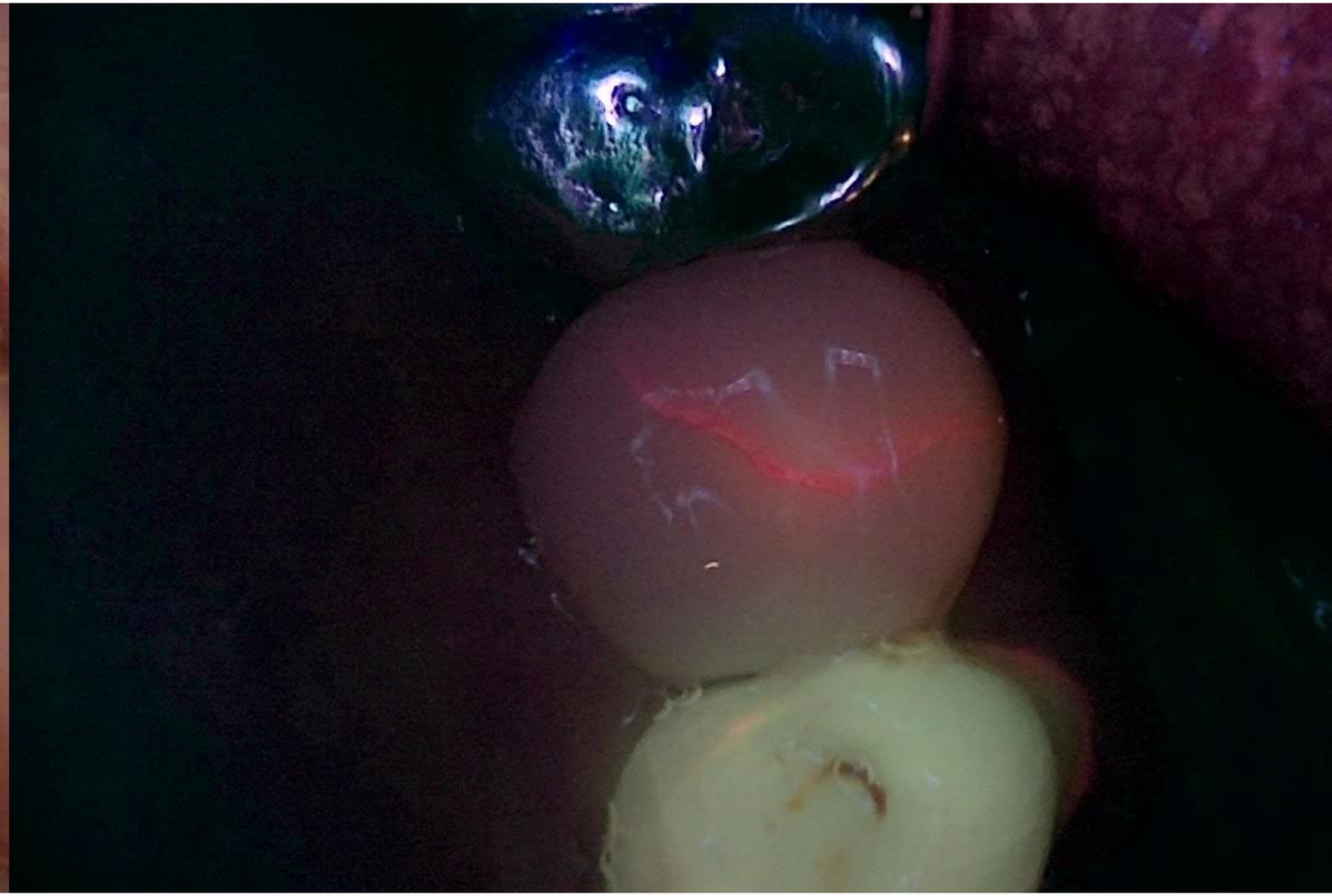


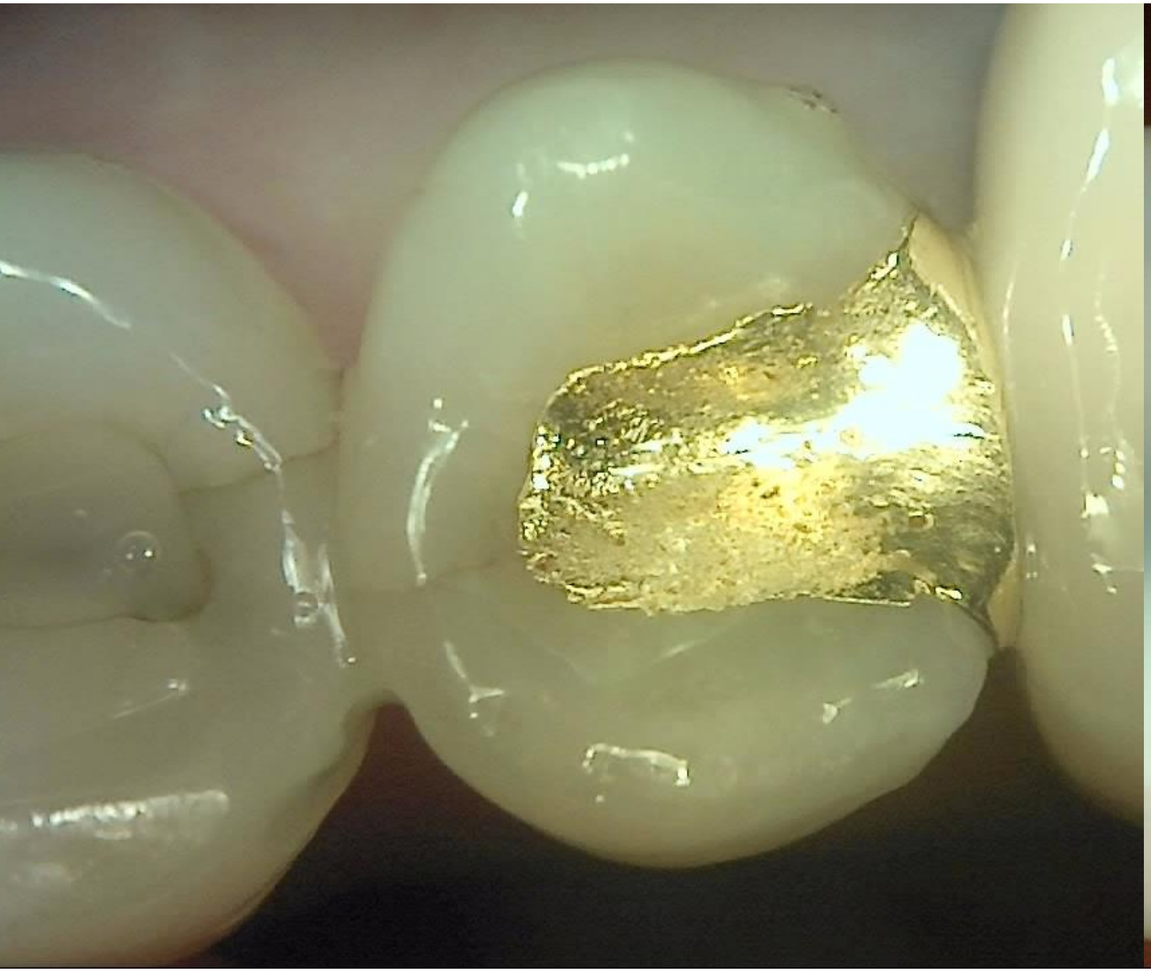


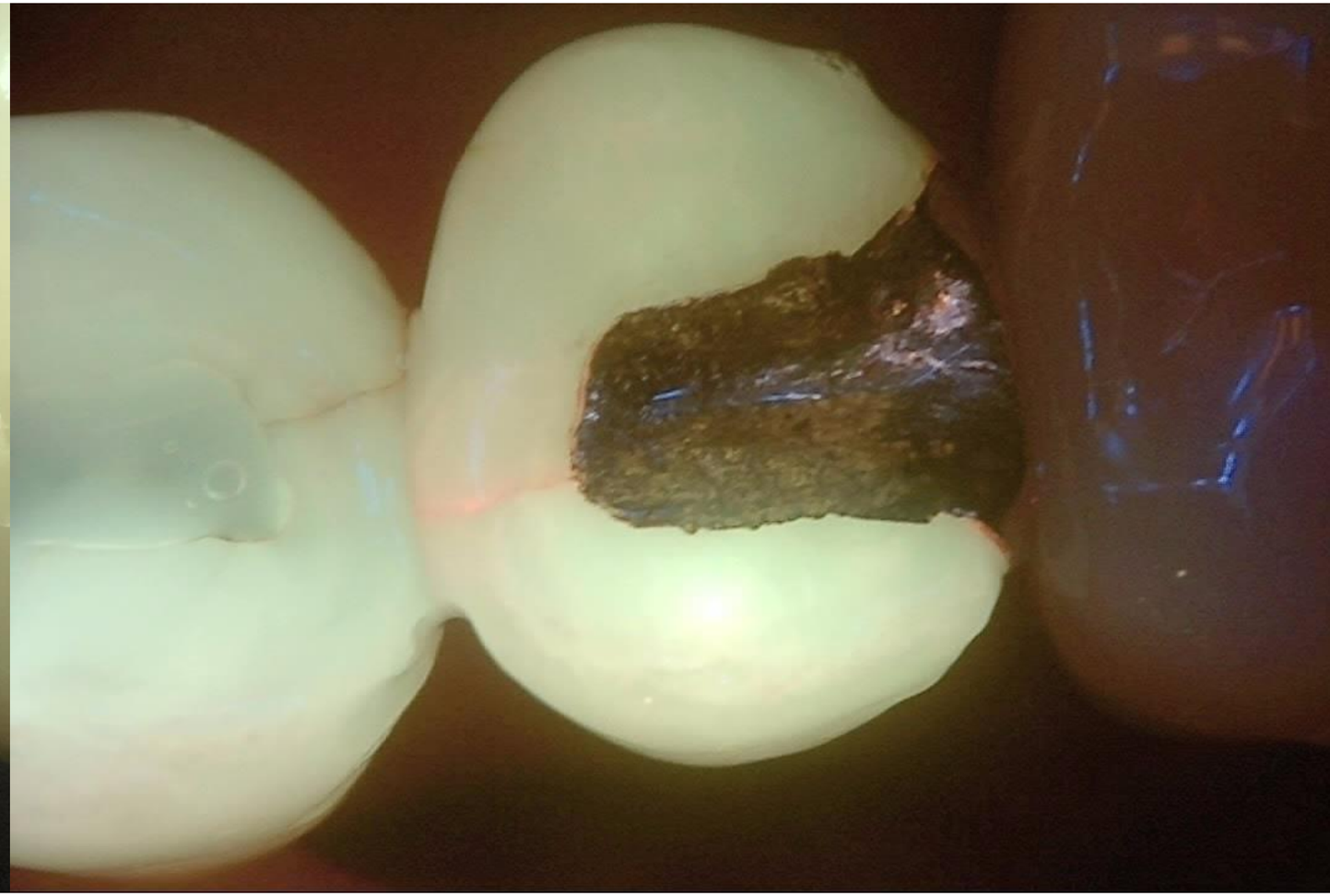


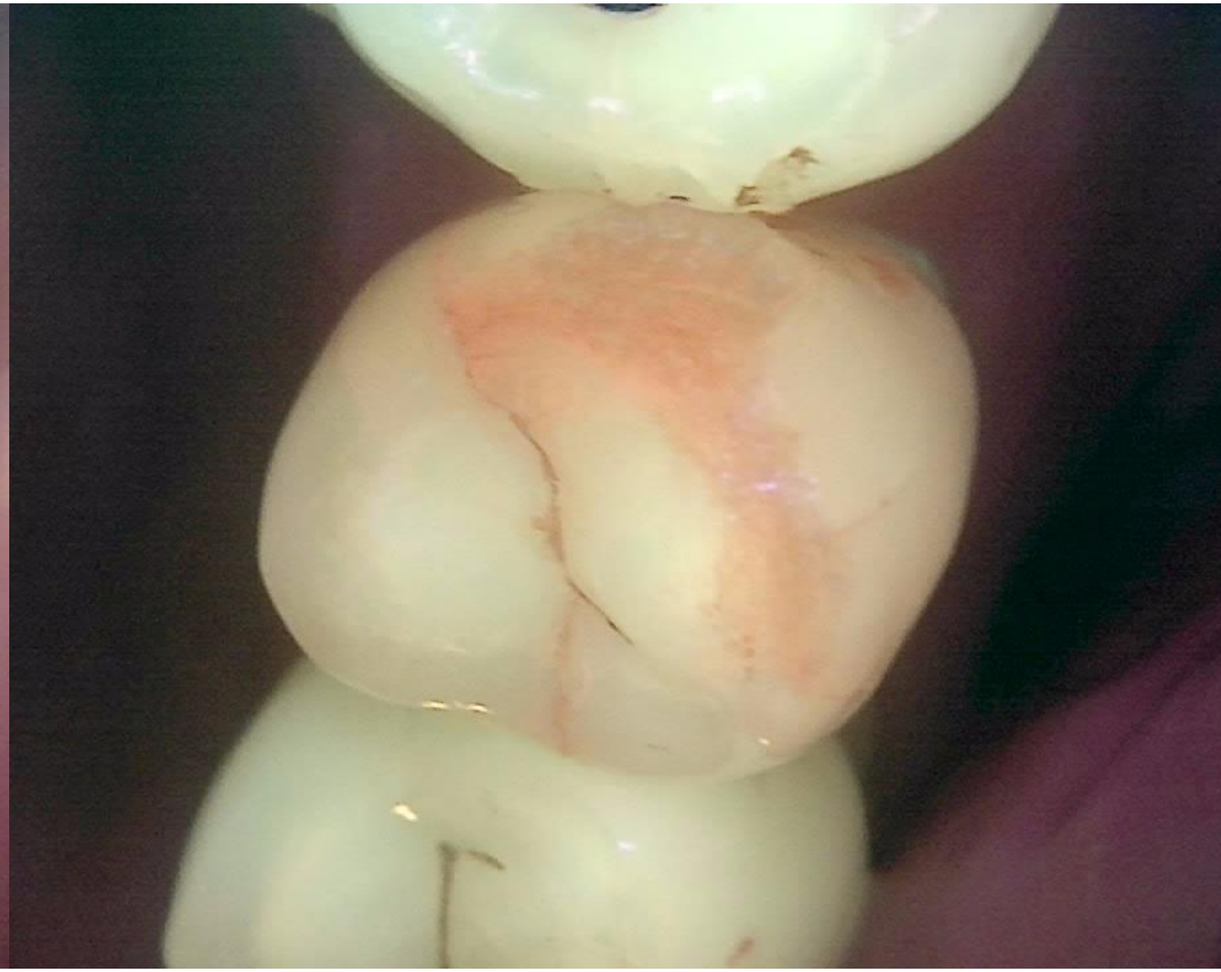


