

RADIOLOGY

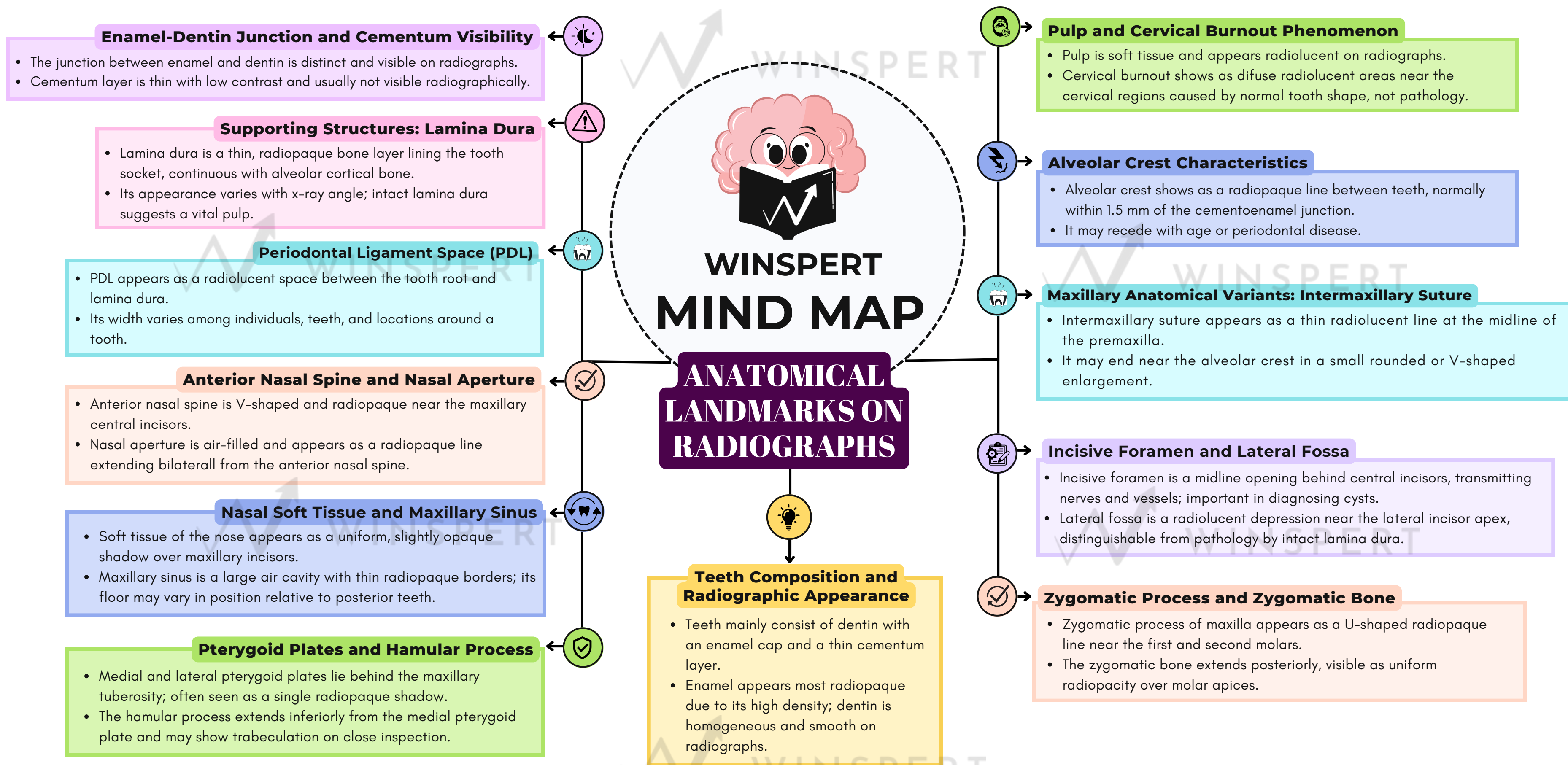
ANATOMICAL LANDMARKS ON RADIOGRAPHS

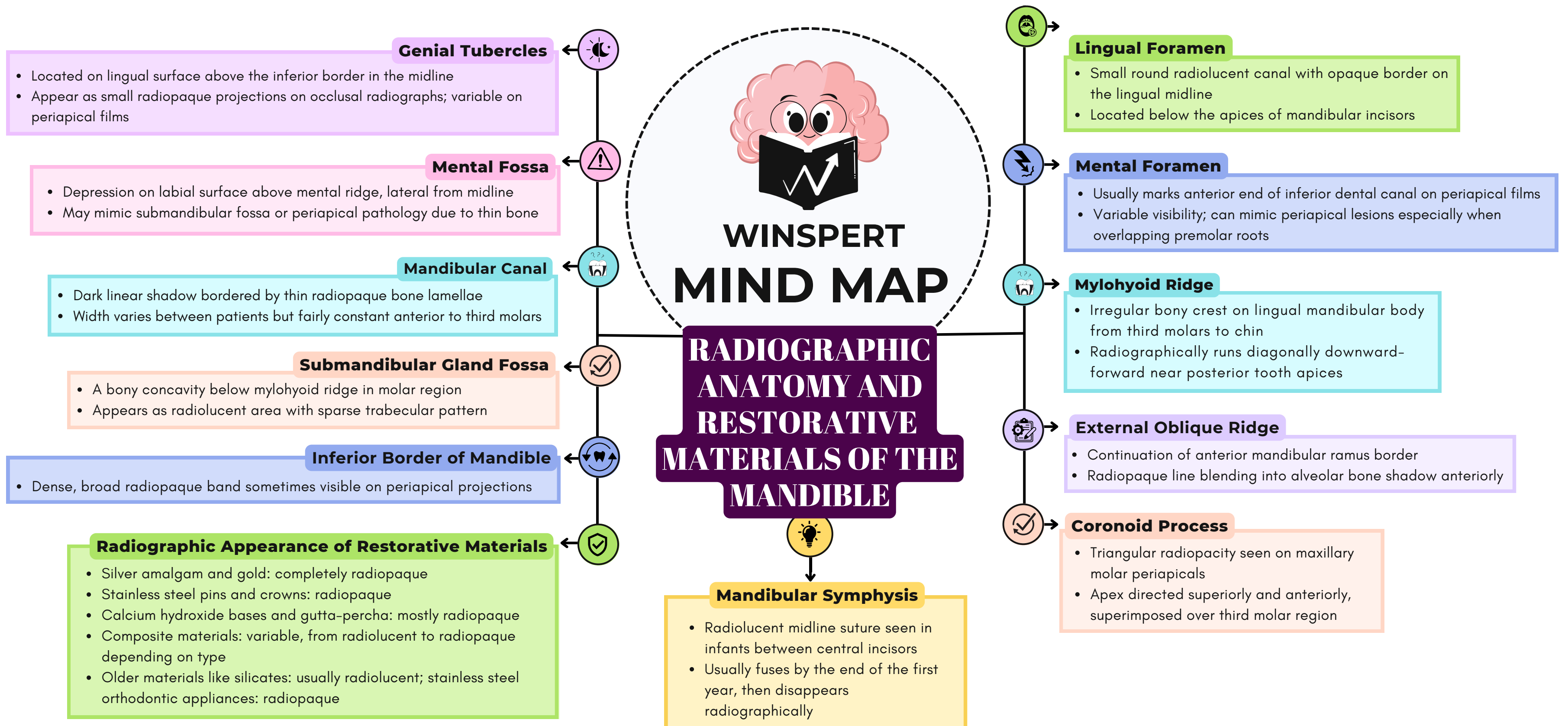


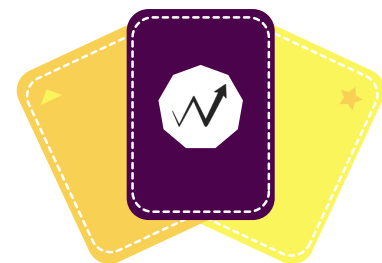
MIND MAP & CUE CARDS



BY DR. JIGYASA SHARMA





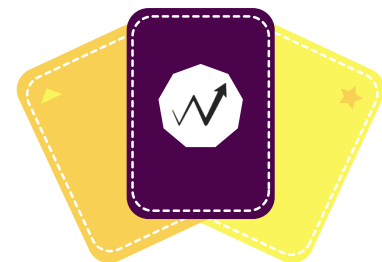


**WINSPERT
CUE CARDS**

ANATOMICAL LANDMARKS ON RADIOGRAPHS

Question 1

What are the primary components of teeth and how do they appear on radiographs?

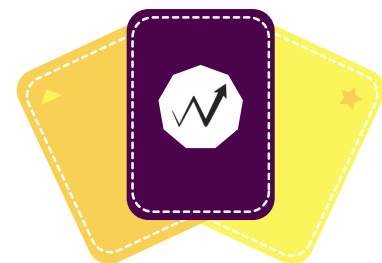


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ANATOMICAL LANDMARKS ON RADIOGRAPHS

Answer 1

Teeth are primarily composed of dentin, with an enamel cap over the crown and a thin layer of cementum over the root. Enamel appears the most radiopaque due to its high density, dentin appears smooth and homogeneous, and cementum is usually not visible because it is thin and similar in density to dentin.



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ANATOMICAL LANDMARKS ON RADIOGRAPHS

Question 2

What is cervical burnout in dental radiographs and how can it be identified?

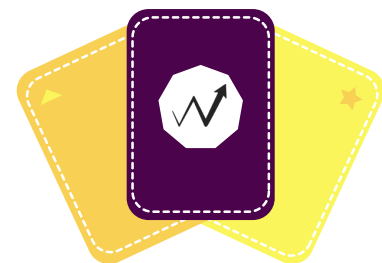


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ANATOMICAL LANDMARKS ON RADIOGRAPHS

Answer 2

Cervical burnout is a diffuse radiolucent area with ill-defined borders near the cervical region of teeth, caused by decreased x-ray absorption due to the tooth's normal shape. It appears between the enamel edge and the alveolar crest and can be identified by intact edges of proximal surfaces and its common presence on almost all teeth.



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ANATOMICAL LANDMARKS ON RADIOGRAPHS

Question 3

Describe the lamina dura and its significance on dental radiographs.

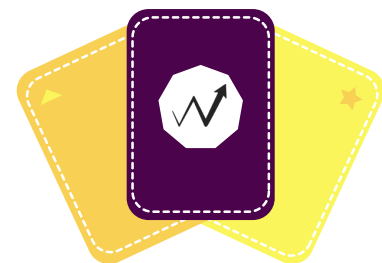


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ANATOMICAL LANDMARKS ON RADIOGRAPHS

Answer 3

The lamina dura is a thin radiopaque layer of dense bone lining the tooth socket, continuous with cortical bone at the alveolar crest. Its presence, especially around the tooth apex, suggests a healthy, vital pulp. Its appearance varies depending on x-ray beam angle and occlusal forces.

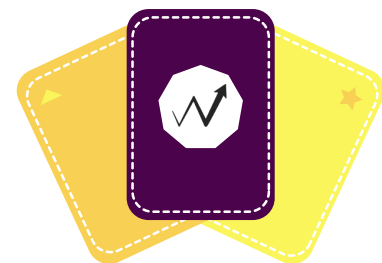


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ANATOMICAL LANDMARKS ON RADIOGRAPHS

Question 4

What is the normal position of the alveolar crest relative to the cemento enamel junction?

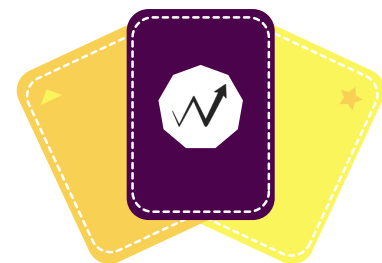


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ANATOMICAL LANDMARKS ON RADIOGRAPHS

Answer 4

The alveolar crest is considered normal when it is no more than 1.5 mm apical to the cementoenamel junction of adjacent teeth. It appears as a radiopaque line on radiographs and may recede with age or periodontal disease.

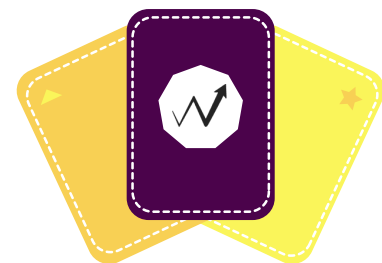


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ANATOMICAL LANDMARKS ON RADIOGRAPHS

Question 5

How does the periodontal ligament (PDL) space appear on radiographs and what factors influence its width?

