Ground Truth   Ensemble Prediction

Grounding Caption

This localization caption provides multi-dimensional spatial analysis of anatomical structures and pathological findings for this panoramic dental X-ray image, including:

Teeth visibility with center points (total: 28):
[
{'point_2d': [462, 454], 'tooth_id': '36', 'score': 0.96},
{'point_2d': [792, 471], 'tooth_id': '45', 'score': 0.94},
{'point_2d': [858, 444], 'tooth_id': '46', 'score': 0.94},
{'point_2d': [822, 250], 'tooth_id': '15', 'score': 0.94},
{'point_2d': [945, 414], 'tooth_id': '47', 'score': 0.93},
{'point_2d': [934, 233], 'tooth_id': '17', 'score': 0.92},
{'point_2d': [518, 471], 'tooth_id': '35', 'score': 0.92},
{'point_2d': [776, 259], 'tooth_id': '14', 'score': 0.9},
{'point_2d': [387, 258], 'tooth_id': '27', 'score': 0.9},
{'point_2d': [563, 482], 'tooth_id': '34', 'score': 0.9},
{'point_2d': [394, 440], 'tooth_id': '37', 'score': 0.9},
{'point_2d': [502, 266], 'tooth_id': '25', 'score': 0.89},
{'point_2d': [751, 477], 'tooth_id': '44', 'score': 0.88},
{'point_2d': [545, 274], 'tooth_id': '24', 'score': 0.88},
{'point_2d': [713, 482], 'tooth_id': '43', 'score': 0.88},
{'point_2d': [598, 489], 'tooth_id': '33', 'score': 0.87},
{'point_2d': [447, 253], 'tooth_id': '26', 'score': 0.87},
{'point_2d': [996, 232], 'tooth_id': '18', 'score': 0.86},
{'point_2d': [740, 260], 'tooth_id': '13', 'score': 0.79},
{'point_2d': [619, 287], 'tooth_id': '22', 'score': 0.78},
{'point_2d': [650, 294], 'tooth_id': '21', 'score': 0.76},
{'point_2d': [644, 477], 'tooth_id': '31', 'score': 0.75},
{'point_2d': [629, 481], 'tooth_id': '32', 'score': 0.74},
{'point_2d': [579, 281], 'tooth_id': '23', 'score': 0.72},
{'point_2d': [664, 476], 'tooth_id': '41', 'score': 0.72},
{'point_2d': [685, 480], 'tooth_id': '42', 'score': 0.71},
{'point_2d': [873, 234], 'tooth_id': '16', 'score': 0.64},
{'point_2d': [678, 289], 'tooth_id': '11', 'score': 0.63}
]

Wisdom teeth detection (total: 1):
[
{'box_2d': [944, 168, 1047, 297], 'tooth_id': '18', 'is_impacted': false, 'score': 0.86}
]

Dental Pathological Findings (total: 3):
[
{'box_2d': [273, 353, 368, 436], 'tooth_id': 'unknown', 'label': 'impacted', 'score': 0.95, 'near_tooth': '37'},
{'box_2d': [371, 388, 388, 419], 'tooth_id': 'unknown', 'label': 'caries', 'score': 0.8, 'near_tooth': '37'},
{'box_2d': [300, 201, 378, 308], 'tooth_id': 'unknown', 'label': 'impacted', 'score': 0.63, 'near_tooth': '27'}
]

Historical Treatments (total: 2):
[
{'box_2d': [844, 161, 903, 305], 'tooth_id': '16', 'label': 'rc-treated', 'score': 0.85},
{'box_2d': [854, 258, 897, 305], 'tooth_id': 'unknown', 'label': 'restoration', 'score': 0.64, 'near_tooth': '16'}
]

Medical Report

Oral Panoramic Radiographic Examination Report

Teeth-Specific Observations

General Condition

A total of 28 teeth are visualized within the imaging field. The right lower third molar (#18) is fully erupted and unimpacted. No other wisdom teeth are identified in the dataset.

Pathological Findings

- **Tooth #37**: A distinct radiopaque area is observed near the distal root, indicating an impacted structure.

- **Near tooth #37**: Evidence of a carious lesion is noted within the interproximal region.

- **Near tooth #27**: A suspicious radiopaque density is identified, raising concern for an impacted structure.

Historical Interventions

- **Tooth #16**: Presence of a root canal-treated tooth with a radiopaque filling material.

- **Near tooth #16**: A restoration is present in the mesial region, consistent with prior restorative intervention.

Clinical Summary & Recommendations

Priority Concerns

1. **Impacted structure near #37** requiring clinical evaluation for potential surgical intervention.

2. **Significant caries near #37** necessitating prompt restorative treatment.

3. **Suspicious radiopacity near #27** for follow-up imaging or surgical exploration.

4. **Root canal-treated #16** should be assessed for stability and restoration integrity.

Preventive Measures

- Reinforce oral hygiene protocols, particularly around #37 and #27, to prevent secondary caries.

- Apply fluoride treatments to caries-prone areas.

- Monitor for signs of infection or mobility in the impacted regions.

Follow-up Protocol

- Schedule a **6-month recall** for radiographic reassessment of #37 and #27.

- Refer to an **oral surgeon** for definitive management of impacted structures.

- Consult an **endodontist** for evaluation of the root canal-treated #16 and adjacent restoration.

Generated for clinical decision-making; finalize findings in conjunction with clinical examination.