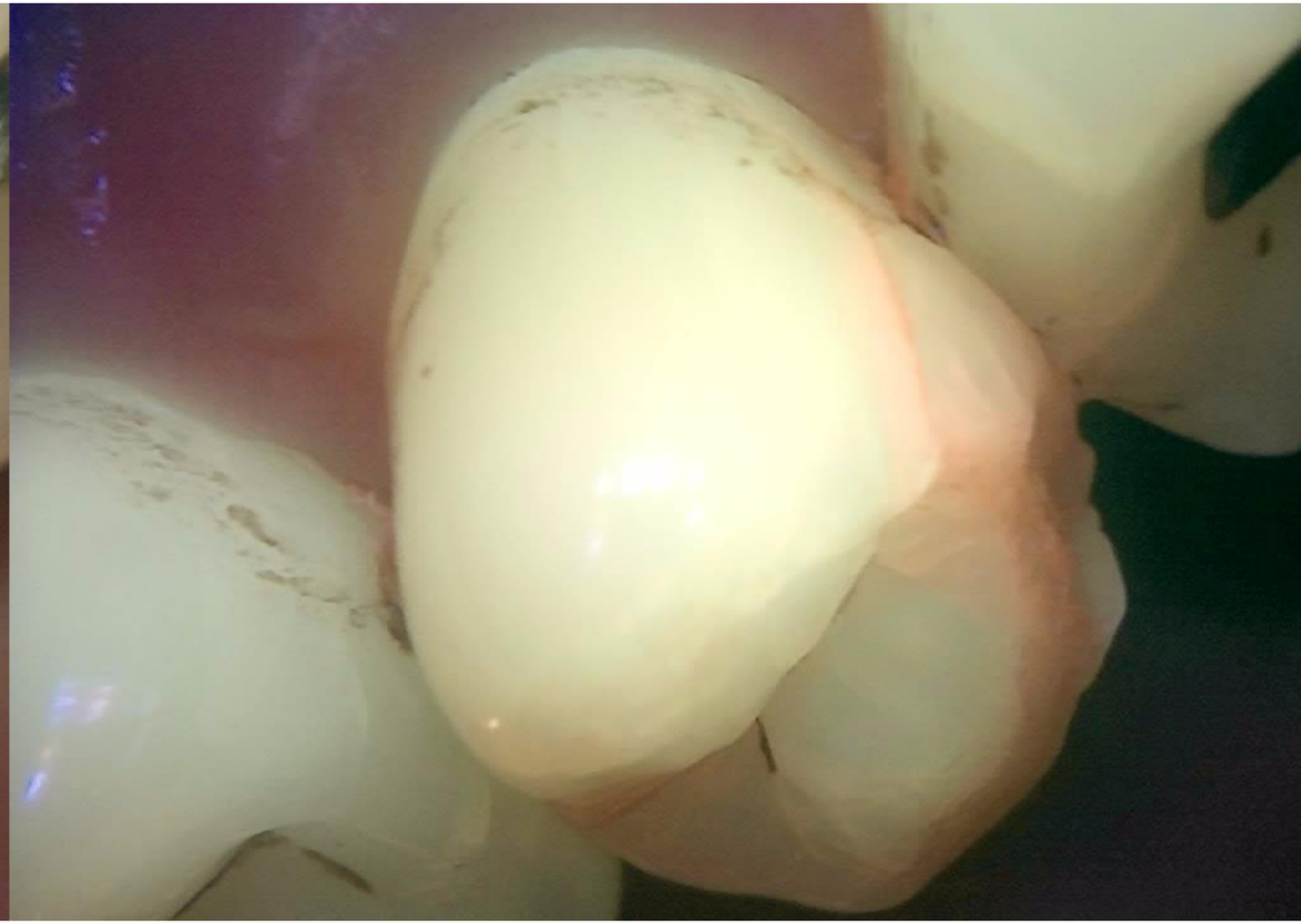


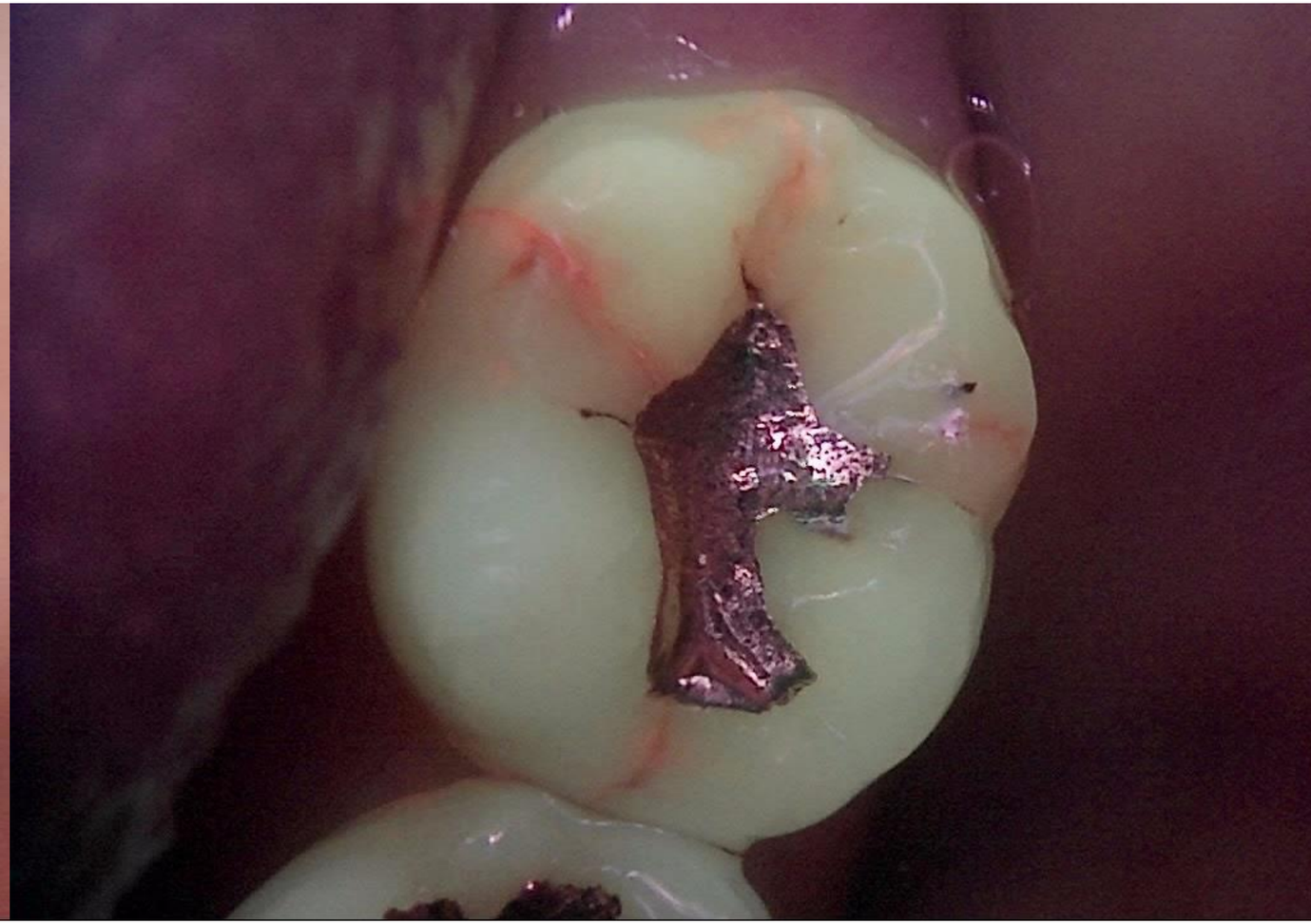


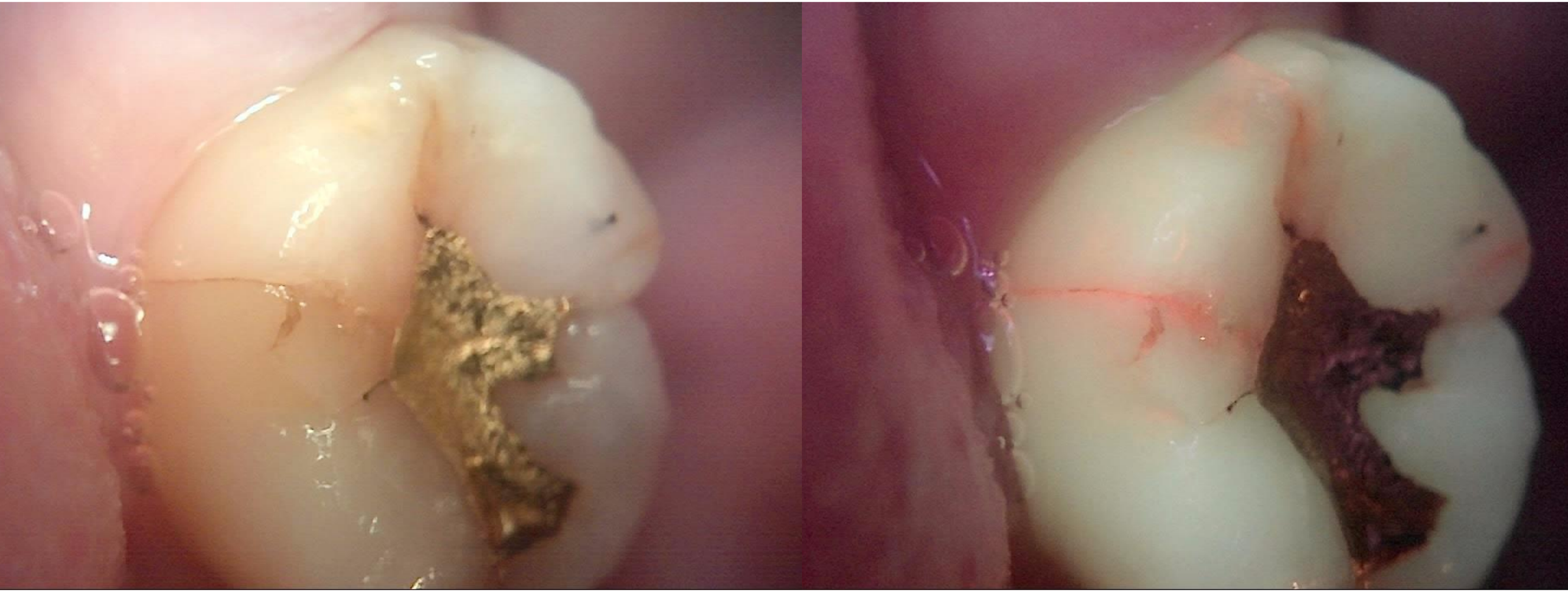


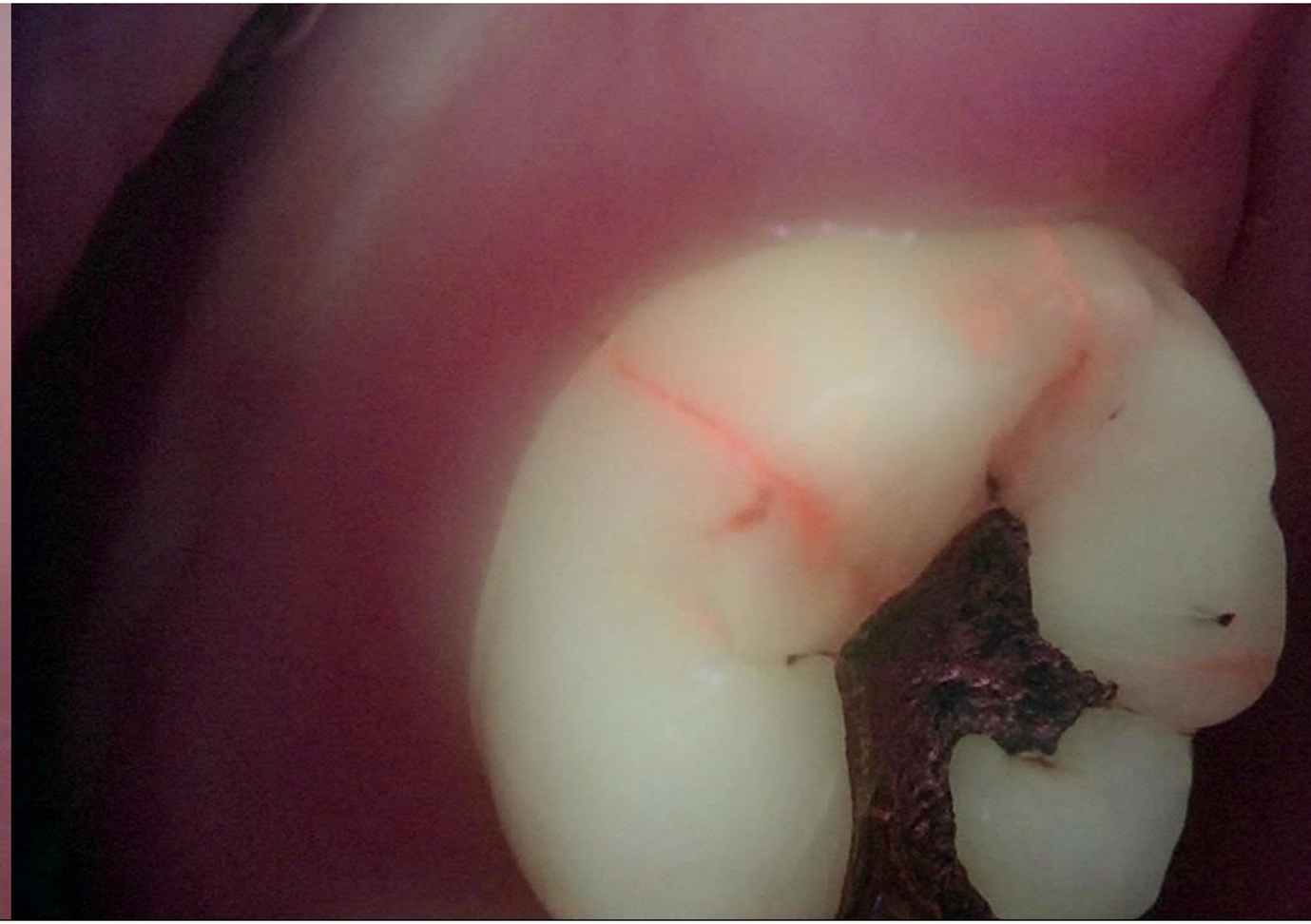