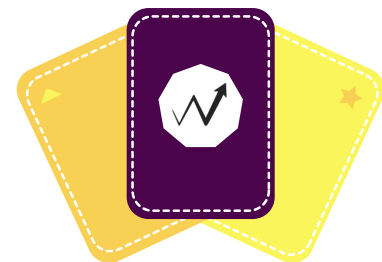


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ANATOMICAL LANDMARKS ON RADIOGRAPHS

Answer 5

The PDL space appears as a radiolucent gap between the tooth root and lamina dura. Its width varies between patients, between different teeth in the same patient, and around different parts of a single tooth.

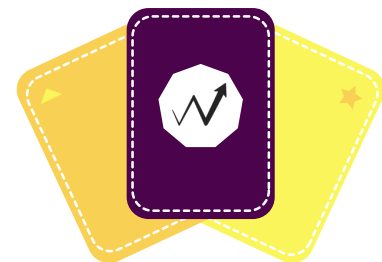


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ANATOMICAL LANDMARKS ON RADIOGRAPHS

Question 6

What is the intermaxillary suture and how does it appear on maxillary radiographs?

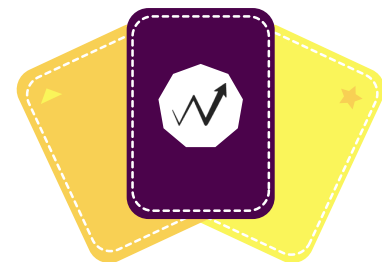


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ANATOMICAL LANDMARKS ON RADIOGRAPHS

Answer 6

The intermaxillary suture is the median suture between the two halves of the premaxilla. On radiographs, it appears as a thin radiolucent line in the midline and may end near the alveolar crest with a small rounded or V-shaped enlargement.

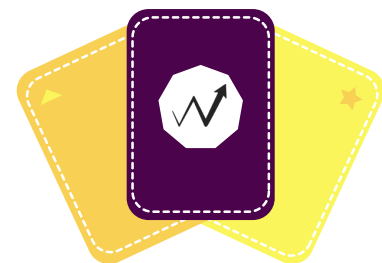


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CUE CARDS**

ANATOMICAL LANDMARKS ON RADIOGRAPHS

Question 7

Where is the incisive foramen located and why is it clinically important?

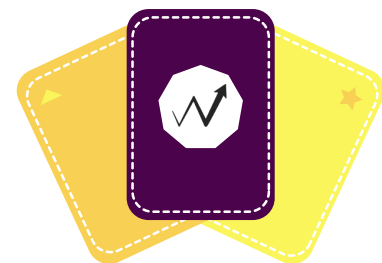


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ANATOMICAL LANDMARKS ON RADIOGRAPHS

Answer 7

The incisive foramen is located in the midline of the palate behind the maxillary central incisors at the junction of the median palatine and incisive sutures. It transmits nasopalatine vessels and nerves and is important because it can be a site for cyst formation, which appears as enlargement on radiographs.



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CUE CARDS**

ANATOMICAL LANDMARKS ON RADIOGRAPHS

Question 8

What radiographic features characterize the maxillary sinus and its relation to adjacent teeth?

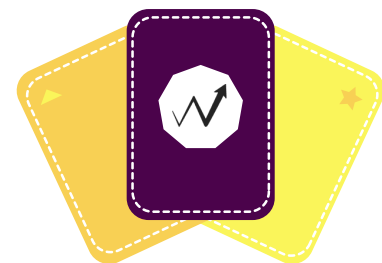


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CUE CARDS**

ANATOMICAL LANDMARKS ON RADIOGRAPHS

Answer 8

The maxillary sinus appears on radiographs as a thin radiopaque line representing its cortical borders. Its floor may extend variably, sometimes overlapping the apices of posterior teeth, and the sinus is pyramid-shaped with walls adjacent to the orbit, premolars, molars, and maxillary tuberosity.



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ANATOMICAL LANDMARKS ON RADIOGRAPHS

Question 9

**Describe the mental foramen
and how it can be
differentiated from periapical
pathology on radiographs.**

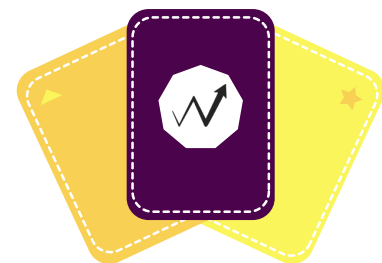


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CUE CARDS**

ANATOMICAL LANDMARKS ON RADIOGRAPHS

Answer 9

The mental foramen is an opening on the anterior border of the mandibular canal, often seen near premolar apices as a radiolucent area. It can mimic periapical pathology but is differentiated by the continuity of the inferior dental canal and sometimes the presence of lamina dura; additional radiographs from different angles help confirm its identity.



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CUE CARDS**

ANATOMICAL LANDMARKS ON RADIOGRAPHS

Question 10

What are the typical radiographic appearances of common restorative materials?



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ANATOMICAL LANDMARKS ON RADIOGRAPHS

Answer 10

Silver amalgam and gold restorations are completely radiopaque. Stainless steel pins and crowns are radiopaque. Calcium hydroxide bases may be radiolucent or radiopaque. Gutta-percha is radiopaque. Composite materials vary from radiolucent to radiopaque depending on type. Silicates are usually radiolucent.

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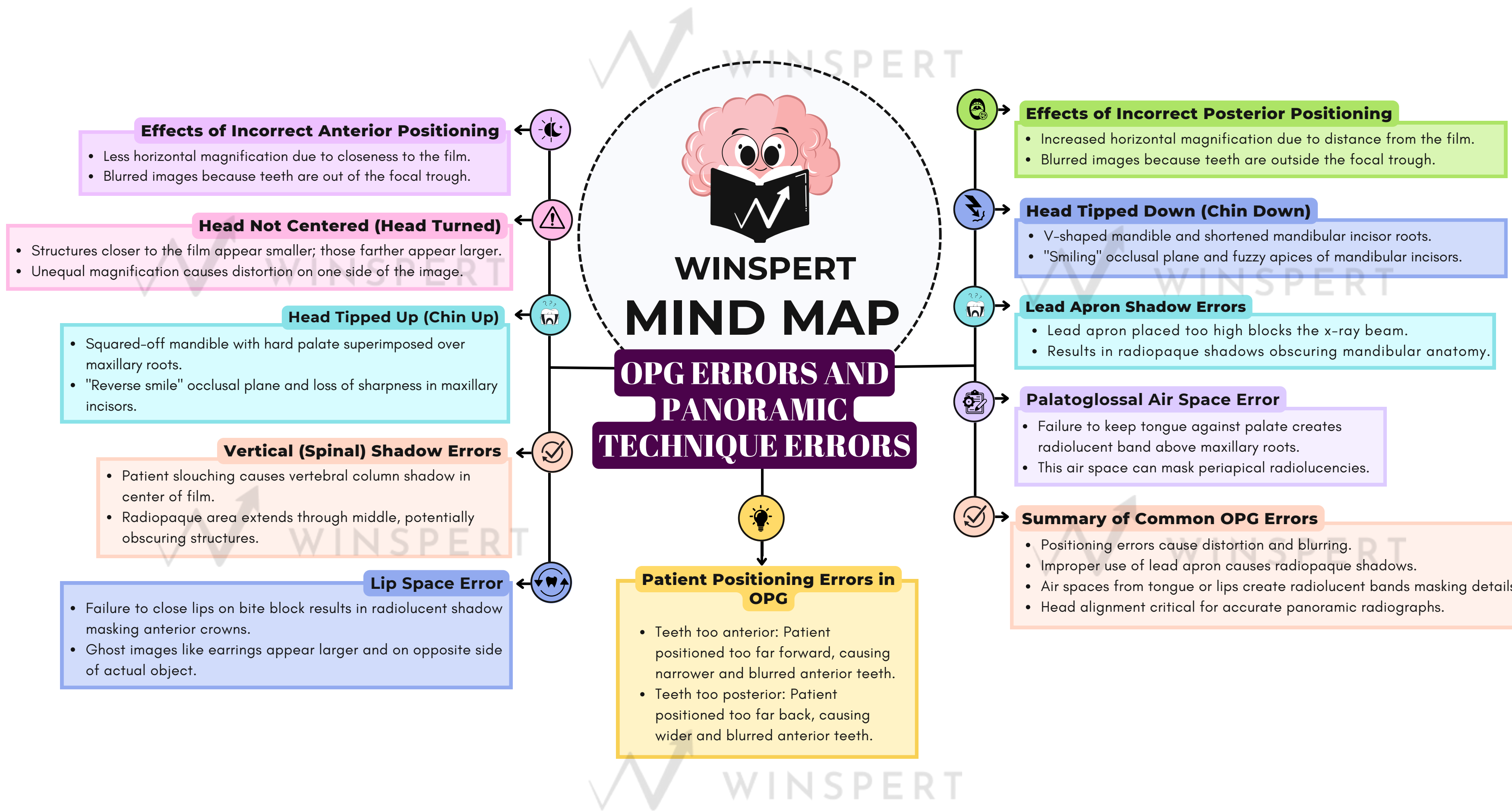
OPG ERRORS

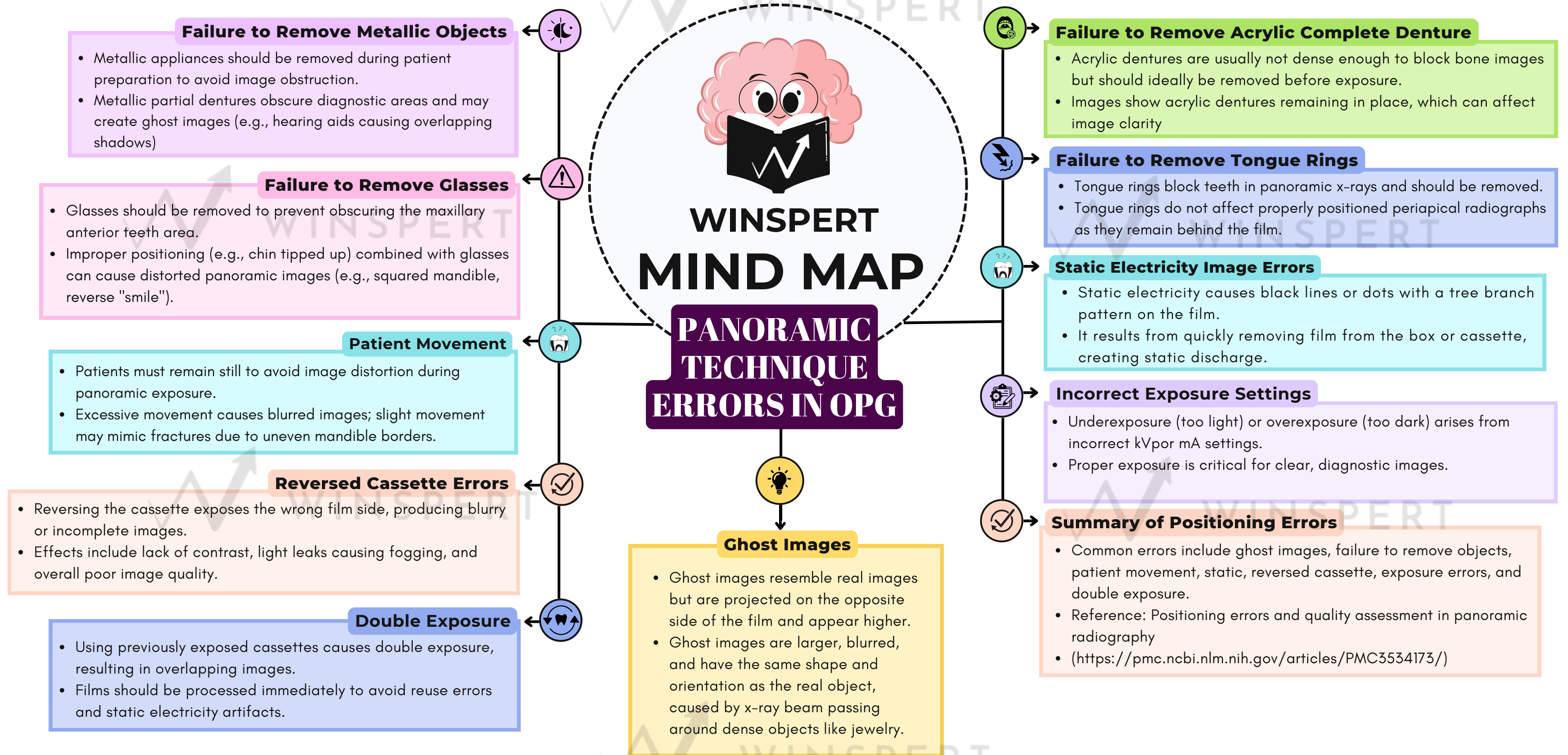


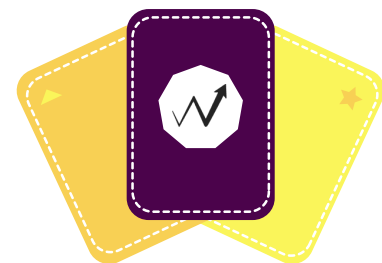
MIND MAP & CUE CARDS



BY DR. JIGYASA SHARMA





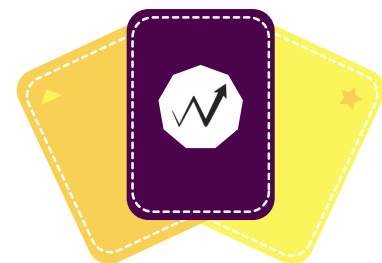


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CUE CARDS**

OPG ERRORS

Question 1

What happens to anterior teeth appearance if the patient is positioned too far forward in an OPG?



