

Questionnaire for dentists:

Deep dentin caries - diagnostical and therapeutical attitudes and behaviour

Thank you for taking some minutes to answer and send this questionnaire. It contains eight questions concerning diagnostics and therapy of deep dentin caries. Please answer the questions by **ticking**. To completely answer the questionnaire will take about eight minutes. Your answers will be evaluated anonymously and data will be erased according to data protection guidelines. Many thanks for your cooperation!

Information concerning the project

Complete removal of carious dentin even in pulpo-proximal lesions has been acknowledged as standard when treating deep dentin caries since established by G.V. Black. In recent years techniques like indirect capping or incomplete caries removal have been discussed as alternative therapy options.

It is however only sparsely investigated if these strategies are implemented in general dental practice. Within our project, the diagnostical and therapeutical behaviour of dentists in Schleswig-Holstein treating deep, pulpo-proximal carious lesions will be investigated and analysed.

1. Caries removal: clinical criteria

Which **criteria** do you use to assess sufficient removal of **primary caries close to the pulp**? When do you terminate the caries removal process, if further excavation might lead to pulp exposure? (Please tick one answer for each criterion)

1.1 Consistency

- ☐ Dentin at the cavity floor can be soft.
- ☐ Dentin at the cavity floor can be leathery.
- ☐ The cavity floor should be hard and dentin finely chipping when using a bur.
- ☐ Consistency is not important to assess caries removal.

1.2 Colour

- ☐ The cavity floor can be very discoloured.
- ☐ The cavity floor can be slightly discoloured.
- ☐ The cavity floor should be yellow (like sound dentin).
- ☐ Colour is not important to assess caries removal.

1.3 Moisture

- ☐ The cavity floor can be very moist.
- ☐ The cavity floor can be slightly moist.
- ☐ The cavity floor should be dry.
- ☐ Moisture is not important to assess caries removal.

Further criteria (please add if necessary): _____

2. Excavation method

Do you regularly use the following **method(s) to remove caries**?

- | yes | no | | yes | no | |
|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|-------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | metal rosehead bur | <input type="checkbox"/> | <input type="checkbox"/> | hand excavator |
| <input type="checkbox"/> | <input type="checkbox"/> | ceramic rosehead bur | <input type="checkbox"/> | <input type="checkbox"/> | chemical excavation (Carisolv etc.) |
| <input type="checkbox"/> | <input type="checkbox"/> | polymeric rosehead bur | <input type="checkbox"/> | <input type="checkbox"/> | other methods |

3. Removal of deep dentin caries.

You are treating a tooth of a 20-years old patient. The tooth is asymptomatic, vital, but has a deep caries. **Which treatment do you perform to remove the caries in proximity to the pulp?**

(Please tick yes or no)

yes no

- ☐ ☐ I remove all carious dentin. If pulp exposure occurs localized, I perform direct capping.
- ☐ ☐ I remove all carious dentin. If pulp exposure occurs, I initiate endodontic treatment.
- ☐ ☐ I excavate, but leave some carious dentin, if pulp exposure is likely. Afterwards, I perform stepwise caries removal (incomplete today, complete excavation in some weeks or months).
- ☐ ☐ I excavate, but leave some carious dentin, if pulp exposure is likely. I remove all caries at the outer walls, afterwards I restore definitively.

4. Use of liners

How do you treat the dentin at the cavity floor in **deep cavities, if you plan a subsequent restoration using adhesive technique?** (multiple choice possible)

- ☐ Calcium hydroxid-suspension (Calxyl, Hypocal)
- ☐ Calcium hydroxid-cement (Dycal, Life)
- ☐ other lining (Harvard, Vitrebond, IRM)
- ☐ adhesive directly onto dentin close to pulp

5. Which **2-year survival rate** (survival=no further therapy necessary) do you expect for the following treatment options of deep caries **in a 20-years old patient?** (Please tick the expected survival rate, n.s.= not specified)

	0-20%	21-40%	41-60%	61-80%	81-100%	n.s.
5.1 Indirect capping						
5.2 Incomplete excavation in proximity to pulp						
5.3 Direct capping						
5.4 Endodontics						

6. How do you feel about leaving caries under a restoration?

Please tick how strongly you agree to the following statements.

(1 strongly disagree, 4 strongly agree, n.s. = not specified)

	1	2	3	4	n.s.
a. Cariogenic microorganisms need to be removed completely, since caries might progress otherwise.					
b. Certain amounts of cariogenic microorganisms can be left, since intact restorations can seal and thus arrest caries.					
c. Caries should always be removed completely, since residual caries is a risk for the vitality of the pulp.					
d. Caries in proximity to the pulp should be left to avoid pulp exposure.					

Clinical case: The following image shows a tooth which was restored six months ago by another dentist. You detect a **radiolucency under the restoration in proximity to the pulp**. You expect this radiolucency to be caries. The restoration is clinical intact, the tooth vital and asymptomatic.



7. <u>How strongly do you agree to the following statements concerning the described case?</u> (1 strongly disagree, 4 strongly agree, n.s. = not specified)	1	2	3	4	n.s.
a. The restoration should be renewed.					
b. The restoration should be left and monitored.					

8. <u>How strongly do you agree to the following statements?</u> (1 strongly disagree, 4 strongly agree, n.s. not specified)	1	2	3	4	n.s.
a. I prefer more invasive treatment if this enhances the longevity of my restorations.					
b. I prefer the less invasive method and accept possible re-treatment (for example repair of fillings).					
c. Legal regulations often demand more invasive treatment, since possible remedial work is part of my guarantee duty to the patient.					

9. General information

Please add some information about you and your working situation.

Year of birth: _____

Dental license since _____

Gender: ☐ male

☐ female

Practice: ☐ 1 Dentists

☐ 2 Dentists

☐ >2 Dentists

☐ University

Practice setting: ☐ City

☐ Town

☐ Rural area

Practice focus: ☐ General dentistry

☐ Prevention

(Multiple choice possible)

☐ Orthodontics

☐ Oral surgery

☐ Endodontics

☐ Periodontology

☐ prosthodontics

☐ Paedodontics

☐ Aesthetic Dentistry