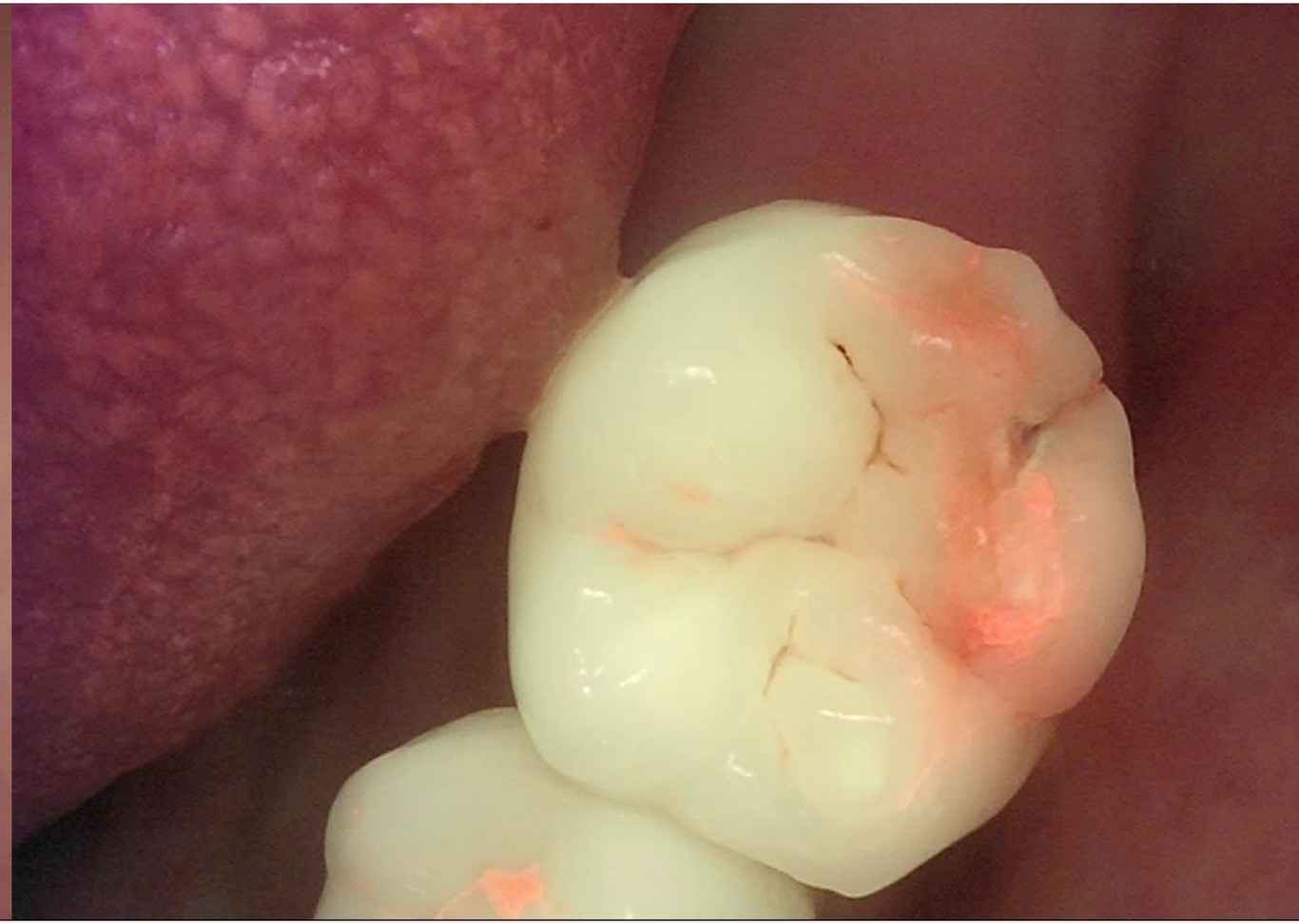


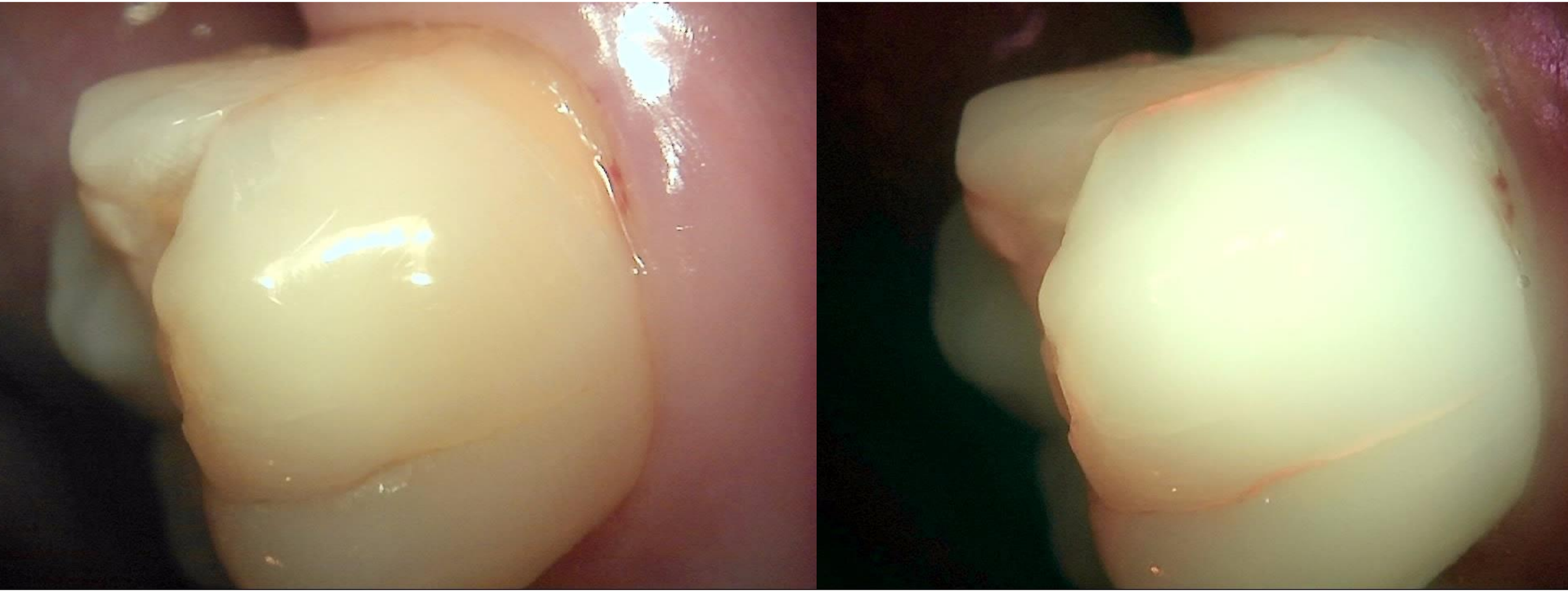


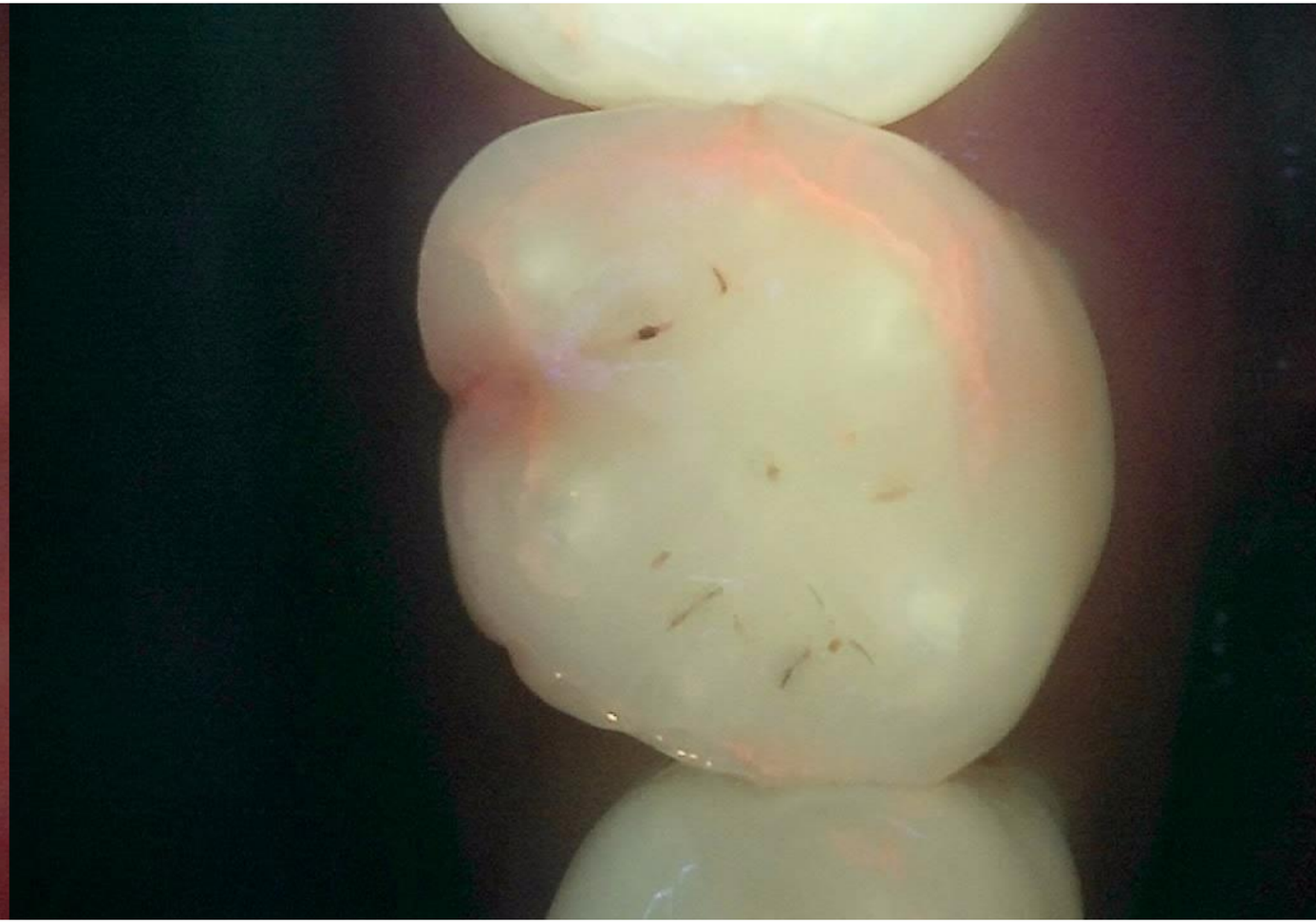


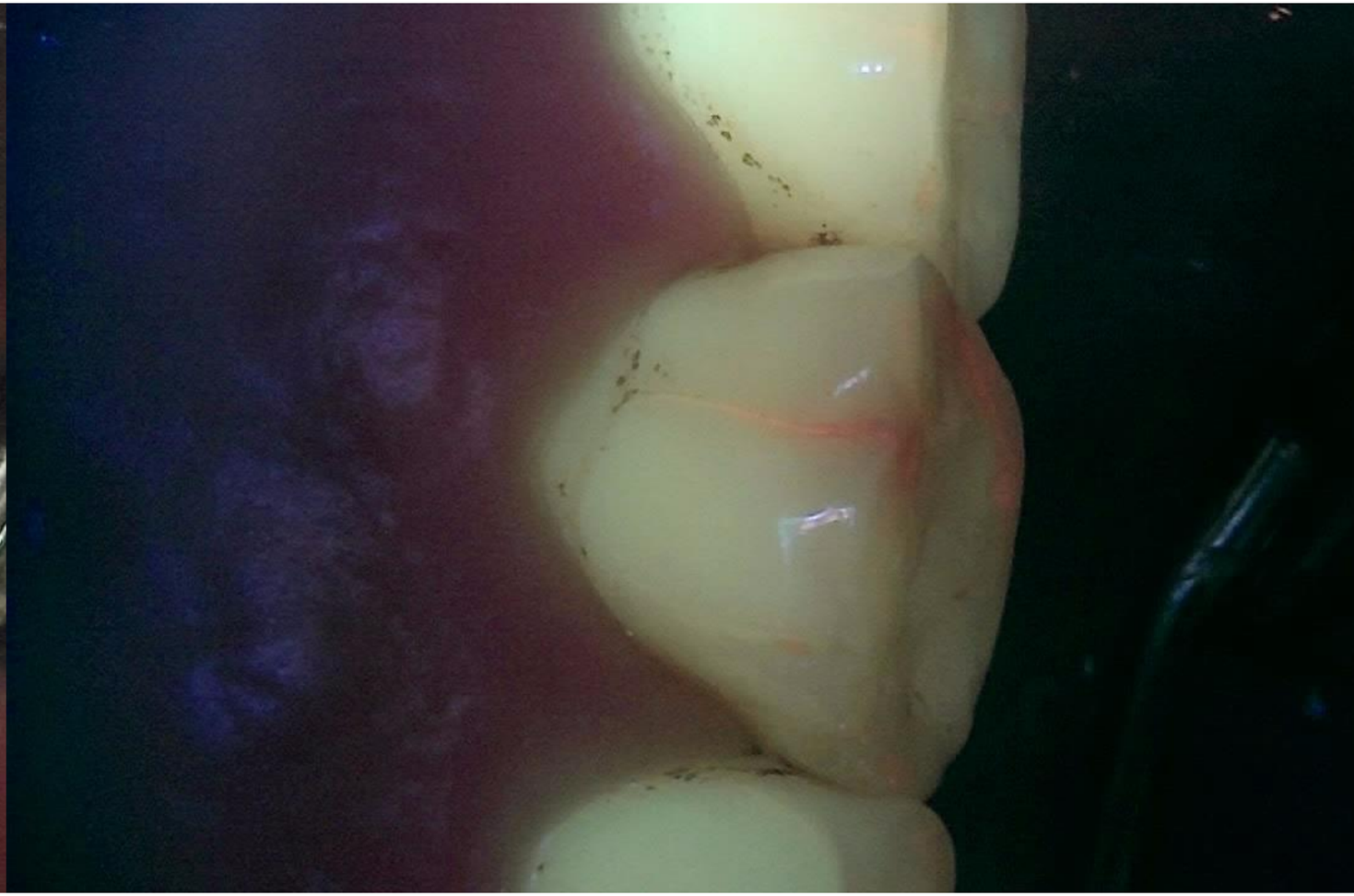