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OPG ERRORS

Answer 1

If the patient is too far forward (anterior to the focal trough), the anterior teeth will appear narrower and blurred because they are closer to the film, causing less horizontal magnification and reduced sharpness.



**WINSPERT
CUE CARDS**

OPG ERRORS

Question 2

How does patient positioning too far back affect the panoramic radiograph?

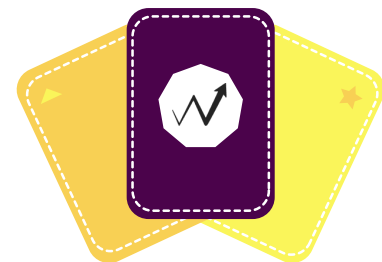


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CUE CARDS**

OPG ERRORS

Answer 2

If the patient is too far back (posterior to the focal trough), the anterior teeth appear wider and blurred due to being farther from the film, which causes more horizontal magnification and decreased image sharpness.



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OPG ERRORS

Question 3

What is the effect on OPG images if the patient's head is turned to one side during exposure?

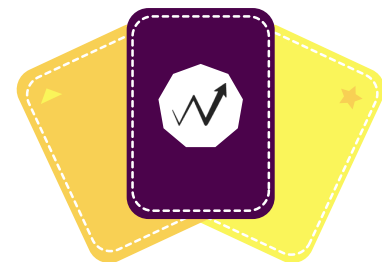


**WINSPERT
CUE CARDS**

OPG ERRORS

Answer 3

When the head is turned, the teeth closer to the film appear smaller due to less magnification, while the teeth farther from the film appear wider because of increased horizontal magnification.



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OPG ERRORS

Question 4

Describe the radiographic changes when the patient's chin is tipped down excessively.

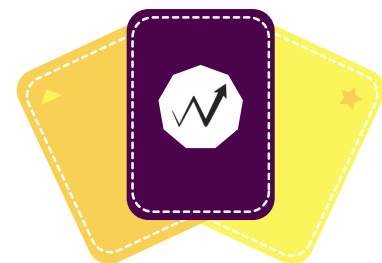


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OPG ERRORS

Answer 4

Excessive chin down positioning causes a V-shaped mandible and shortening of the mandibular incisor roots; the occlusal plane appears “smiling,” and the apices of mandibular incisors become fuzzy.



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CUE CARDS**

OPG ERRORS

Question 5

What are the radiographic consequences of tipping the patient's head up too much during OPG exposure?



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CUE CARDS**

OPG ERRORS

Answer 5

Chin tipped up too much results in a squared-off mandible, superimposition of the hard palate over maxillary roots, a "reverse smile" occlusal plane, and loss of sharpness in maxillary incisor images.



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CUE CARDS**

OPG ERRORS

Question 6

Why should the lead apron be placed low on the patient's neck during panoramic radiographs?

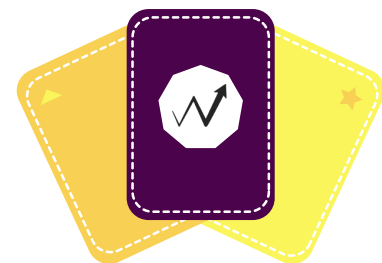


**WINSPERT
CUE CARDS**

OPG ERRORS

Answer 6

The lead apron should be placed low on the neck to avoid blocking the x-ray beam; if placed too high, it causes a radiopaque shadow on the film that obscures a portion of the mandible with no visible teeth or bone.

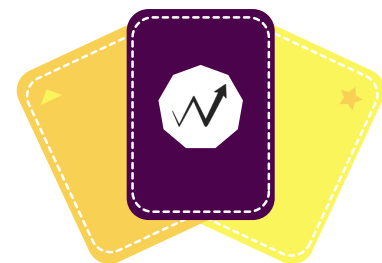


**WINSPERT
CUE CARDS**

OPG ERRORS

Question 7

What causes the palatoglossal air space in a panoramic radiograph and how can it be prevented?



**WINSPERT
CUE CARDS**

OPG ERRORS

Answer 7

The palatoglossal air space is caused by failure to keep the tongue against the palate during exposure, resulting in a radiolucent band above maxillary roots. It can be prevented by asking the patient to swallow and maintain tongue contact with the palate throughout the exposure.



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OPG ERRORS

Question 8

What kind of image artifact is created by ghost images in panoramic radiography?

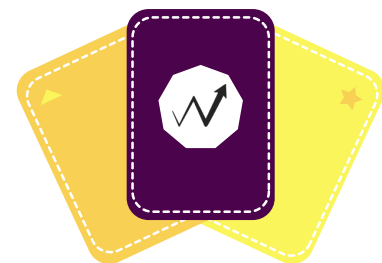


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CUE CARDS**

OPG ERRORS

Answer 8

Ghost images are blurred, larger, and projected higher on the opposite side of the film from the real object (such as jewelry), having the same shape and orientation as the real image but appearing as a secondary artifact.



**WINSPERT
CUE CARDS**

OPG ERRORS

Question 9

What are the effects of patient movement during panoramic radiography?



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CUE CARDS**

OPG ERRORS

Answer 9

Patient movement causes image blurring and distortion; excessive movement requires retaking the film, while slight movement can create uneven mandibular borders that may mimic fractures.



**WINSPERT
CUE CARDS**

OPG ERRORS

Question 10

What problems can arise from using a reversed cassette in panoramic radiography?



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CUE CARDS**

OPG ERRORS

Answer 10

A reversed cassette can produce blurry or incomplete images, lack of contrast, light leaks causing film fogging, and overall poor image quality due to exposure of the wrong side of the film.

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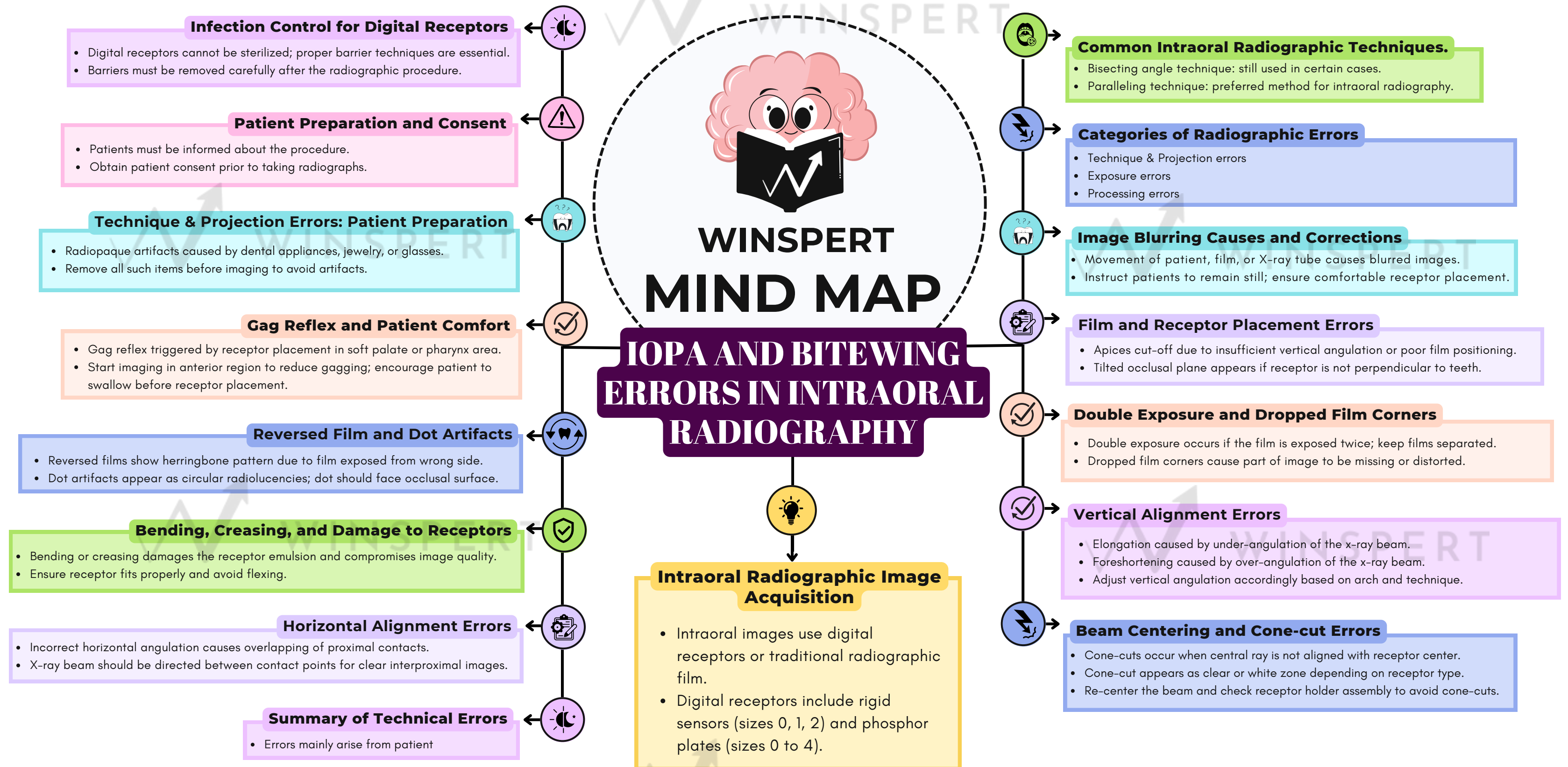
BITEWING AND IOPA ERRORS



MIND MAP & CUE CARDS



BY DR. JIGYASA SHARMA







**WINSPERT
CUE CARDS**

**BITEWING AND
IOPA ERRORS**

Question 1

What are the two main types of intraoral radiographic receptors?



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**BITEWING AND
IOPA ERRORS**

Answer 1

The two main types of intraoral radiographic receptors are digital receptors and radiographic film.



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**BITEWING AND
IOPA ERRORS**

Question 2

What sizes are rigid digital receptors typically available in?



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CUE CARDS**

**BITEWING AND
IOPA ERRORS**

Answer 2

Rigid digital receptors are typically available in sizes 0, 1, and 2.



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CUE CARDS**

**BITEWING AND
IOPA ERRORS**

Question 3

Why can digital receptors not be sterilized, and what must be done because of this?



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**BITEWING AND
IOPA ERRORS**

Answer 3

Digital receptors cannot be sterilized because of their material composition; therefore, proper infection control techniques must be used, including preparing and covering the receptors with barriers and removing them effectively after use.



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**BITEWING AND
IOPA ERRORS**

Question 4

**Which two intraoral
radiographic techniques are
most commonly used?**



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**BITEWING AND
IOPA ERRORS**

Answer 4

The two most commonly used techniques are the bisecting angle technique and the paralleling technique.



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**BITEWING AND
IOPA ERRORS**

Question 5

Which intraoral radiographic technique is considered the method of choice?

