Results of Quick Poll on Deep Margin Elevation

The deep margin elevation (DME) is a less expensive, invasive technique proposed in 1998[2] indicated for tooth preparations of semi-direct and indirect adhesive restorations when the gingival margins cannot be isolated with rubber dam alone. But there is no information as to how this technique is recommended by general practitioners in the USA. Therefore, a 5-questions Quick Poll on indications for DME was conducted by the National Dental Practice-based Research Network between Nov 18 and Dec 17, 2021. There were 533 responses that were accompanied by a radiograph, a clinical scenario, and a clinical photo from a published study[1] (Figure 1, used with permission[1]).

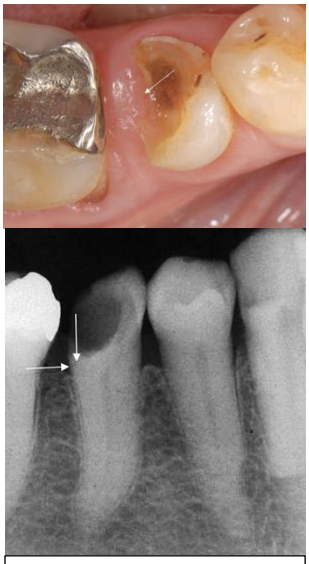


Figure 1 – Clinical and radiographic example for deep margin elevation indication.[1]

The case was described as follows: "An adult patient presents with restoration loss on the mandibular right premolar. Upon clinical and radiographic examination, you diagnose superficial demineralized dentin reaching beyond the CEJ with the proximal margin partially covered by overgrowing gingival tissue. The tooth is vital and there is no periapical radiolucency. What would be your most likely standard of care treatment approach for this case scenario in your practice?"

Specific questions were:

- Would you do crown lengthening? (Q1)
- Would you do root canal therapy? (Q2)
- How would you restore function? (Q3)
- How often do patients in your practice in a similar situation decide to extract the tooth rather than restore it? (Q4)

The final question (Q5) asked whether the dentist was familiar with a technique variously referred to as Deep Margin Elevation (DME), Coronal Margin Relocation (CMR), or Proximal Box Elevation (PBE).

Results

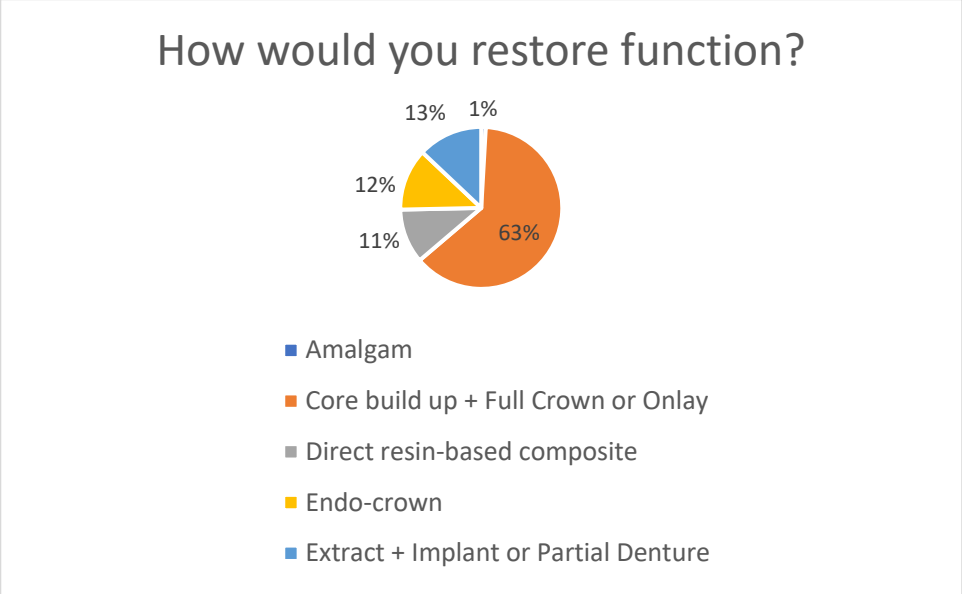
The respondents were evenly split concerning the clinical indication/use of crown lengthening, with 48% stating that they would do crown lengthening to address this clinical scenario. About one-third (35%) would do root canal therapy.

Table 1. – Number and percentage of responses for specific questions

	Yes	No	Total
Would you do crown lengthening?	257 (48.2%)	276 (51.8%)	533 (100%)
Would you do RCT?	184 (34.5%)	349 (65.5%)	533 (100%)