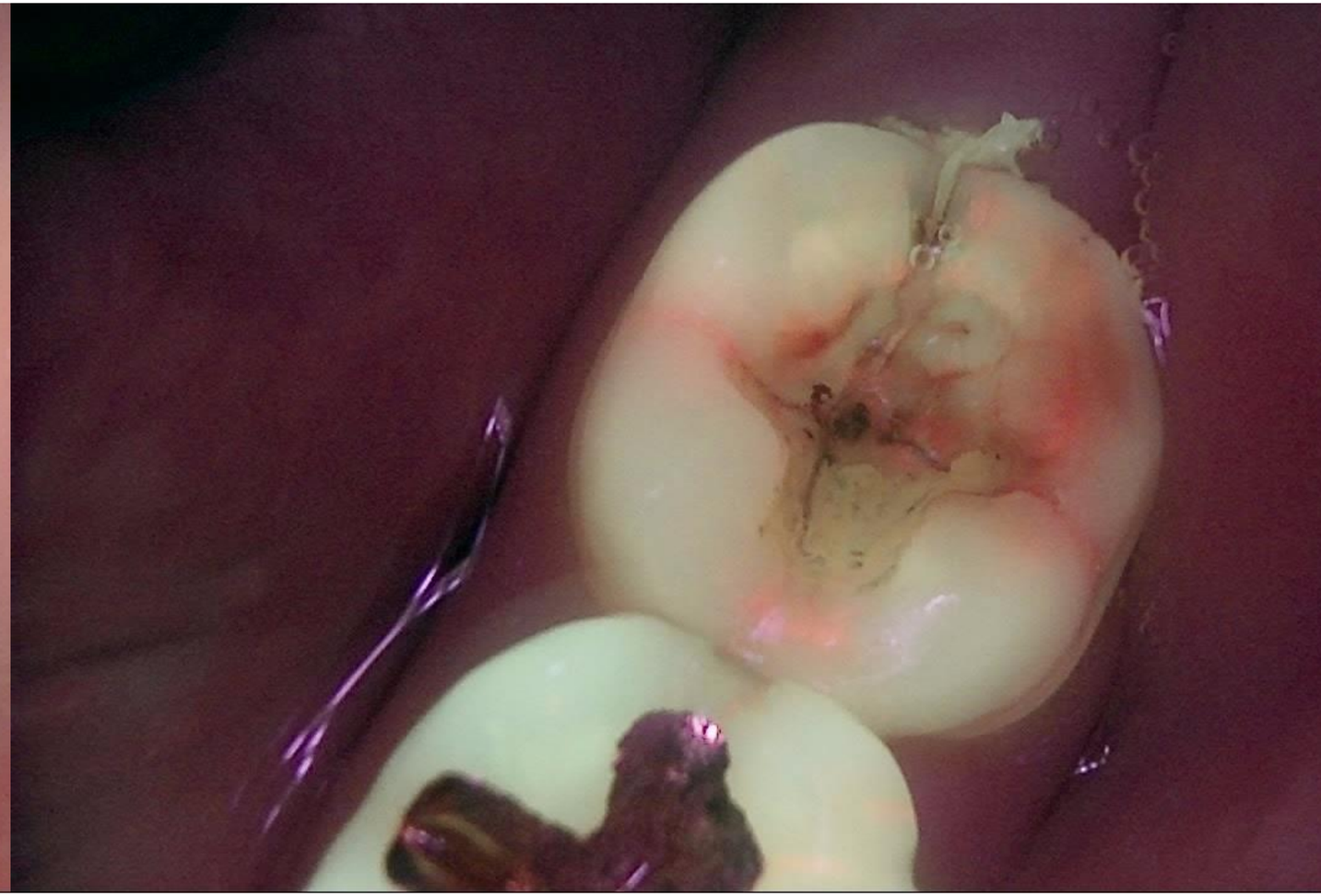












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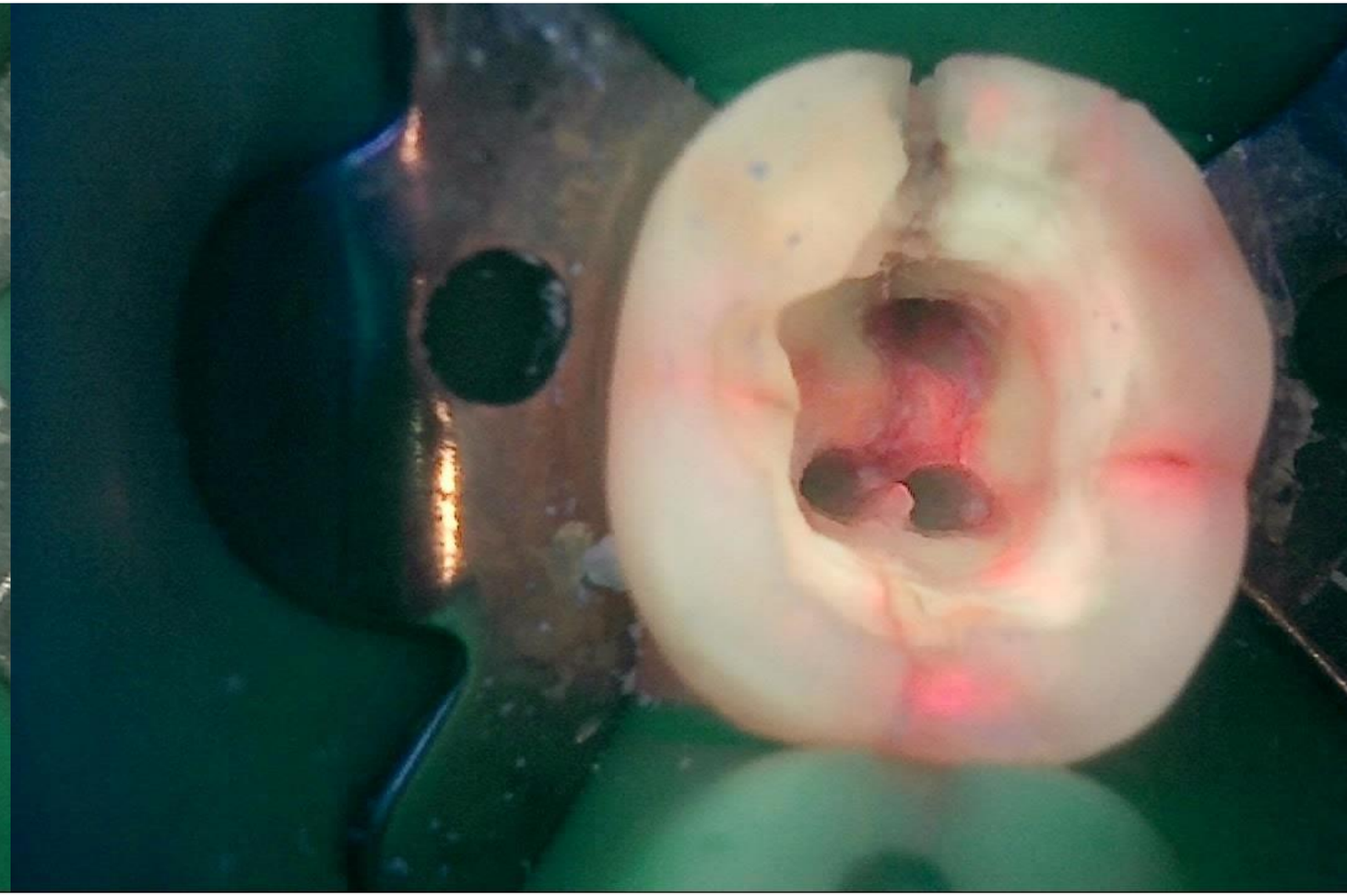

RVG 6100