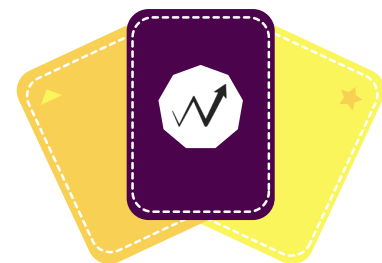


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**BITEWING AND
IOPA ERRORS**

Answer 5

The paralleling technique is the method of choice for intraoral radiography.



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**BITEWING AND
IOPA ERRORS**

Question 6

What are the three main categories of errors in intraoral radiography?



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**BITEWING AND
IOPA ERRORS**

Answer 6

The three main categories of errors are technique and projection errors, exposure errors, and processing errors.



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CUE CARDS**

**BITEWING AND
IOPA ERRORS**

Question 7

What causes radiopaque artifacts on intraoral radiographs, and how can they be corrected?



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CUE CARDS**

**BITEWING AND
IOPA ERRORS**

Answer 7

Radiopaque artifacts are caused by dental appliances, jewelry, or eyeglasses left in the mouth during exposure. Correction involves removing all such items before placing the receptor.



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CUE CARDS**

**BITEWING AND
IOPA ERRORS**

Question 8

What is the most common cause of a blurred image in intraoral radiographs?

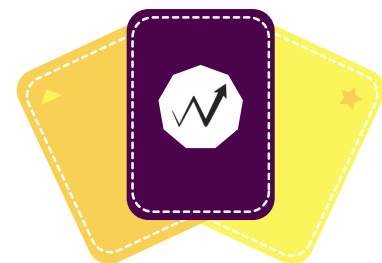


**WINSPERT
CUE CARDS**

**BITEWING AND
IOPA ERRORS**

Answer 8

The most common cause of a blurred image is movement of the film, patient, or X-ray tube head during exposure.



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**BITEWING AND
IOPA ERRORS**

Question 9

How can patient movement during radiographic exposure be minimized?



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CUE CARDS**

**BITEWING AND
IOPA ERRORS**

Answer 9

Patient movement can be minimized by proper receptor placement, explaining the procedure clearly to the patient, asking them to remain still, and using cushioned receptor edges to reduce discomfort.



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CUE CARDS**

**BITEWING AND
IOPA ERRORS**

Question 10

What is a common cause of the gag reflex during intraoral radiography, and how can it be managed?



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CUE CARDS**

**BITEWING AND
IOPA ERRORS**

Answer 10

The gag reflex is commonly stimulated when the receptor touches the soft palate, base of the tongue, or posterior pharynx. It can be managed by starting exposures in the anterior region, encouraging the patient to swallow before receptor placement, and being gentle during placement.

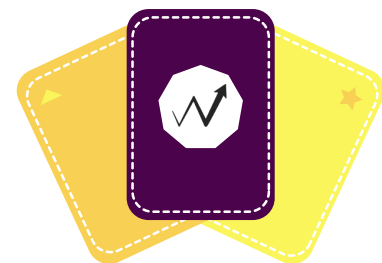


**WINSPERT
CUE CARDS**

**BITEWING AND
IOPA ERRORS**

Question 11

What is the cause and correction for apices cut off in intraoral radiographs?



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**BITEWING AND
IOPA ERRORS**

Answer 11

Apices cut off are caused by insufficient vertical angulation or improper film placement that does not cover the apical regions. Correction involves ensuring the film edge extends no more than 1/8 inch beyond the incisal or occlusal surfaces to cover the apices.



**WINSPERT
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**BITEWING AND
IOPA ERRORS**

Question 12

What does a reversed film error look like, and what causes it?



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**BITEWING AND
IOPA ERRORS**

Answer 12

A reversed film error appears as a light image with a herringbone or tire track pattern due to the embossed lead foil backing being exposed to the X-ray beam. It occurs when the film is placed backward in the mouth.



**WINSPERT
CUE CARDS**

**BITEWING AND
IOPA ERRORS**

Question 13

How can a dot artifact appear on a radiograph, and what is the correct placement of the dot?

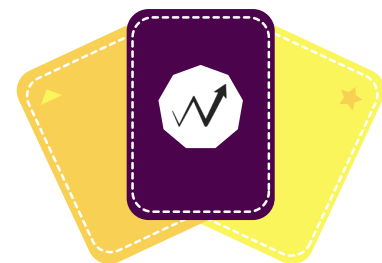


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CUE CARDS**

**BITEWING AND
IOPA ERRORS**

Answer 13

A dot artifact appears as a circular radiolucent spot on the radiograph. The dot should be placed toward the occlusal portion of the teeth.



**WINSPERT
CUE CARDS**

**BITEWING AND
IOPA ERRORS**

Question 14

What causes elongation in radiographic images, and how can it be corrected?



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CUE CARDS**

**BITEWING AND
IOPA ERRORS**

Answer 14

Elongation occurs from under-angulation (too little vertical angle) of the X-ray beam. It can be corrected by increasing the vertical angulation: increasing positive angulation for maxillary arch and negative angulation for mandibular arch.

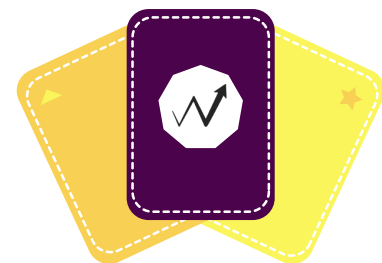


**WINSPERT
CUE CARDS**

**BITEWING AND
IOPA ERRORS**

Question 15

What causes foreshortening in radiographic images, and how can it be corrected?



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CUE CARDS**

**BITEWING AND
IOPA ERRORS**

Answer 15

Foreshortening is caused by over-angulation (too much vertical angle) of the X-ray beam. Correction involves decreasing the positive vertical angulation for maxillary projections and decreasing negative vertical angulation for mandibular projections.



**WINSPERT
CUE CARDS**

**BITEWING AND
IOPA ERRORS**

Question 16

Why is proper horizontal alignment of the X-ray beam important?

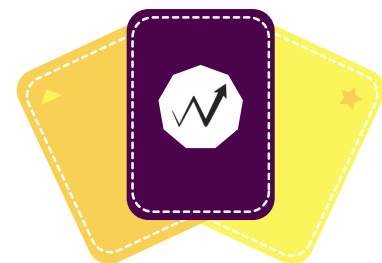


**WINSPERT
CUE CARDS**

**BITEWING AND
IOPA ERRORS**

Answer 16

Proper horizontal alignment opens interproximal contacts, allowing thorough caries evaluation and assessment of alveolar bone levels by preventing the overlapping of proximal contacts.



**WINSPERT
CUE CARDS**

**BITEWING AND
IOPA ERRORS**

Question 17

**What causes a cone-cut error,
and how does it appear on
traditional and digital
radiographs?**

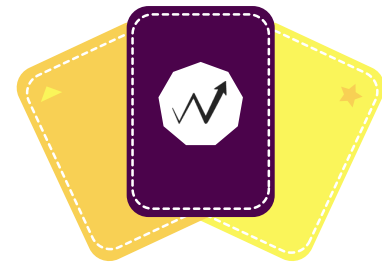


**WINSPERT
CUE CARDS**

**BITEWING AND
IOPA ERRORS**

Answer 17

A cone-cut error is caused by misalignment of the central X-ray beam with the receptor, resulting in a clear zone on traditional radiographs or an opaque white zone on digital images where the beam did not expose the receptor.



**WINSPERT
CUE CARDS**

**BITEWING AND
IOPA ERRORS**

Question 18

What are the common causes of an underexposed radiographic image?



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CUE CARDS**

**BITEWING AND
IOPA ERRORS**

Answer 18

Underexposure can be caused by inadequate exposure time, low kVp or mA settings, increased source-to-object distance, or the operator releasing the exposure button too soon.



**WINSPERT
CUE CARDS**

**BITEWING AND
IOPA ERRORS**

Question 19

What are the signs and causes of a film exposed to light, and how can this be prevented?



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**BITEWING AND
IOPA ERRORS**

Answer 19

A film exposed to light appears black due to accidental exposure to white light. Prevention includes unwrapping films only under safe light conditions and checking the darkroom for light leaks.

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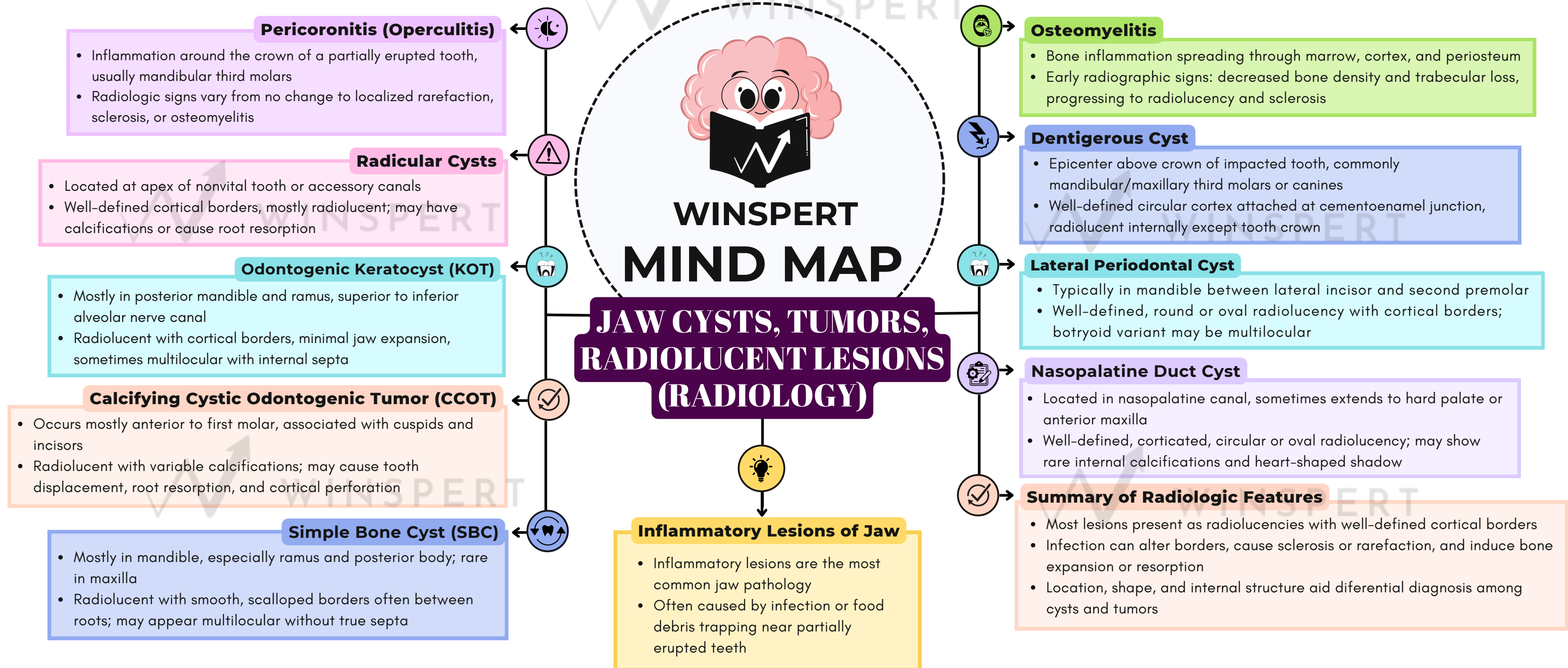
JAW CYSTS, TUMORS, RADIOLOLUCENT LESSIONS

