

Incorporating Early Diagnosis and Non-Surgical Intervention into the General Dentistry Practice

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Principles of Diagnosis

- The goal of examining a patient for the presence of dental caries is to detect the earliest signs of carious demineralization on enamel and root surfaces
- If early signs of demineralization are detected, preventive care may reverse the caries process

Indications for Tooth Preparation

- Aid plaque control and thereby manage caries activity at this specific location
- Protect the pulp-dentin complex and arrest the lesion by sealing it
- Restore the function, form, and aesthetics of the tooth

Cavitation of Proximal Lesions Based on Radiographic Presentation in Adults

Direct Visual Inspection	Categories of Caries Lesion Severity on Radiographic Diagnosis (n [%])						Total
	E0	E1	E2	D1	D2	D3	
Noncavitated	1375 (99.8%)	198 (96.6%)	77 (93.9%)	23 (85.2%)	6 (50%)	5 (38.5%)	1684 (98.1%)
Cavitated	3 (0.2%)	7 (3.4%)	5 (6.1%)	4 (14.8%)	6 (50%)	8 (61.5%)	33 (1.9%)
Total	1378	205	82	27	12	13	1717

Abbreviations: E0, no lesion; E1, lesion within the outer half of enamel; E2, lesion within the inner half of enamel; D1, lesion within the outer third of dentin; D2, lesion within the middle third of dentin; D3, lesion within the inner third of dentin.

ADA Recommendations for Non-surgical Therapy by Site

OCCUSAL	PROXIMAL	FACIAL/LINGUAL	ROOT
-Sealant + 5% NaF Varnish q 3-6 months -Sealant alone (over varnish alone) -1.23% APF gel q 3-6 months -0.2% NaF rinse weekly	-5% NaF Varnish q 3-6 months -Resin Infiltration -Resin Infiltration + NaF Varnish q 3-6 months -Sealants (low evidence)	-1.23% APF Gel q 3-6 months -5% NaF varnish q 3-6 months	-5k ppm fluoride paste (1.1% NaF) daily -38% SDF + KI annually -38% SDF annually -1%CHX + 1% thymol varnish q 3-6 months (low evidence)

ICDAS Codes for Non-cavitated lesions and Clinical Presentation

ICDAS 0	ICDAS 1	ICDAS 2	ICDAS 3	ICDAS 4
No evidence of caries after air drying.	Seen only after air drying. Restricted to pits & fissures.	Carious opacity or discoloration to the pit & fissure. Noticeable when wet.	Localized enamel breakdown without visible dentin exposure.	Underlying dentin shadow. Most visible when wet.

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