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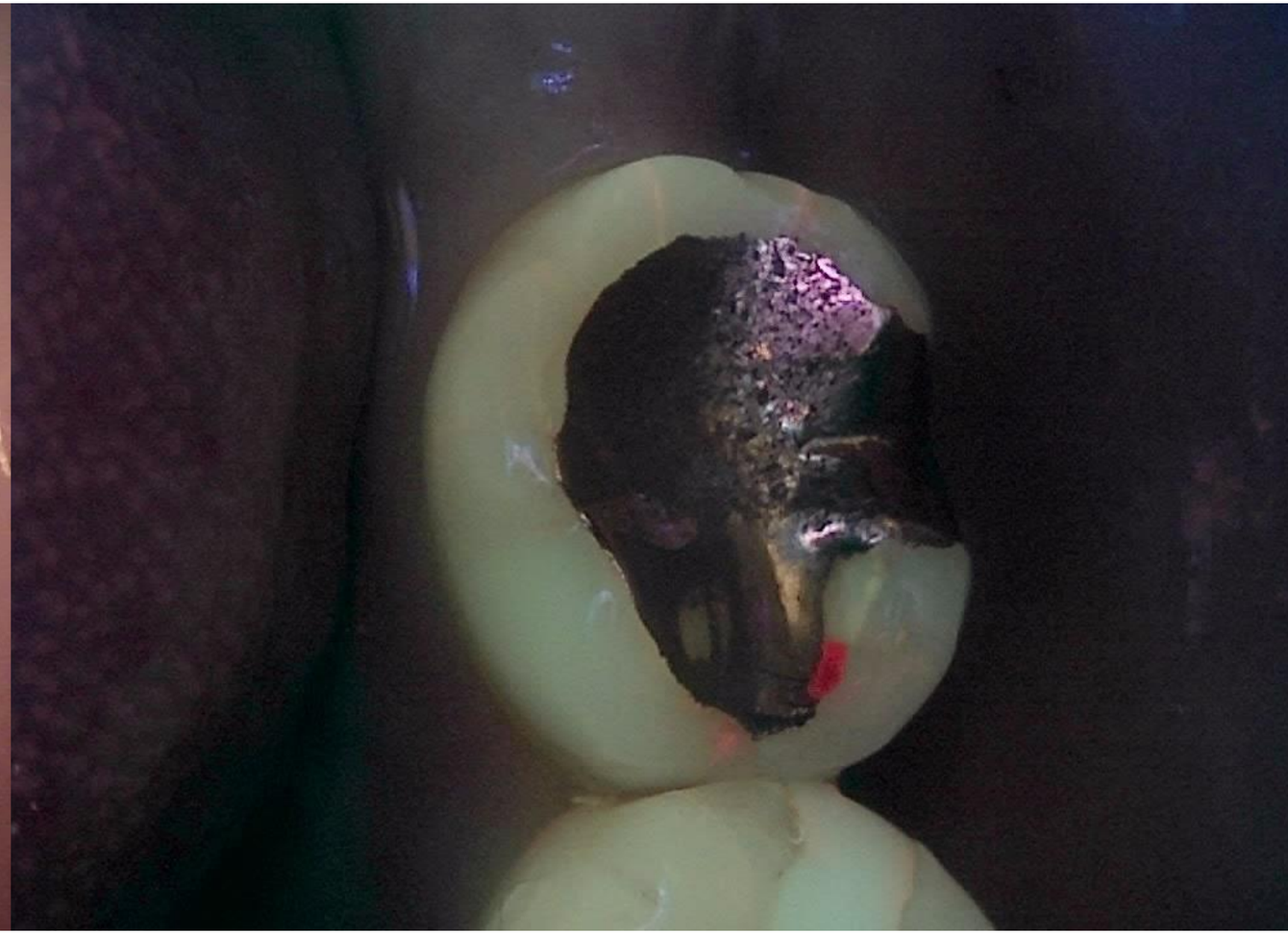
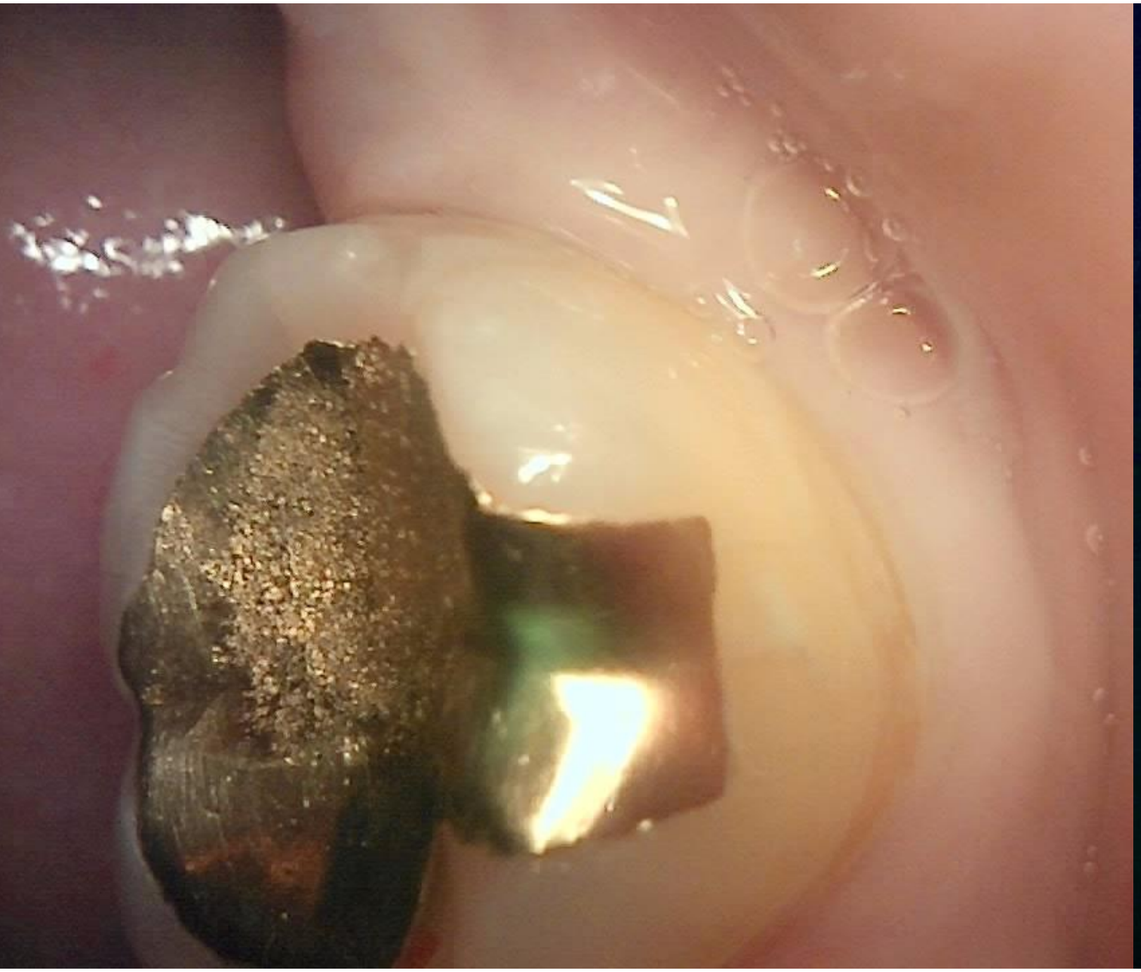
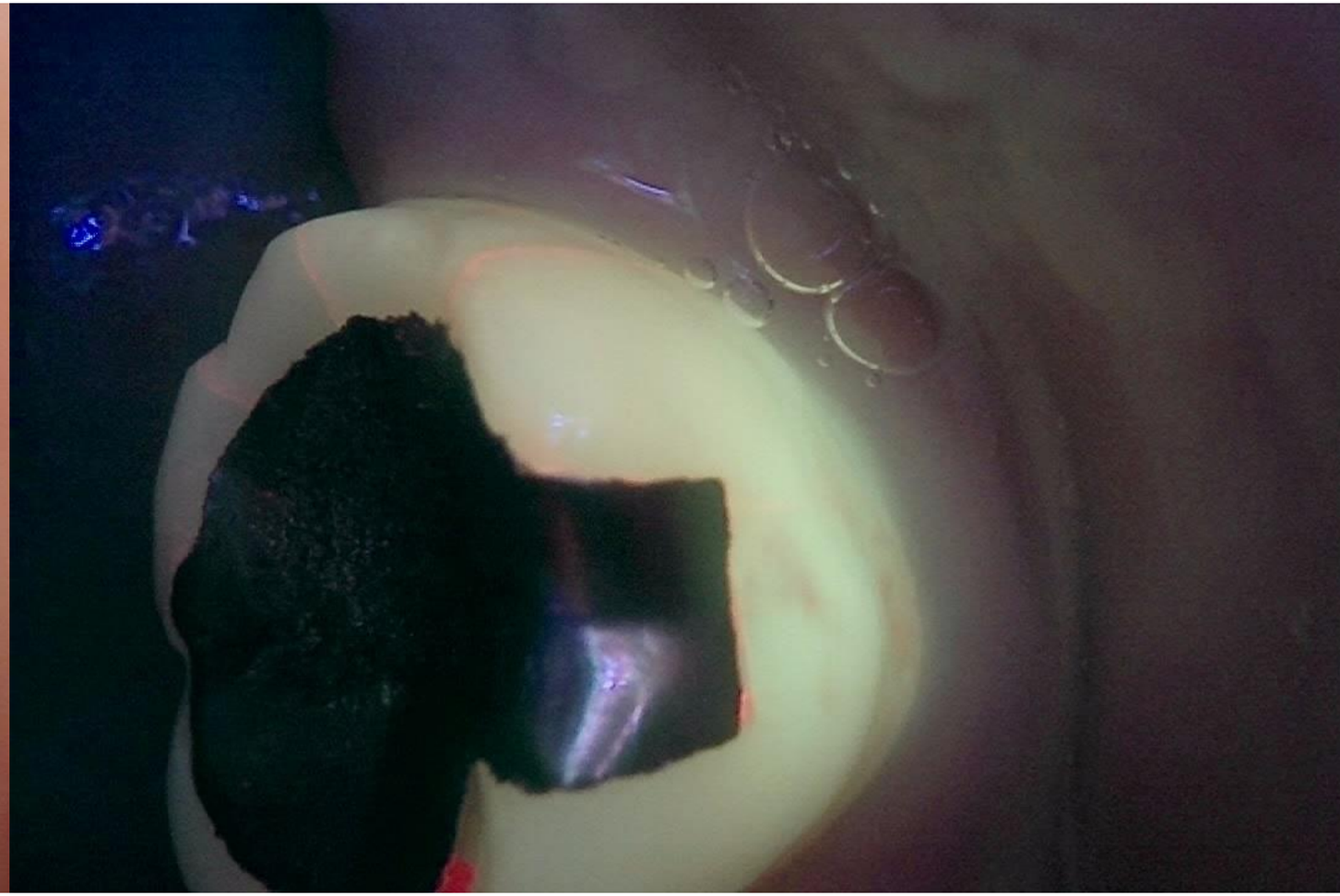