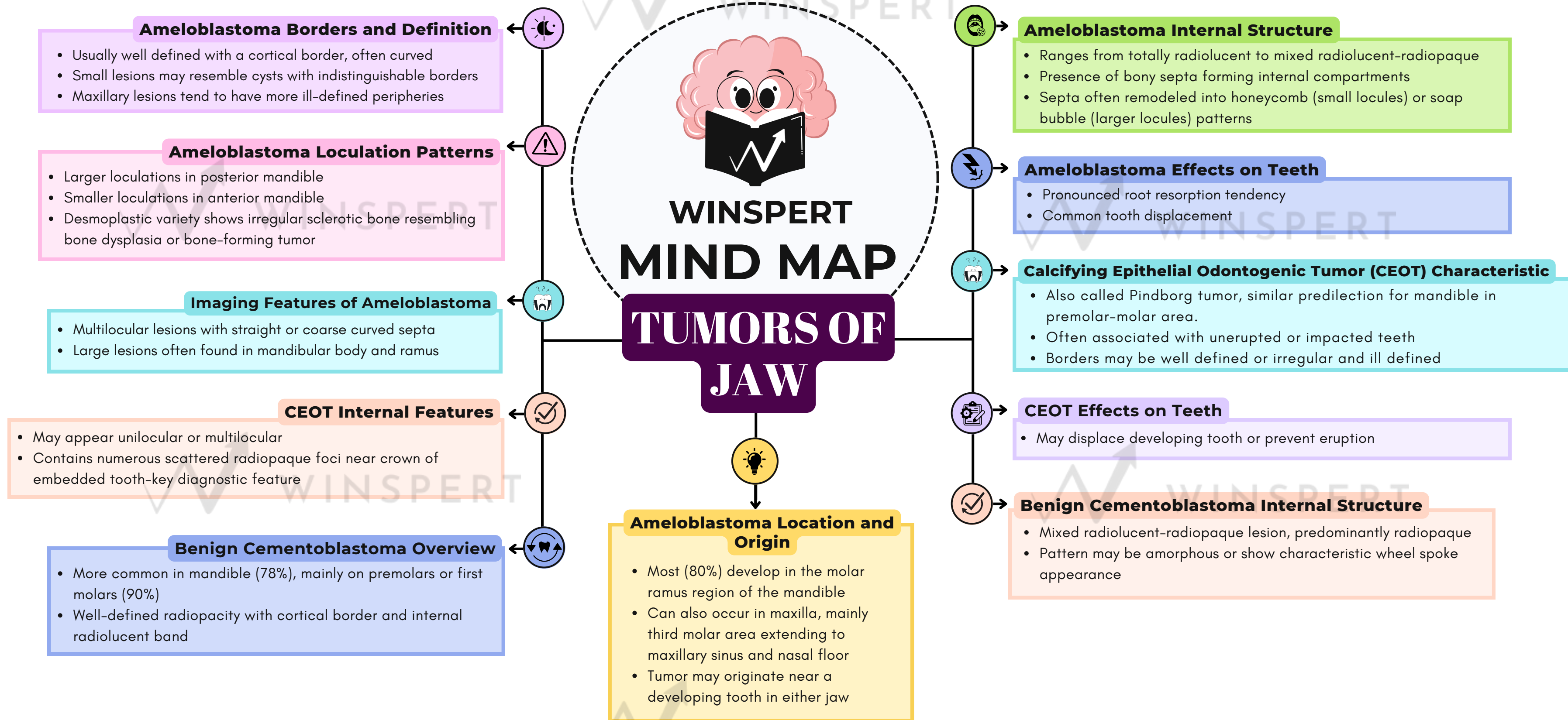


MIND MAP & CUE CARDS



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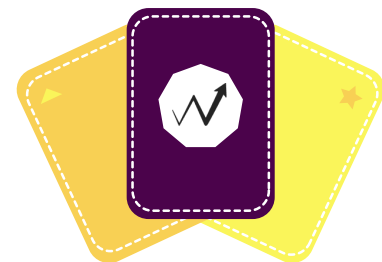


**WINSPERT
CUE CARDS**

**JAW CYSTS, TUMORS,
RADIOLUCENT LESSIONS**

Question 1

What is pericoronitis and which tooth is it most commonly associated with?



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CUE CARDS**

JAW CYSTS, TUMORS, RADIOLUCENT LESIONS

Answer 1

Pericoronitis is inflammation of the tissues surrounding the crown of a partially erupted tooth. It is most commonly associated with the mandibular third molars in young adults.



**WINSPERT
CUE CARDS**

**JAW CYSTS, TUMORS,
RADIOLUCENT LESIONS**

Question 2

What radiologic signs can be observed in pericoronitis when bone changes are present?

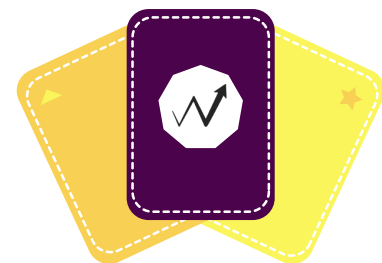


**WINSPERT
CUE CARDS**

JAW CYSTS, TUMORS, RADIOLUCENT LESIONS

Answer 2

When bone changes occur in pericoronitis, they are centered on the follicular space or the portion of the crown still embedded in or near bone. The lesion's periphery is ill-defined with a gradual transition into a sclerotic region, and the adjacent bone shows sclerosis with thick trabeculae. Radiolucency enlarging the follicular space may also be seen.



**WINSPERT
CUE CARDS**

**JAW CYSTS, TUMORS,
RADIOLUCENT LESSIONS**

Question 3

**What are the first
radiographic signs of acute
osteomyelitis in the jaw?**

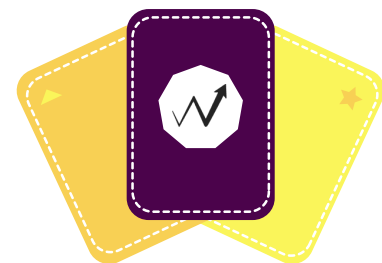


**WINSPERT
CUE CARDS**

JAW CYSTS, TUMORS, RADIOLUCENT LESSIONS

Answer 3

The first radiographic evidence of acute osteomyelitis is a slight decrease in bone density with a loss of sharpness in the existing trabeculae.

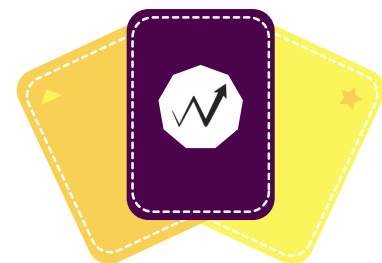


**WINSPERT
CUE CARDS**

**JAW CYSTS, TUMORS,
RADIOLUCENT LESSIONS**

Question 4

**How can sequestra be
identified radiographically in
chronic osteomyelitis?**

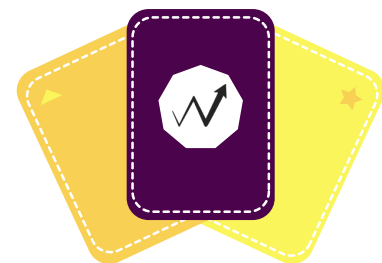


**WINSPERT
CUE CARDS**

JAW CYSTS, TUMORS, RADIOLUCENT LESIONS

Answer 4

Sequestra appear as islands of nonvital bone within areas of radiolucency. They vary in size from small dots (more common in young patients) to larger segments of radiopaque bone.



**WINSPERT
CUE CARDS**

**JAW CYSTS, TUMORS,
RADIOLUCENT LESSIONS**

Question 5

**Where is the epicenter of a
radicular cyst typically
located?**



**WINSPERT
CUE CARDS**

JAW CYSTS, TUMORS, RADIOLUCENT LESSIONS

Answer 5

The epicenter of a radicular cyst is usually located at the apex of a nonvital tooth. Occasionally, it may be found at the mesial or distal root surface, accessory canal openings, or deep periodontal pockets.

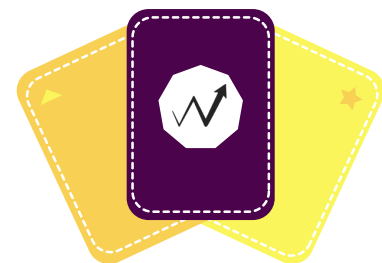


**WINSPERT
CUE CARDS**

**JAW CYSTS, TUMORS,
RADIOLUCENT LESSIONS**

Question 6

**What distinguishes a
dentigerous cyst
radiographically and where is
it most commonly found?**

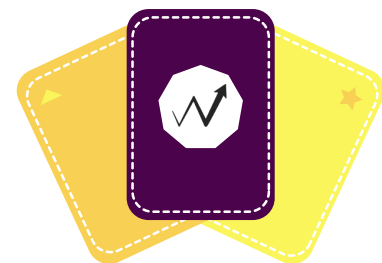


**WINSPERT
CUE CARDS**

JAW CYSTS, TUMORS, RADIOLUCENT LESIONS

Answer 6

A dentigerous cyst typically has a well-defined cortex with a curved or circular outline and attaches at the cementoenamel junction above the crown of an involved tooth. It is most commonly found around mandibular or maxillary third molars and maxillary canines.

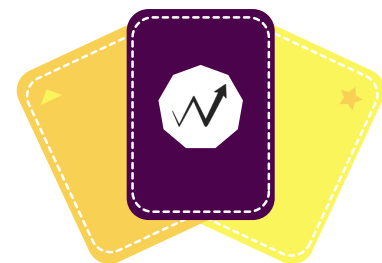


**WINSPERT
CUE CARDS**

**JAW CYSTS, TUMORS,
RADIOLUCENT LESIONS**

Question 7

**What is a keratocystic
odontogenic tumor (KOT) and
what is its common location?**

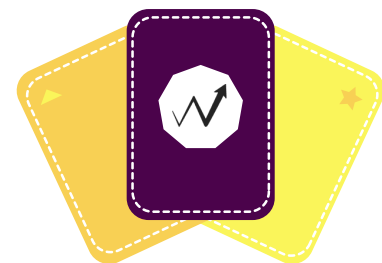


**WINSPERT
CUE CARDS**

JAW CYSTS, TUMORS, RADIOLUCENT LESIONS

Answer 7

A keratocystic odontogenic tumor (KOT) is a cystic lesion commonly found in the posterior body and ramus of the mandible, usually superior to the inferior alveolar nerve canal. It often shows a radiolucent internal structure and may have curved internal septa, giving it a multilocular appearance.

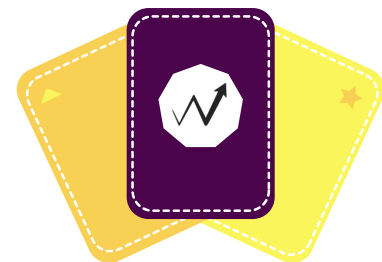


**WINSPERT
CUE CARDS**

**JAW CYSTS, TUMORS,
RADIOLUCENT LESSIONS**

Question 8

Where do lateral periodontal cysts most frequently develop and how do they appear radiographically?

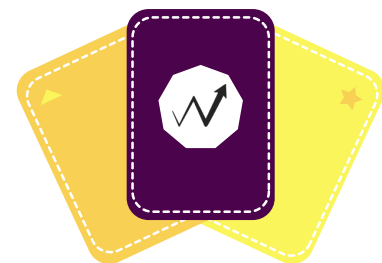


**WINSPERT
CUE CARDS**

JAW CYSTS, TUMORS, RADIOLUCENT LESIONS

Answer 8

Lateral periodontal cysts most frequently develop in the mandible, from the lateral incisor to the second premolar region. Radiographically, they appear as well-defined, round or oval radiolucencies with a prominent cortical boundary.



**WINSPERT
CUE CARDS**

**JAW CYSTS, TUMORS,
RADIOLUCENT LESSIONS**

Question 9

What are the typical features of a calcifying cystic odontogenic tumor (CCOT) on radiographs?



**WINSPERT
CUE CARDS**

JAW CYSTS, TUMORS, RADIOLUCENT LESIONS

Answer 9

CCOTs often occur anterior to the first molar, with a periphery that can be well-defined or ill-defined. Internally, they may appear completely radiolucent or contain small calcified flecks or larger amorphous masses. They can be associated with tooth displacement, root resorption, and cortical plate perforation.



**WINSPERT
CUE CARDS**

**JAW CYSTS, TUMORS,
RADIOLUCENT LESIONS**

Question 10

What radiographic patterns are characteristic of ameloblastomas in the jaw?



**WINSPERT
CUE CARDS**

JAW CYSTS, TUMORS, RADIOLUCENT LESIONS

Answer 10

Ameloblastomas typically show a well-defined, often curved cortical border with internal compartments created by bony septa. These septa can produce honeycomb (many small loculations) or soap bubble (larger loculations) radiographic patterns. Root resorption and tooth displacement are common.

