Oral Medicine and Pathology

National Dental Examining Board of Canada (NDEB) Virtual OSCE and Assessment of Fundamental Knowledge (AFK)

About 12% of the Virtual OSCE · 4 topics · 2026 blueprint

Oral Medicine and Pathology covers recognizing soft and hard tissue lesions, systemic conditions with oral signs, and the oral effects of drugs and cancer therapy. It is about 12% of the Virtual OSCE in NDEB's 2026 blueprint. Questions show a photo or radiograph and ask for the most likely diagnosis, the next investigation (often a biopsy or referral), and the appropriate management or prescription.

You should be able to: An ulcer on the lateral tongue has not healed 2 weeks after you smoothed an adjacent sharp cusp. What is the next step?

Every topic: the key point and the trap

OM-1 White, red and potentially malignant lesions

Leukoplakia is a white patch that cannot be wiped off and cannot be diagnosed as any other condition; it is a clinical term and needs a biopsy.

Trap: Choosing an excisional biopsy or a brush cytology for a large suspicious lesion. Incisional biopsy of the most suspicious area gives a tissue diagnosis without destroying margins needed for cancer surgery.

OM-2 Ulcers, vesicles and infections

Recurrent herpes labialis and intraoral recurrent herpes occur on keratinized tissue (lip vermilion, hard palate, attached gingiva); recurrent aphthous ulcers occur on non-keratinized mucosa.

Trap: Prescribing fluconazole to a patient on warfarin without considering the interaction. It inhibits warfarin metabolism and can cause serious bleeding.

OM-3 Jaw lesions on radiographs

Describe a jaw lesion by site, size, borders (well defined corticated or ill defined), internal structure (radiolucent, mixed, radiopaque), and effect on teeth and cortex.

Trap: Starting root canal treatment on vital teeth because of an apical radiolucency. The pulp test result is the deciding fact.

OM-4 Drugs, cancer therapy and the mouth

Medication-related osteonecrosis of the jaw (MRONJ) is exposed bone lasting more than 8 weeks in a patient on antiresorptive or antiangiogenic drugs with no history of jaw radiation.

Trap: Treating oral bisphosphonates for osteoporosis and intravenous bisphosphonates for cancer as the same risk. The cancer dose carries a much higher MRONJ risk and changes the plan.

Key terms

Leukoplakia: A white patch not removable by scraping and not attributable to another diagnosis; potentially malignant.

Erythroplakia: A red patch that cannot be diagnosed as another condition; high risk of dysplasia or carcinoma.

Incisional biopsy: Removal of a representative part of a lesion for diagnosis; used for large or suspicious lesions.

Excisional biopsy: Removal of the entire lesion; used for small lesions that appear benign.

Wickham striae: Fine lacy white lines typical of lichen planus.

Acantholysis: Loss of adhesion between epithelial cells; the key histologic feature of pemphigus vulgaris.

Direct immunofluorescence: A test on fresh perilesional tissue that shows antibody deposits, used to diagnose pemphigus and pemphigoid.

MRONJ: Medication-related osteonecrosis of the jaw: exposed or probeable bone for more than 8 weeks in a patient on antiresorptive or antiangiogenic drugs, without jaw radiation.

Osteoradionecrosis: Death of irradiated bone that fails to heal, often after extraction in a radiation field.

Periapical cemento-osseous dysplasia: A benign fibro-osseous lesion at apices of vital teeth, most often mandibular incisors; monitored, not treated.

Odontogenic keratocyst: A developmental cyst with a high recurrence rate, often in the posterior mandible.

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