Craze line

AIOBIO

Craze line with Red fluorescence

AIOBIO

American Association of Endodontists Classification of cracked teeth

Classification	Originate	Direction	Symptoms	Pulp status	Prognosis
Craze line	Crown	Variable	None	Vital	Excellent
Craze line with red fluorescence	Crown	Variable	None	Vital	Questionable
Fractured cusp	Crown	M-D and/or F-L	Mild and generally, only to biting and cold	Usually vital	Good
Cracked tooth	Crown+/-Root	M-D often Central	Acute pain on biting,Occasionally sharp pain to cold	Variable	Questionable: Dependant on depth and extent of the crack
Split tooth	Crown+Root	M-D	Marked pain on chewing	Often root filed	Poor unless crack terminates just subgingivally
Vertical root fracture	Roots	F-L	Vague pain Mimics periodontal disease	Mainly root filed	Poor: Root resection in multi- rooted teeth

Qray & Crack

Journal of Endodontics, 23 Aug 2021

ELSEVIER

Journal of Endodontics

Available online 23 August 2021

In Press, Corrected Proof

Case Report/Clinical Techniques

The Effectiveness of a Quantitative Light-induced Fluorescent Device for the Diagnosis of a Cracked Tooth: A Case Report

Sung-Ae Son DDS, MSD, PhD *, Jae-Hoon Kim DDS, MSD, PhD †, Jeong-Kil Park DDS, MSD, PhD *

ARTICLE IN PRESS

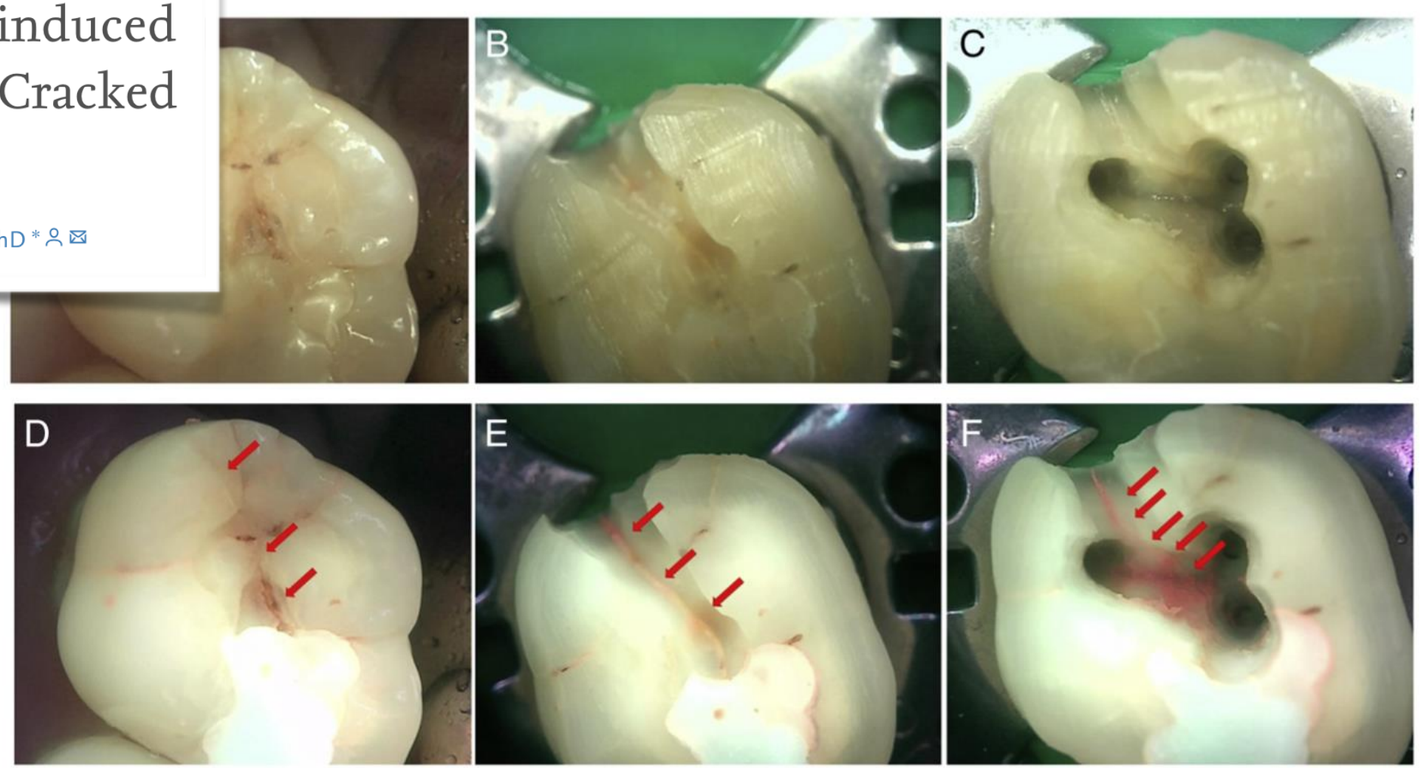


FIGURE 3 – (*A–C*) White-light and (*D–F*) fluorescence images taken with a Q-ray penC. Images taken (*A* and *B*) before and (*D* and *E*) after crack line removal. (*B* and *E*) Images of the cavity traced the crack from the occlusal surface to the distal side. (*C* and *F*) The crack connecting the distal side extended to the bottom of the pulp chamber. The *arrows* indicate the crack lines.

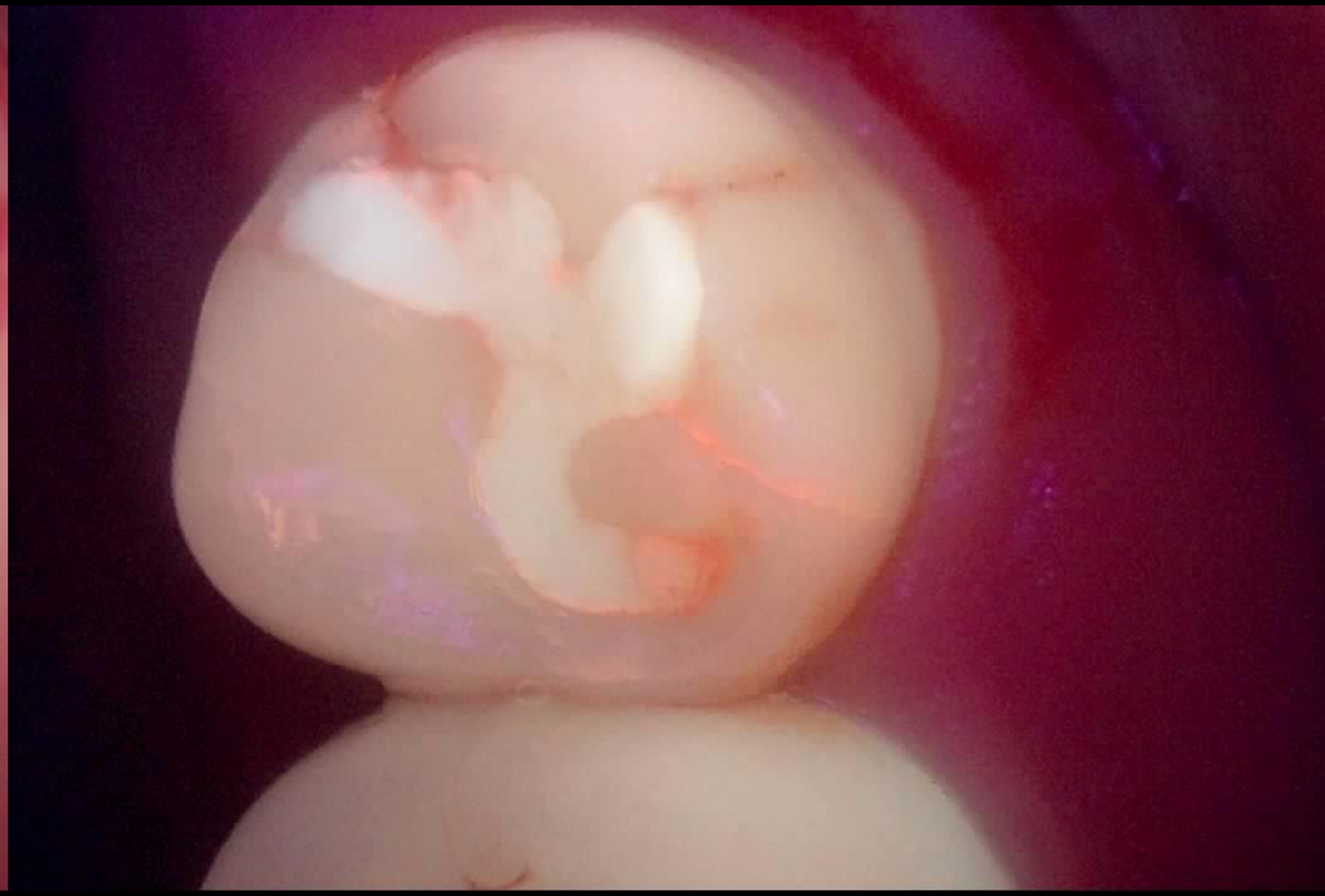
Journal of Endodontics, 23 Aug 2021

ABSTRACT

Diagnosing a cracked tooth is a challenge for dental clinicians. This report describes the use of a quantitative light-induced fluorescent (QLF) device that detects fluorescence reactions with visible light (405 nm) to visually identify microscopic tooth cracks during the diagnosis and treatment of cracked teeth that caused pulp disease. Fluorescence images of the occlusal surface, before and after removal of the restoration, and inside of the access cavity for root canal treatment were obtained using an intraoral capture-type QLF device (Q-ray penC; AIOBIO, Seoul, Korea). The device provided visual information such as enhanced magnification and fluorescent images to identify cracks on the exterior of the tooth, around restorations, and inside the cavity after removal of the restoration by a simple image capture process. The device was able to demonstrate the existence of the crack line and to predict the depth of cracks during treatment.The QLF device showed a potential benefit in the diagnosis and characterization, including the location and depth, of tooth cracks.