RADIOLOGY

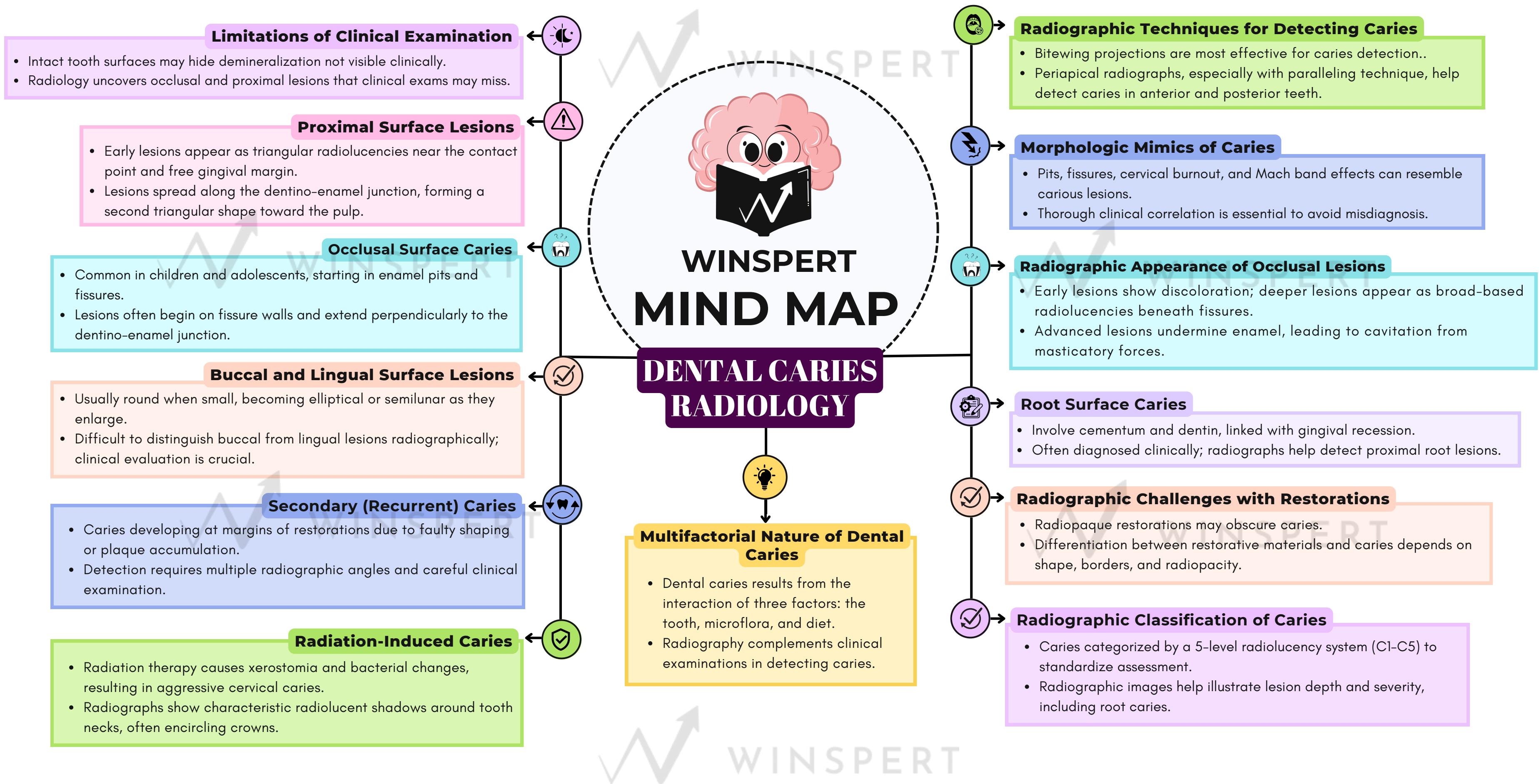
DENTAL CARIES RADIOLOGY

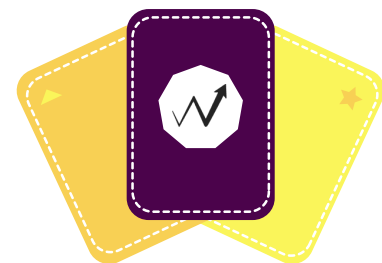


MIND MAP & CUE CARDS



BY DR. JIGYASA SHARMA



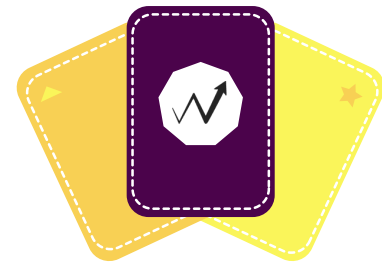


**WINSPERT
CUE CARDS**

**DENTAL CARIES
RADIOLOGY**

Question 1

**What are the three factors
involved in the development of
dental caries?**

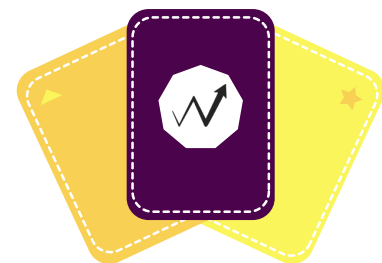


**WINSPERT
CUE CARDS**

**DENTAL CARIES
RADIOLOGY**

Answer 1

Dental caries is a multifactorial disease involving the interaction between the tooth, the microflora, and the diet.

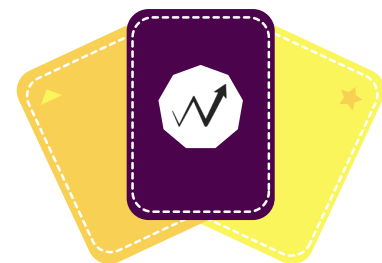


**WINSPERT
CUE CARDS**

**DENTAL CARIES
RADIOLOGY**

Question 2

Why is radiography considered valuable in detecting dental caries?

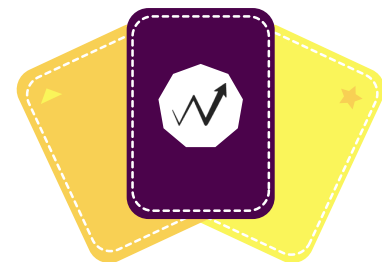


**WINSPERT
CUE CARDS**

**DENTAL CARIES
RADIOLOGY**

Answer 2

Radiography is a valuable supplement to clinical examination because it can reveal demineralizations beneath intact surfaces, especially in occlusal and proximal areas, that may not be visible during a clinical exam.

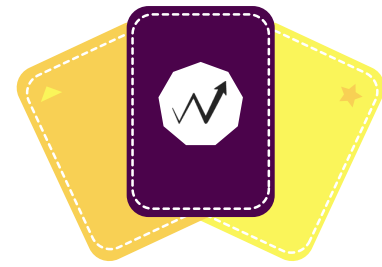


**WINSPERT
CUE CARDS**

**DENTAL CARIES
RADIOLOGY**

Question 3

**Which radiographic projection
is most useful for detecting
dental caries?**

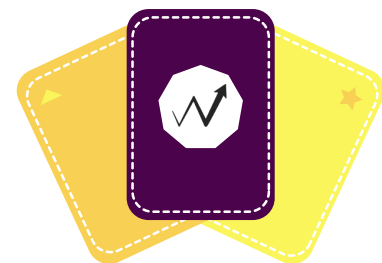


**WINSPERT
CUE CARDS**

**DENTAL CARIES
RADIOLOGY**

Answer 3

The bitewing projection is the most useful radiologic examination for detecting caries.

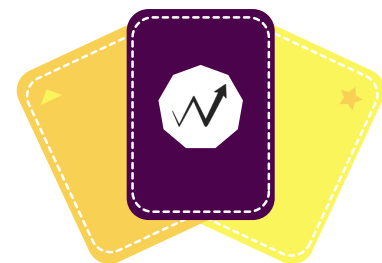


**WINSPERT
CUE CARDS**

**DENTAL CARIES
RADIOLOGY**

Question 4

What is the classic radiographic appearance of early proximal enamel carious lesions?

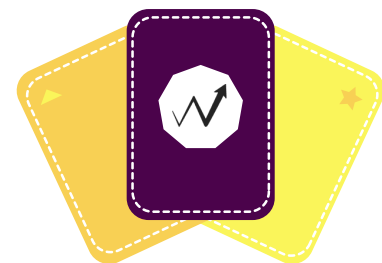


**WINSPERT
CUE CARDS**

**DENTAL CARIES
RADIOLOGY**

Answer 4

Early proximal enamel carious lesions typically appear as a triangular radiolucency with the broad base at the tooth surface, spreading along the enamel rods.

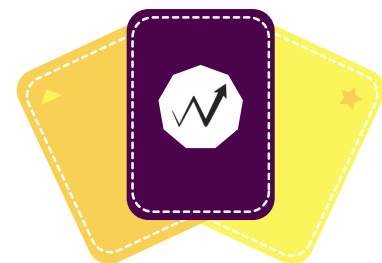


**WINSPERT
CUE CARDS**

**DENTAL CARIES
RADIOLOGY**

Question 5

How do carious lesions progress when they reach the dentino-enamel junction (DEJ)?

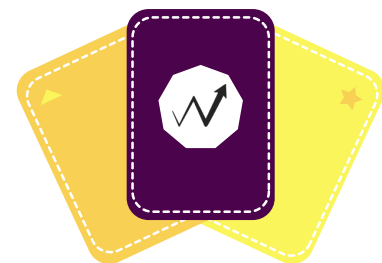


**WINSPERT
CUE CARDS**

**DENTAL CARIES
RADIOLOGY**

Answer 5

When lesions reach the DEJ, they spread along the junction forming a second triangle with its apex directed toward the pulp, progressing deeper through the dentinal tubules.

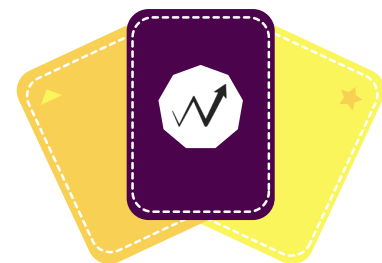


**WINSPERT
CUE CARDS**

**DENTAL CARIES
RADIOLOGY**

Question 6

Where do occlusal carious lesions commonly start, and how do they appear clinically?



**WINSPERT
CUE CARDS**

**DENTAL CARIES
RADIOLOGY**

Answer 6

Occlusal lesions commonly start on the sides of fissure walls rather than the base and appear as chalky white, yellow, brown, or black discolorations of the occlusal fissures.

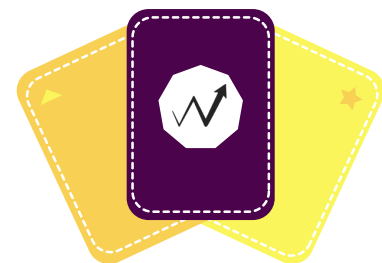


**WINSPERT
CUE CARDS**

**DENTAL CARIES
RADIOLOGY**

Question 7

What challenges exist in radiographically detecting buccal and lingual carious lesions?

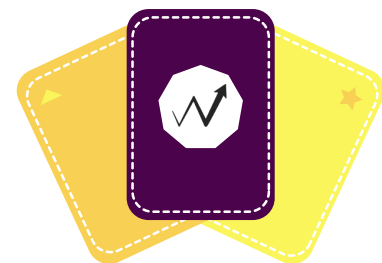


**WINSPERT
CUE CARDS**

**DENTAL CARIES
RADIOLOGY**

Answer 7

It can be difficult to differentiate buccal from lingual lesions on radiographs, and these lesions often present as round or elliptical radiolucencies with sharp, well-defined borders surrounded by non-carious enamel.



**WINSPERT
CUE CARDS**

**DENTAL CARIES
RADIOLOGY**

Question 8

What characterizes root surface caries, and how are they typically diagnosed?

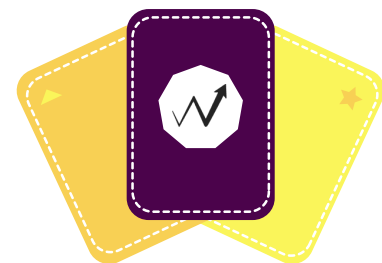


**WINSPERT
CUE CARDS**

**DENTAL CARIES
RADIOLOGY**

Answer 8

Root surface caries involve cementum and dentin, are associated with gingival recession, and are usually diagnosed clinically since radiographs are often not necessary, except in proximal root surfaces.

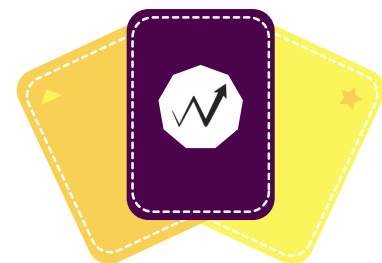


**WINSPERT
CUE CARDS**

**DENTAL CARIES
RADIOLOGY**

Question 9

What are secondary or recurrent caries, and how can they be detected radiographically?

