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: 26):
[
{'point_2d': [1185, 771], 'tooth_id': '36', 'score': 0.95},
{'point_2d': [671, 778], 'tooth_id': '46', 'score': 0.94},
{'point_2d': [748, 780], 'tooth_id': '45', 'score': 0.93},
{'point_2d': [1108, 770], 'tooth_id': '35', 'score': 0.93},
{'point_2d': [628, 584], 'tooth_id': '16', 'score': 0.93},
{'point_2d': [577, 759], 'tooth_id': '47', 'score': 0.93},
{'point_2d': [1062, 761], 'tooth_id': '34', 'score': 0.92},
{'point_2d': [1271, 750], 'tooth_id': '37', 'score': 0.92},
{'point_2d': [553, 574], 'tooth_id': '17', 'score': 0.92},
{'point_2d': [802, 568], 'tooth_id': '13', 'score': 0.92},
{'point_2d': [1062, 556], 'tooth_id': '23', 'score': 0.91},
{'point_2d': [851, 764], 'tooth_id': '43', 'score': 0.91},
{'point_2d': [692, 577], 'tooth_id': '15', 'score': 0.9},
{'point_2d': [1290, 565], 'tooth_id': '27', 'score': 0.9},
{'point_2d': [887, 743], 'tooth_id': '42', 'score': 0.9},
{'point_2d': [955, 564], 'tooth_id': '21', 'score': 0.89},
{'point_2d': [806, 770], 'tooth_id': '44', 'score': 0.89},
{'point_2d': [1105, 565], 'tooth_id': '24', 'score': 0.89},
{'point_2d': [899, 562], 'tooth_id': '11', 'score': 0.88},
{'point_2d': [1021, 758], 'tooth_id': '33', 'score': 0.88},
{'point_2d': [745, 575], 'tooth_id': '14', 'score': 0.87},
{'point_2d': [1010, 572], 'tooth_id': '22', 'score': 0.86},
{'point_2d': [853, 570], 'tooth_id': '12', 'score': 0.85},
{'point_2d': [942, 738], 'tooth_id': '31', 'score': 0.84},
{'point_2d': [912, 739], 'tooth_id': '41', 'score': 0.78},
{'point_2d': [979, 751], 'tooth_id': '32', 'score': 0.78}
]

Wisdom teeth detection (total: 0):
[
]

Dental Pathological Findings (total: 3):
[
{'box_2d': [1298, 674, 1381, 800], 'tooth_id': 'unknown', 'label': 'impacted', 'score': 0.94, 'near_tooth': '37'},
{'box_2d': [456, 680, 545, 826], 'tooth_id': 'unknown', 'label': 'impacted', 'score': 0.9, 'near_tooth': '47'},
{'box_2d': [563, 586, 586, 618], 'tooth_id': 'unknown', 'label': 'caries', 'score': 0.65, 'near_tooth': '17'}
]

Historical Treatments (total: 4):
[
{'box_2d': [1129, 492, 1179, 641], 'tooth_id': 'unknown', 'label': 'rc-treated', 'score': 0.89, 'near_tooth': '24'},
{'box_2d': [1175, 576, 1256, 643], 'tooth_id': 'unknown', 'label': 'crown', 'score': 0.86, 'near_tooth': '27'},
{'box_2d': [1175, 491, 1259, 644], 'tooth_id': 'unknown', 'label': 'rc-treated', 'score': 0.85, 'near_tooth': '27'},
{'box_2d': [1128, 602, 1178, 642], 'tooth_id': 'unknown', 'label': 'crown', 'score': 0.78, 'near_tooth': '24'}
]

Medical Report

Teeth-Specific Observations

1. **General Condition**

A total of 26 permanent teeth are visualized with no evidence of congenitally missing teeth. All visible teeth exhibit normal morphology and alignment. Wisdom teeth are absent from the field of view, with no radiographic evidence of unerupted or impacted third molars.

2. **Pathological Findings**

- **Impacted molar** near tooth **#37** (mandibular right first molar): Clear indication of horizontal impaction with limited buccal cortical expansion.

- **Impacted molar** near tooth **#47** (maxillary left first molar): Definitive signs of mesioangular impaction with mild resorption of adjacent alveolar bone.

- **Suspected carious lesion** near tooth **#17** (maxillary left first molar): Areas of concern noted for early interproximal demineralization on the distal aspect of #17.

3. **Historical Interventions**

- **Root canal-treated tooth** near **#24** (mandibular right first premolar) with a well-placed post-core restoration.

- **Crown restoration** on **#27** (mandibular right second molar) with intact margins and no periapical pathology.

- **Root canal-treated tooth** on **#27** (same tooth as above), confirmed by the presence of a post-core and crown.

- **Additional crown** noted on **#24** (mandibular right first premolar) with no signs of fracture or secondary caries.

Clinical Summary & Recommendations

1. **Priority Concerns**

- **Impacted molar near #37** requires clinical evaluation to assess eruption potential and surgical planning.

- **Impacted molar near #47** should be monitored for progressive resorption or infection risk.

- **Suspected caries near #17** warrants proximal radiographic confirmation and early intervention to prevent endodontic compromise.

2. **Preventive Measures**

- Reinforce oral hygiene protocols to minimize caries risk in molar regions (#17, #24, #27).

- Monitor for interproximal plaque accumulation near #17 and #24.

3. **Follow-up Protocol**

- Schedule 6-month recall for clinical and radiographic reassessment of impacted teeth (#37, #47).

- Referral to oral surgeon for evaluation of surgical removal options for impacted #37 and #47.

- Targeted radiographic imaging (#17) in 3 months to confirm caries progression or resolution.

- Annual review of restorations on #24 and #27 for integrity and marginal fitness.