(J Endod 2021;■:1–5.)

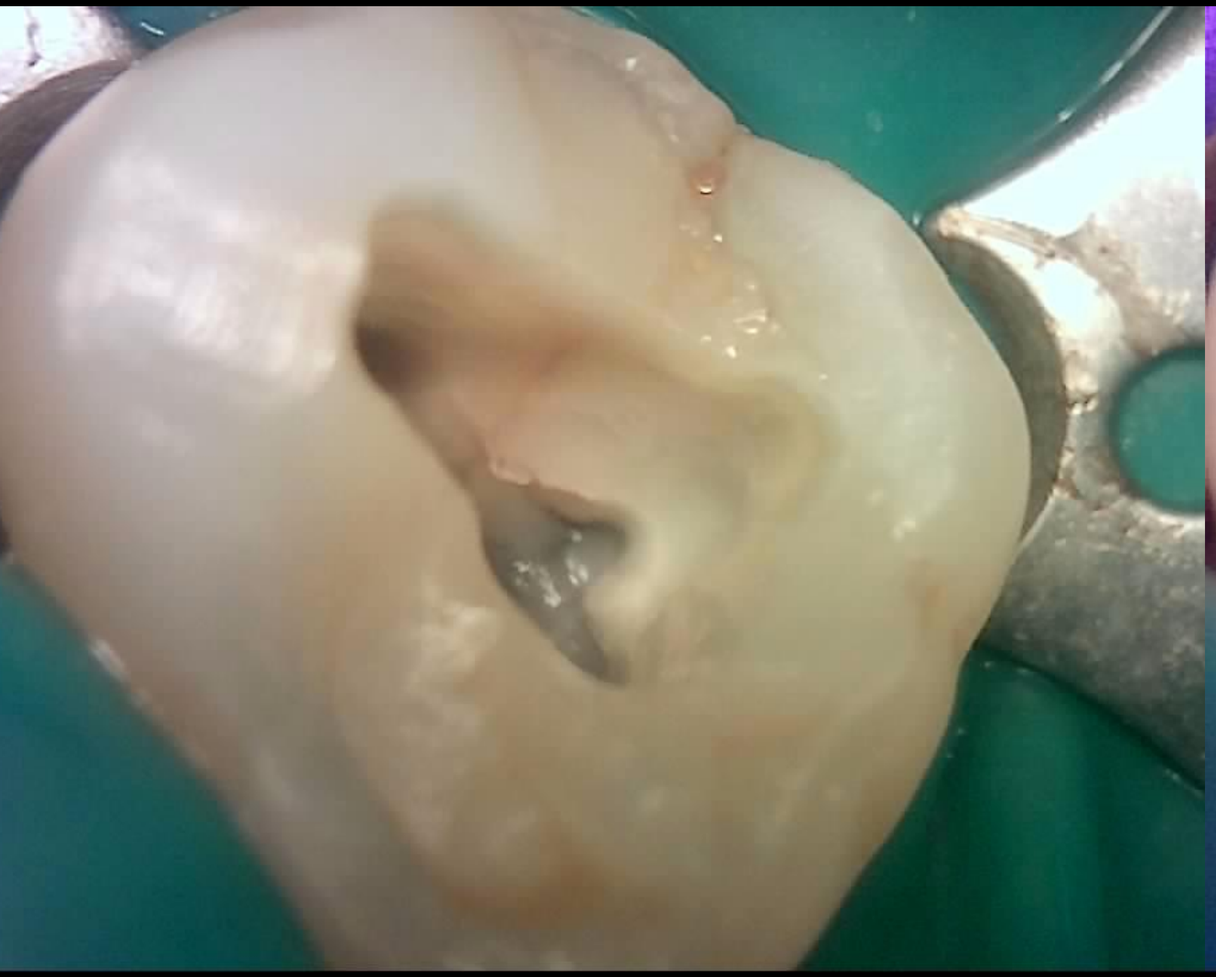
Craze line with Red fluorescence

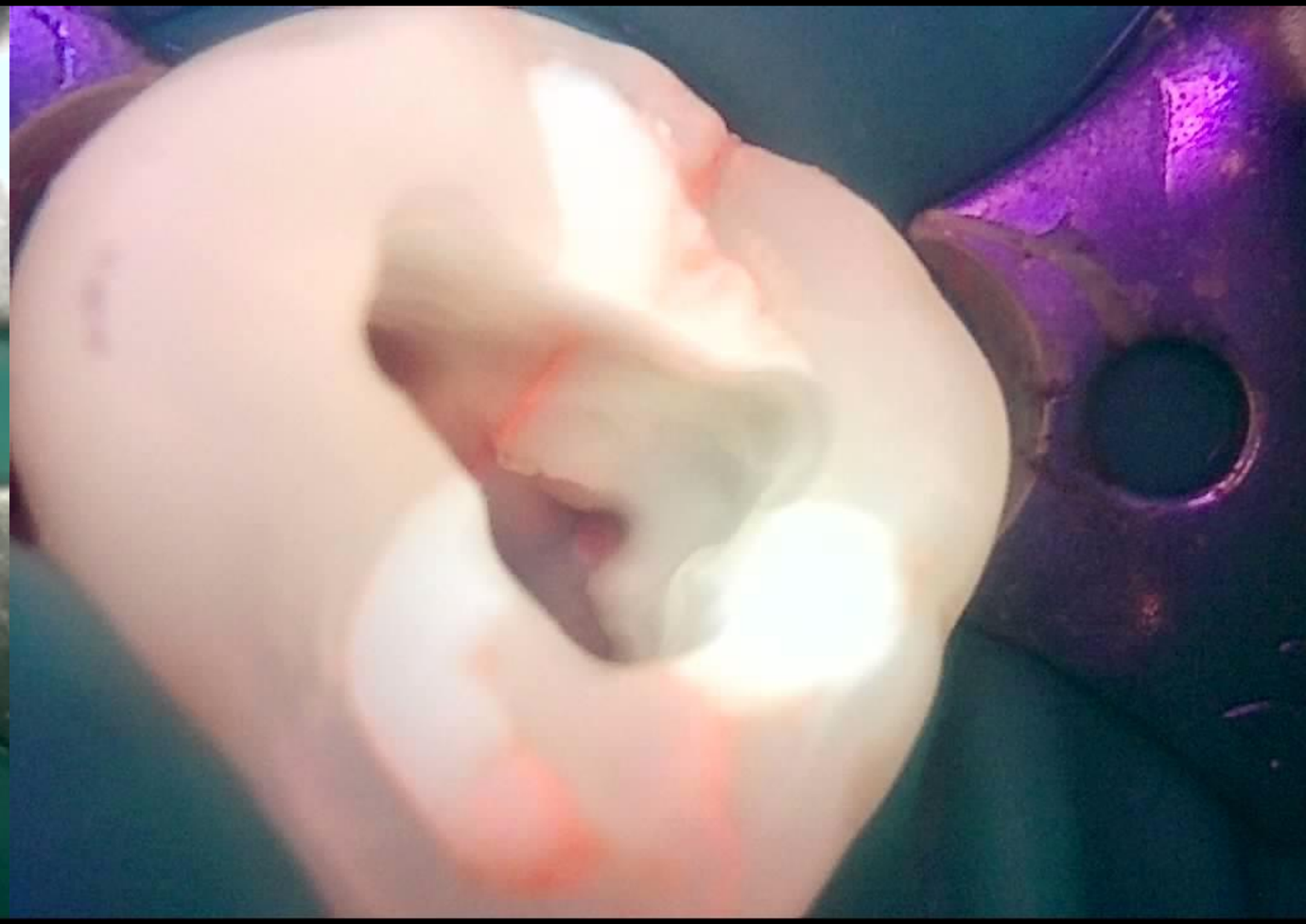


AIOBIO

AIOBIO

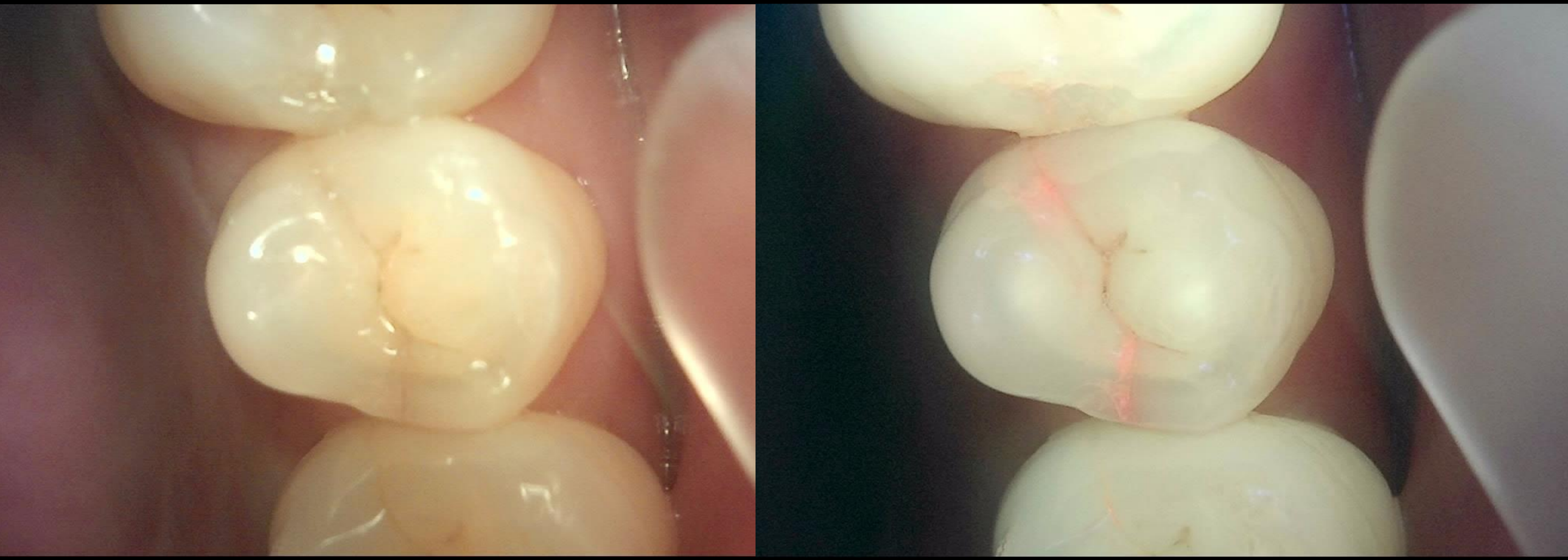
Craze line with Red fluorescence → Cracked tooth