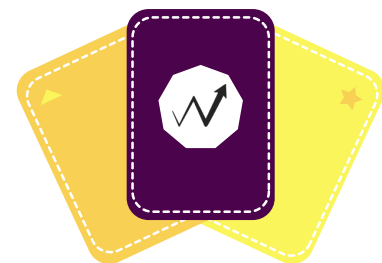


**WINSPERT
CUE CARDS**

**DENTAL CARIES
RADIOLOGY**

Answer 9

Secondary or recurrent caries develop at the margins of existing restorations, often due to plaque accumulation from faulty restoration shaping. They can be obscured by radiopaque restorations but may be detected using radiographs taken at different angulations.

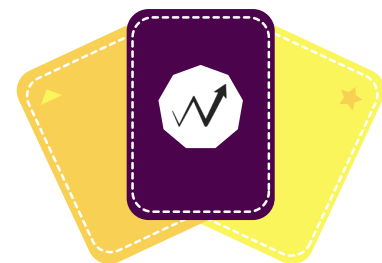


**WINSPERT
CUE CARDS**

**DENTAL CARIES
RADIOLOGY**

Question 10

**What are the typical features
and radiographic appearance of
radiation caries?**



**WINSPERT
CUE CARDS**

**DENTAL CARIES
RADIOLOGY**

Answer 10

Radiation caries occur after therapeutic head and neck radiation causing xerostomia and changes in tooth structure; they begin at the cervical region and aggressively encircle the tooth. Radiographically, they appear as radiolucent shadows at the necks of teeth, especially on mesial and distal aspects.

RADIOLOGY

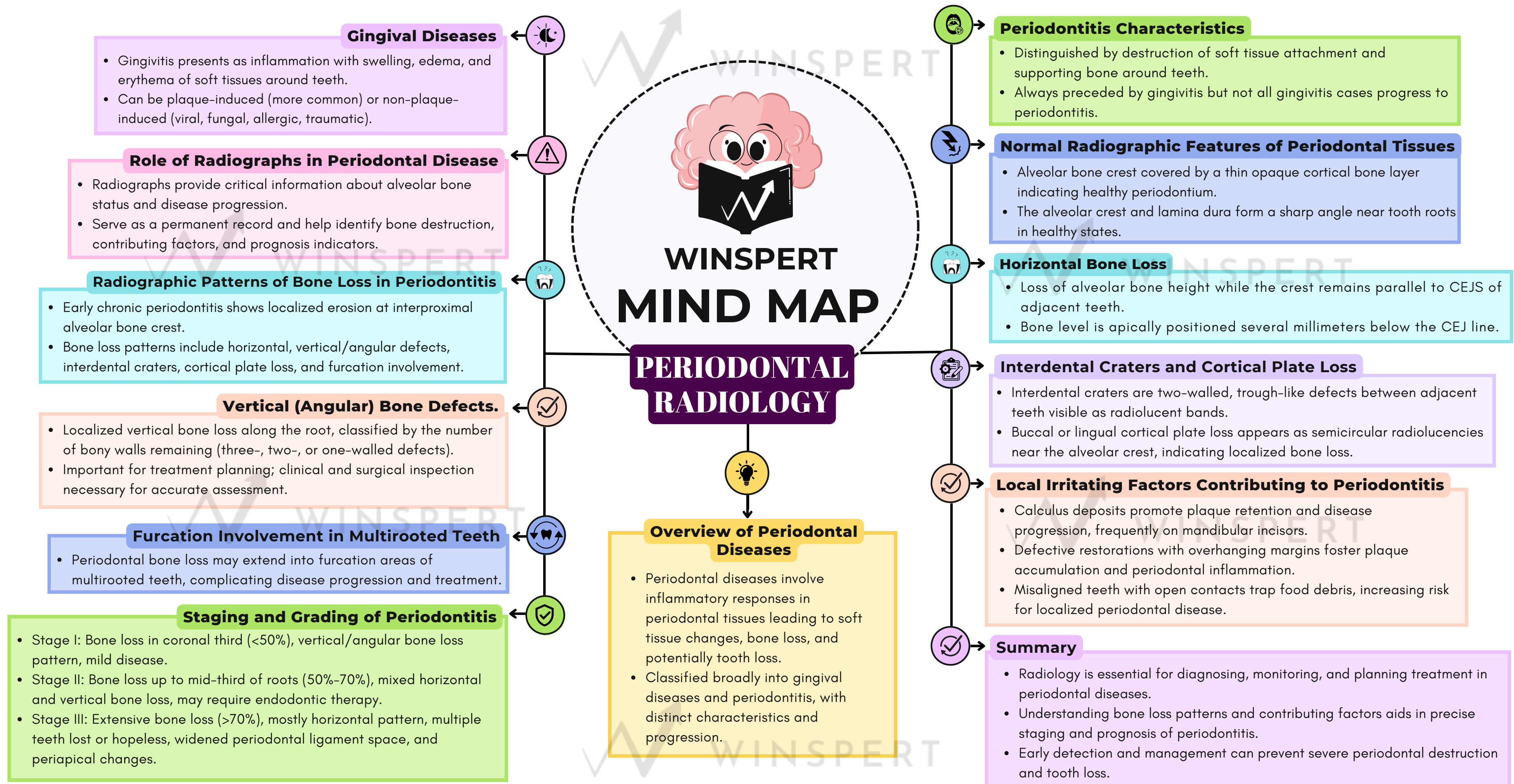
PERIODONTITIS RADIOLOGY

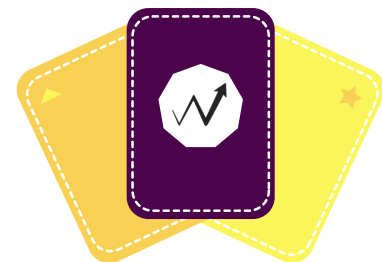


MIND MAP & CUE CARDS



BY DR. JIGYASA SHARMA



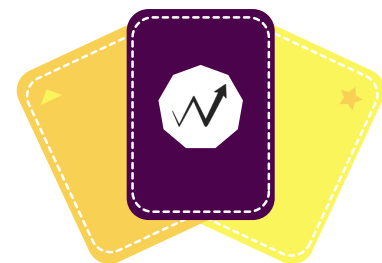


**WINSPERT
CUE CARDS**

**PERIODONTITIS
RADIOLOGY**

Question 1

**What are periodontal diseases
and what tissues do they
affect?**



**WINSPERT
CUE CARDS**

**PERIODONTITIS
RADIOLOGY**

Answer 1

Periodontal diseases are a set of conditions characterized by an inflammatory host response in the periodontal tissues that may lead to localized or generalized changes in the soft tissues around the teeth, loss of supporting bone, and ultimately, tooth loss.

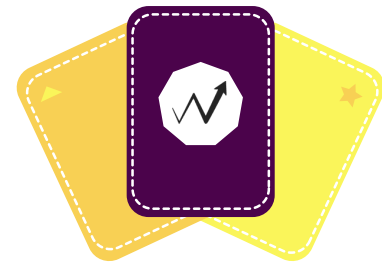


**WINSPERT
CUE CARDS**

**PERIODONTITIS
RADIOLOGY**

Question 2

**How are periodontal diseases
broadly classified?**

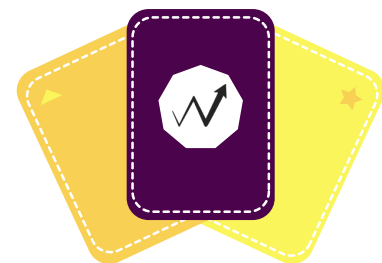


**WINSPERT
CUE CARDS**

**PERIODONTITIS
RADIOLOGY**

Answer 2

Periodontal diseases are broadly classified as gingival diseases and periodontitis.



**WINSPERT
CUE CARDS**

**PERIODONTITIS
RADIOLOGY**

Question 3

**What distinguishes gingivitis
from periodontitis clinically?**



**WINSPERT
CUE CARDS**

**PERIODONTITIS
RADIOLOGY**

Answer 3

Gingivitis presents as inflammation of soft tissue around the teeth with swelling, edema, and erythema, while periodontitis is distinguished by clinically detectable destruction of host tissues seen as loss of soft tissue attachment and supporting bone.



**WINSPERT
CUE CARDS**

**PERIODONTITIS
RADIOLOGY**

Question 4

**What role do radiographs play
in periodontal disease
assessment?**

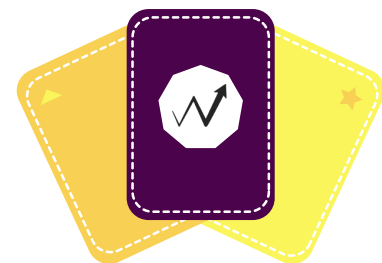


**WINSPERT
CUE CARDS**

**PERIODONTITIS
RADIOLOGY**

Answer 4

Radiographs provide unique information about the status of the periodontium, offer a permanent record of bone condition, help identify the extent of alveolar bone destruction, local contributing factors, and features influencing prognosis.



**WINSPERT
CUE CARDS**

**PERIODONTITIS
RADIOLOGY**

Question 5

**Describe the radiographic
appearance of normal alveolar
bone.**

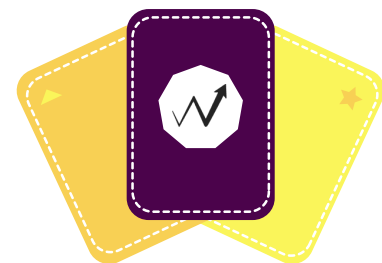


**WINSPERT
CUE CARDS**

**PERIODONTITIS
RADIOLOGY**

Answer 5

Normal alveolar bone shows a thin layer of opaque cortical bone covering the alveolar crest, a well-mineralized cortical outline indicating no periodontitis activity, and a sharp angle where the alveolar crest meets the lamina dura of adjacent teeth.

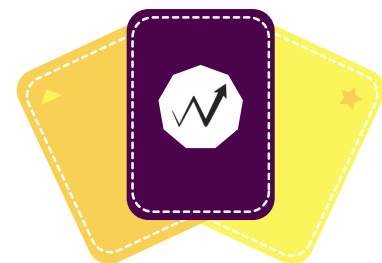


**WINSPERT
CUE CARDS**

**PERIODONTITIS
RADIOLOGY**

Question 6

What are the general radiographic patterns of bone loss seen in periodontitis?

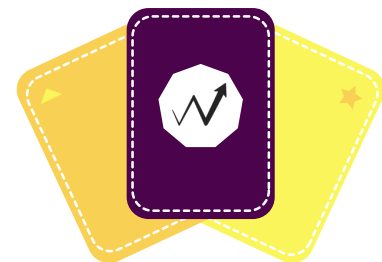


**WINSPERT
CUE CARDS**

**PERIODONTITIS
RADIOLOGY**

Answer 6

Bone loss patterns include horizontal bone loss, vertical (angular) defects, interdental craters, buccal or lingual cortical plate loss, and furcation involvement in multirooted teeth.

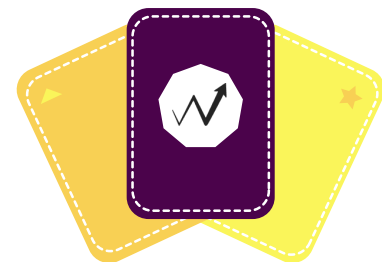


**WINSPERT
CUE CARDS**

**PERIODONTITIS
RADIOLOGY**

Question 7

What is horizontal bone loss in periodontal radiographs?



**WINSPERT
CUE CARDS**

**PERIODONTITIS
RADIOLOGY**

Answer 7

Horizontal bone loss is the radiographic loss in height of alveolar bone where the crest remains horizontal and parallel to a line joining the cementsoenamel junctions (CEJs) of adjacent teeth but is positioned apically more than a few millimeters from the CEJs.



**WINSPERT
CUE CARDS**

**PERIODONTITIS
RADIOLOGY**

Question 8

**How are vertical (angular)
bone defects described and
classified?**



**WINSPERT
CUE CARDS**

**PERIODONTITIS
RADIOLOGY**

Answer 8

Vertical osseous defects are localized bony lesions extending apically along the root from the alveolar crest, classified as three-walled, two-walled, or one-walled defects depending on the presence or absence of buccal and lingual cortical plates.