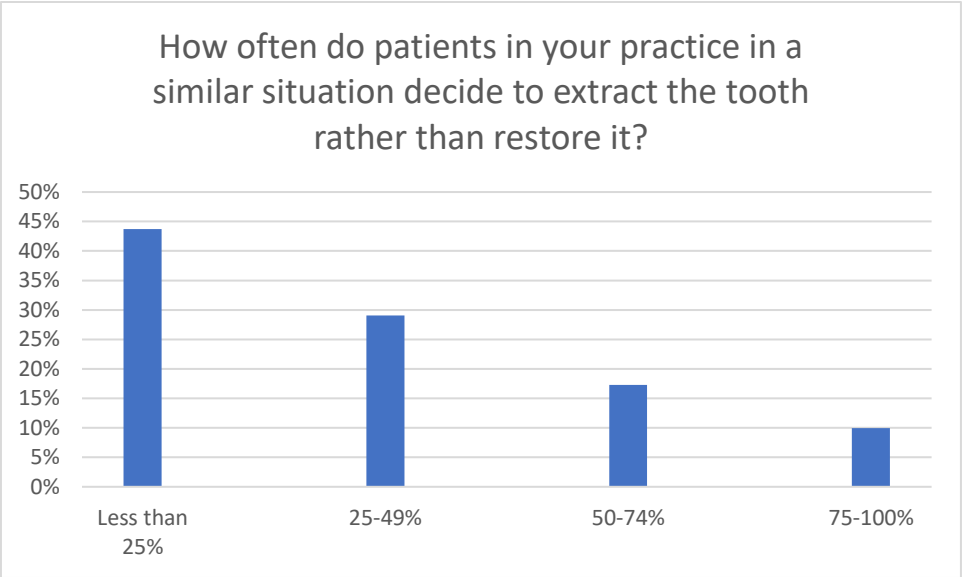
The responses for the clinical options to restore function are shown in Figure 1. Most practitioners chose "Core build up + Full Crown or Onlay" (63%). Only 1% would restore with amalgam.

Figure 1. – Chart demonstrating the response distribution for the decision to restore function



Among the respondents, only about 10% reported a high likelihood that patients in their practice would decide to have the tooth extracted. Most (44%) felt that less than 25% of the patients in their practice would opt for an extraction when a scenario similar to this clinical situation arose (Figure 2).

Figure 2. – Graph depicting how often patients would opt for tooth extraction in their practice



About half of the 533 respondents (48%) were not familiar with the technique described as DME (Table 2). However, among the 279 who had heard of it, 148 (53%) had used it.

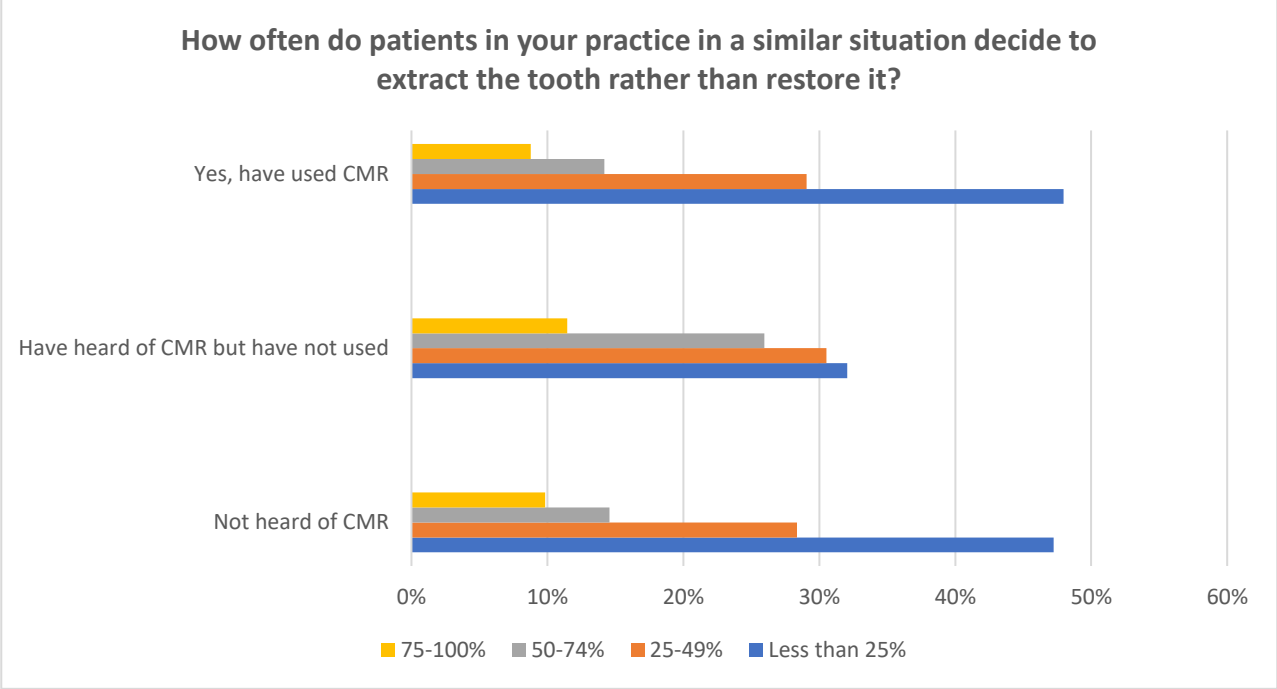
Table 2. – Percentage of respondents with awareness of the DME technique

	Not heard of DME	Have heard of DME but have not used	Yes, have used DME	Total

Prior to today, had you been aware of this restorative dentistry technique?	254 (47.7%)	131 (24.6%)	148 (27.8%)	533 (100%)

Further analysis showed that practitioners who have heard of the DME technique but have not used it were more likely to state that their practice had a higher proportion of patients who would opt for extraction relative to the dentists who have used DME, and dentists who had not heard of DME (Figure 3; Chi square test, p=0.03).

Figure 3. – Graph depicting the distribution of characteristics of responses of Q4 by Q5



References cited:

1 Frese, C., Wolff, D. & Staehle, H. J. Proximal box elevation with resin composite and the dogma of biological width: clinical R2-technique and critical review. *Oper Dent* **39**, 22-31, doi:10.2341/13-052-T (2014).

2 Dietschi, D. & Spreafico, R. Current clinical concepts for adhesive cementation of tooth-colored posterior restorations. *Pract Periodontics Aesthet Dent* **10**, 47-54; quiz 56 (1998).