AIOBIO

Craze line with Red fluorescence

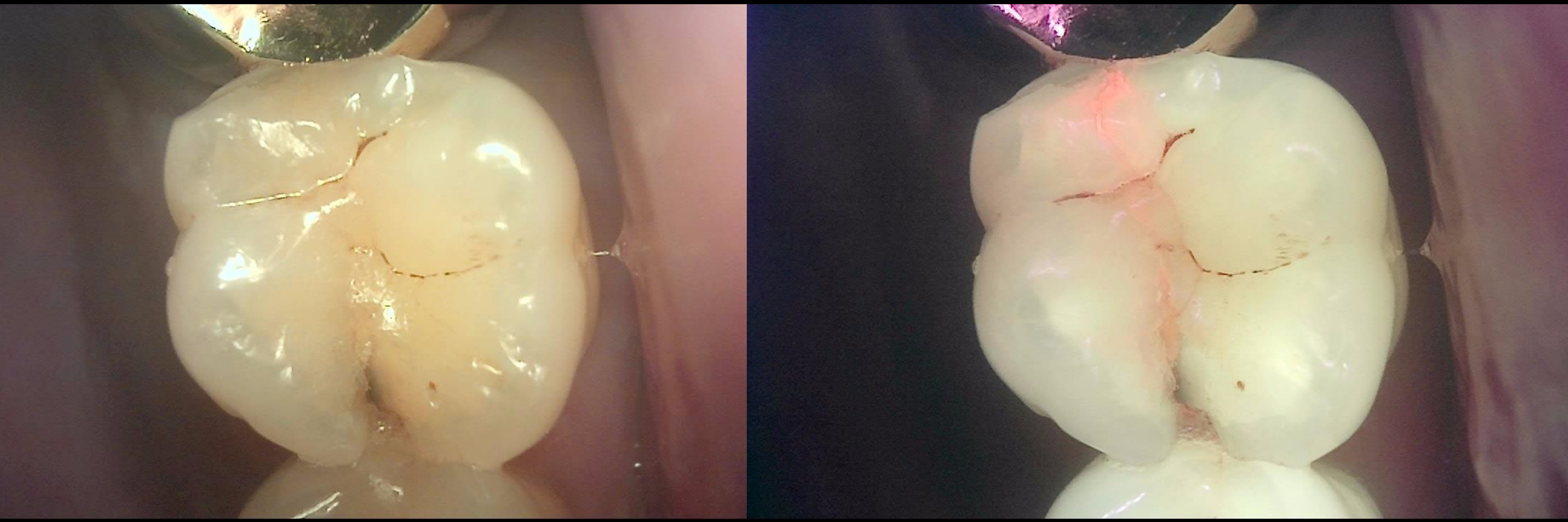


AIOBIO

Craze line with Red fluorescence

AIOBIO

Craze line with Red fluorescence

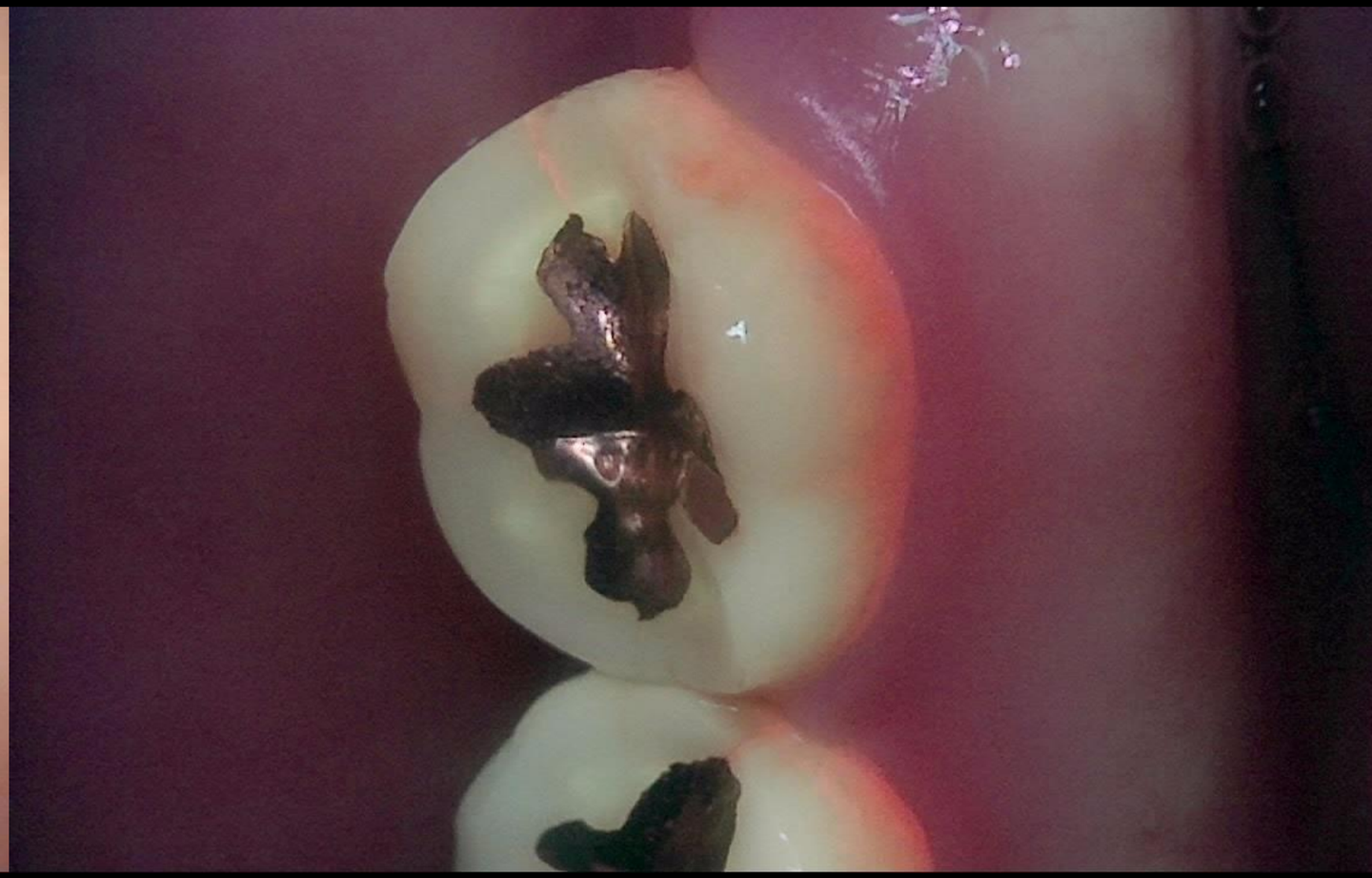


AIOBIO

Craze line with Red fluorescence

AIOBIO

Craze line with Red fluorescence



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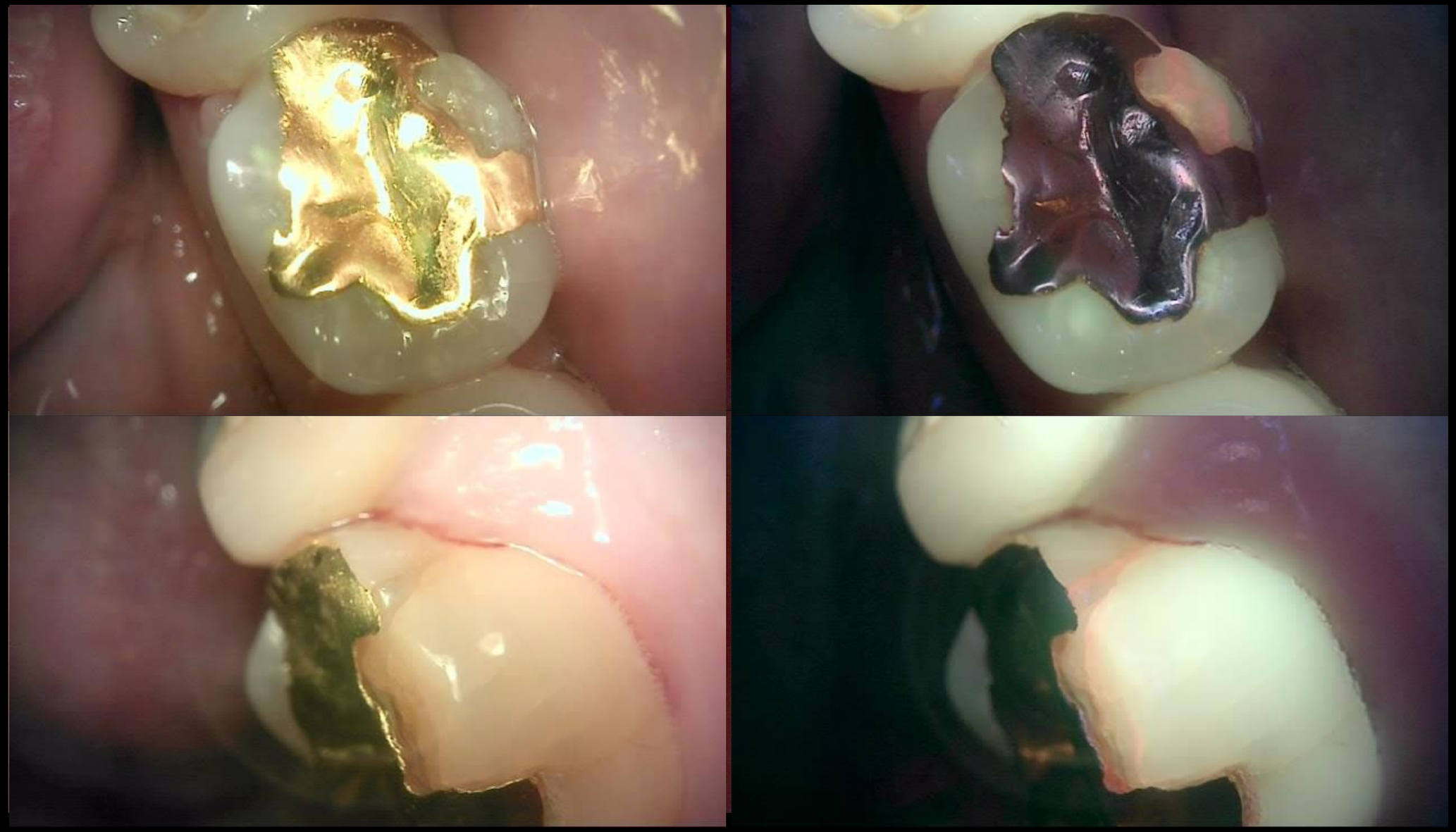

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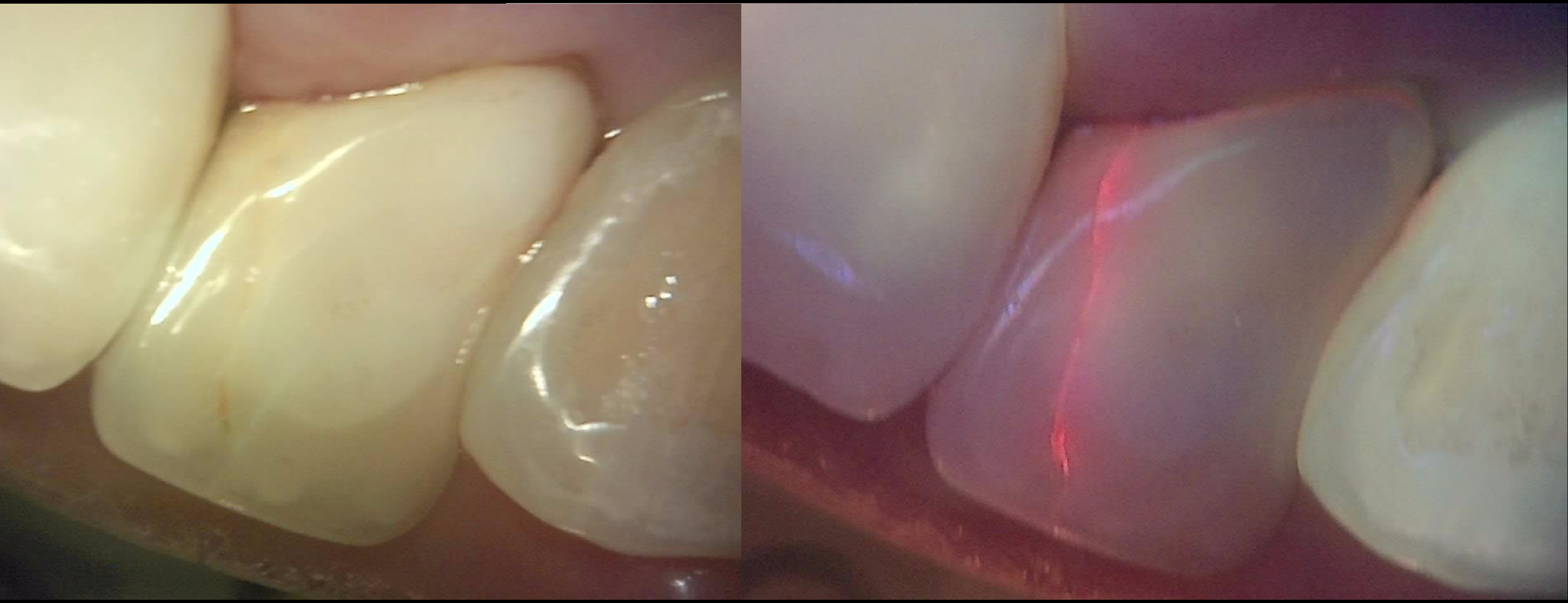

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