RADIOLOGY

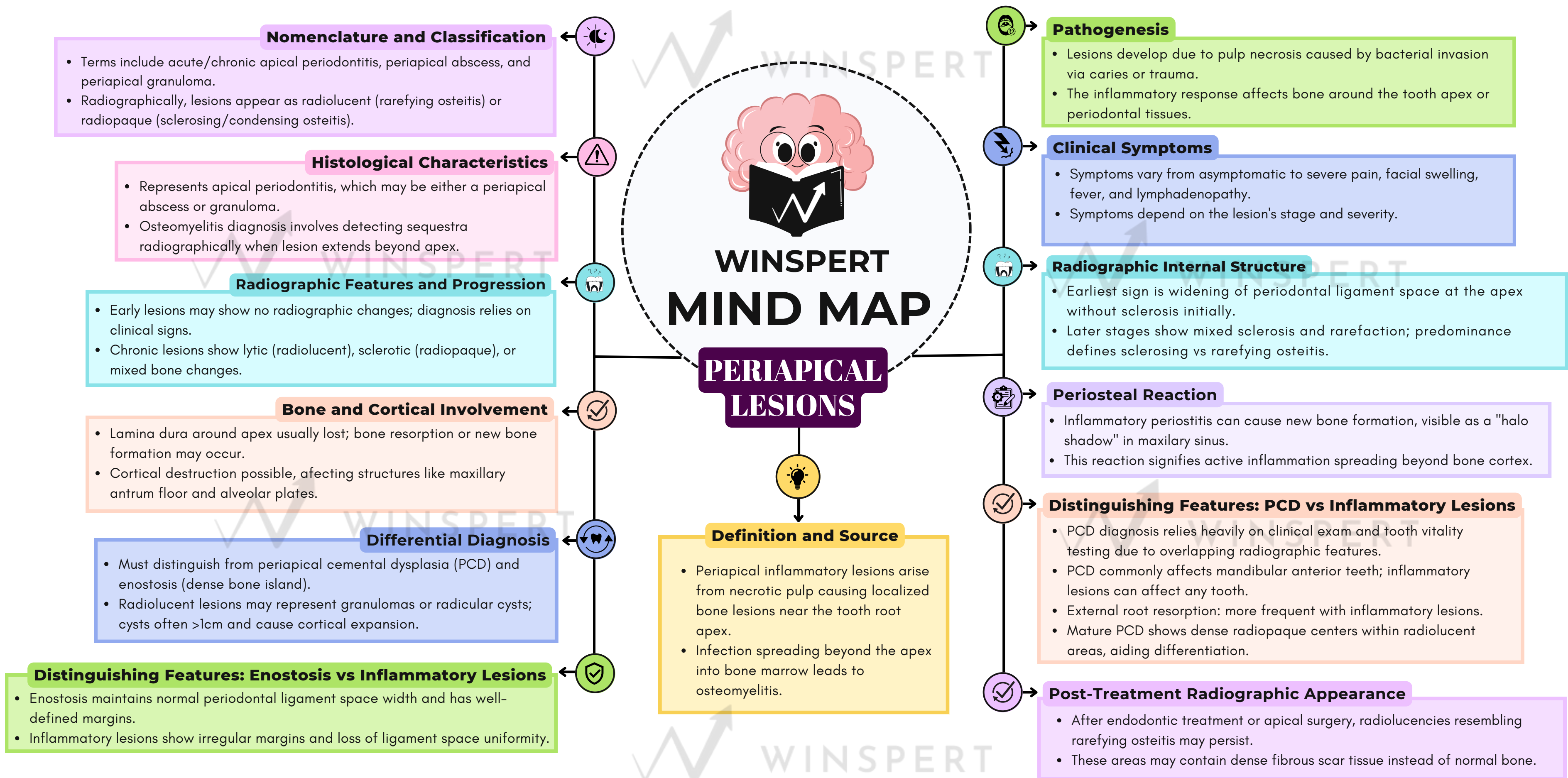
PERIAPICAL LESIONS

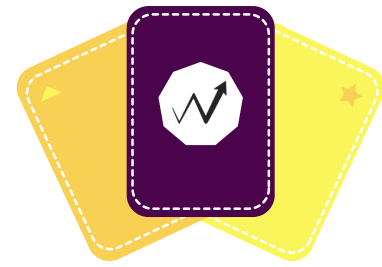


MIND MAP & CUE CARDS



BY DR. JIGYASA SHARMA



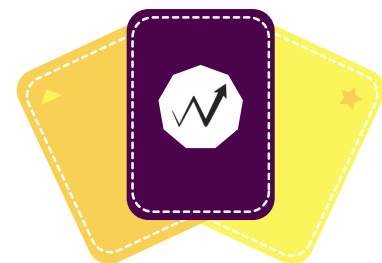


**WINSPERT
CUE CARDS**

**PERIAPICAL
LESIONS**

Question 1

What defines a periapical inflammatory lesion and what is the initial source of inflammation?

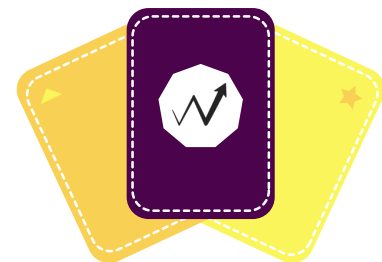


**WINSPERT
CUE CARDS**

**PERIAPICAL
LESIONS**

Answer 1

A periapical inflammatory lesion is a local response of the bone around the apex of a tooth that occurs due to necrosis of the pulp or destruction of periapical tissues by extensive periodontal disease. The initial source of inflammation is a necrotic pulp.

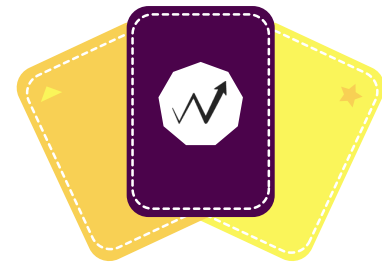


**WINSPERT
CUE CARDS**

**PERIAPICAL
LESIONS**

Question 2

What condition is diagnosed when the infection spreads beyond the tooth root apex into the bone marrow?



**WINSPERT
CUE CARDS**

**PERIAPICAL
LESIONS**

Answer 2

When the infection spreads beyond the tooth root apex into the bone marrow and is no longer localized, the condition is called osteomyelitis.



**WINSPERT
CUE CARDS**

**PERIAPICAL
LESIONS**

Question 3

What are some alternative names used for periapical inflammatory lesions?

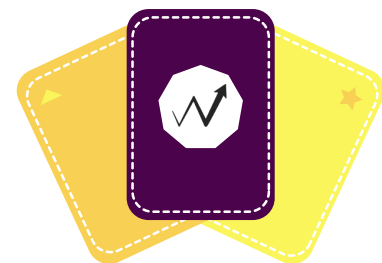


**WINSPERT
CUE CARDS**

**PERIAPICAL
LESIONS**

Answer 3

Periapical inflammatory lesions have been called acute apical periodontitis, chronic apical periodontitis, periapical abscess, and periapical granuloma.

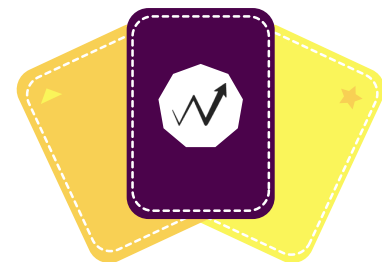


**WINSPERT
CUE CARDS**

**PERIAPICAL
LESIONS**

Question 4

How are radiolucent and radiopaque presentations of periapical inflammatory lesions termed radiographically?

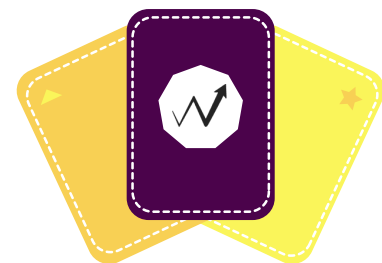


**WINSPERT
CUE CARDS**

**PERIAPICAL
LESIONS**

Answer 4

Radiolucent presentations are called rarefying osteitis, whereas radiopaque presentations are called sclerosing osteitis, condensing osteitis, or focal sclerosing osteitis.

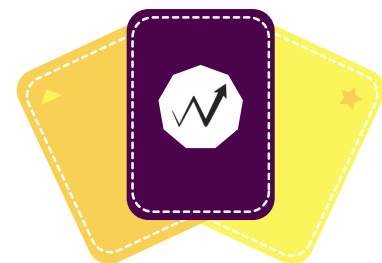


**WINSPERT
CUE CARDS**

**PERIAPICAL
LESIONS**

Question 5

**What are the earliest
radiographic changes seen in
periapical inflammatory
lesions?**

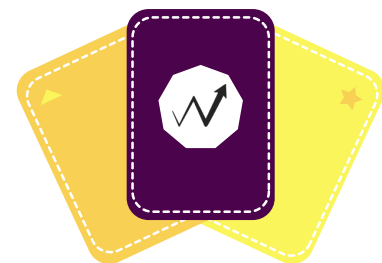


**WINSPERT
CUE CARDS**

**PERIAPICAL
LESIONS**

Answer 5

The earliest radiographic change is loss of bone density, usually seen as widening of the periodontal ligament (PDL) space at the apex of the tooth. Early lesions may show no sclerotic bone reaction.

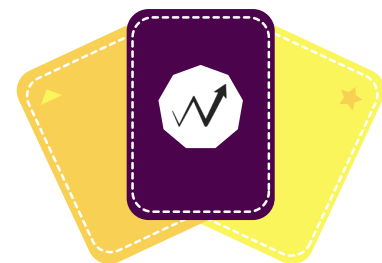


**WINSPERT
CUE CARDS**

**PERIAPICAL
LESIONS**

Question 6

How do periapical inflammatory lesions affect bone, and what terms are used depending on whether bone resorption or formation predominates?



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**PERIAPICAL
LESIONS**

Answer 6

Periapical inflammatory lesions may stimulate either bone resorption or new bone formation. When bone formation predominates, the lesion is called periapical sclerosing osteitis; when bone resorption predominates, it is called periapical rarefying osteitis.

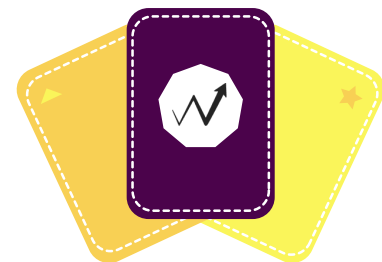


**WINSPERT
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**PERIAPICAL
LESIONS**

Question 7

What are the typical clinical symptoms associated with periapical inflammatory lesions?



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**PERIAPICAL
LESIONS**

Answer 7

Symptoms can range from asymptomatic to occasional toothache, to severe pain with or without facial swelling, fever, and lymphadenopathy.

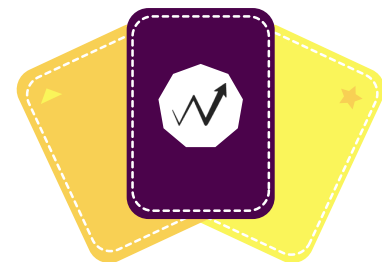


**WINSPERT
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**PERIAPICAL
LESIONS**

Question 8

What radiographic feature helps distinguish osteomyelitis from periapical inflammation?

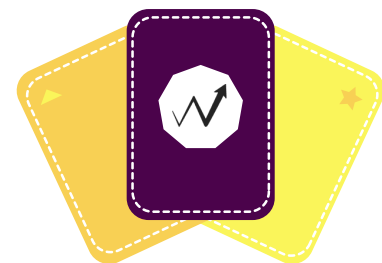


**WINSPERT
CUE CARDS**

**PERIAPICAL
LESIONS**

Answer 8

The presence of sequestra (dead bone fragments) detected radiographically helps distinguish osteomyelitis from periapical inflammation.

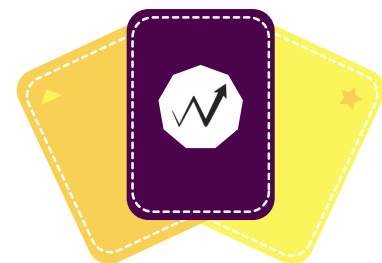


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**PERIAPICAL
LESIONS**

Question 9

What is the main differential diagnosis for periapical inflammatory lesions, and how can they be distinguished?



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**PERIAPICAL
LESIONS**

Answer 9

The main differential diagnoses are periapical cemental dysplasia (PCD) and enostosis (dense bone island). PCD often occurs at mandibular anterior teeth and shows a dense radiopaque structure in mature lesions, while enostosis has a well-defined border and normal periodontal ligament space. Clinical tests like tooth vitality are crucial for differentiation.