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: 16):
[
{'point_2d': [1308, 603], 'tooth_id': '38', 'score': 0.94},
{'point_2d': [701, 659], 'tooth_id': '45', 'score': 0.94},
{'point_2d': [1314, 434], 'tooth_id': '28', 'score': 0.92},
{'point_2d': [1242, 458], 'tooth_id': '27', 'score': 0.91},
{'point_2d': [491, 609], 'tooth_id': '47', 'score': 0.9},
{'point_2d': [1098, 654], 'tooth_id': '35', 'score': 0.9},
{'point_2d': [749, 646], 'tooth_id': '44', 'score': 0.9},
{'point_2d': [908, 627], 'tooth_id': '31', 'score': 0.89},
{'point_2d': [794, 651], 'tooth_id': '43', 'score': 0.89},
{'point_2d': [465, 438], 'tooth_id': '17', 'score': 0.88},
{'point_2d': [988, 656], 'tooth_id': '33', 'score': 0.88},
{'point_2d': [950, 638], 'tooth_id': '32', 'score': 0.87},
{'point_2d': [758, 425], 'tooth_id': '13', 'score': 0.85},
{'point_2d': [872, 632], 'tooth_id': '41', 'score': 0.81},
{'point_2d': [811, 445], 'tooth_id': '12', 'score': 0.77},
{'point_2d': [1036, 442], 'tooth_id': '23', 'score': 0.66}
]

Wisdom teeth detection (total: 2):
[
{'box_2d': [1239, 526, 1377, 679], 'tooth_id': '38', 'is_impacted': false, 'score': 0.94},
{'box_2d': [1278, 358, 1351, 511], 'tooth_id': '28', 'is_impacted': false, 'score': 0.92}
]

Dental Pathological Findings (total: 13):
[
{'box_2d': [1112, 444, 1168, 522], 'tooth_id': 'unknown', 'label': 'root-stump', 'score': 0.93, 'near_tooth': '27'},
{'box_2d': [547, 611, 611, 649], 'tooth_id': 'unknown', 'label': 'root-stump', 'score': 0.88, 'near_tooth': '47'},
{'box_2d': [1012, 628, 1058, 703], 'tooth_id': 'unknown', 'label': 'root-stump', 'score': 0.82, 'near_tooth': '33'},
{'box_2d': [1051, 384, 1123, 539], 'tooth_id': 'unknown', 'label': 'root-stump', 'score': 0.8, 'near_tooth': '23'},
{'box_2d': [1153, 603, 1235, 654], 'tooth_id': 'unknown', 'label': 'root-stump', 'score': 0.78, 'near_tooth': '35'},
{'box_2d': [1053, 482, 1091, 536], 'tooth_id': 'unknown', 'label': 'caries', 'score': 0.65, 'near_tooth': '23'},
{'box_2d': [1087, 575, 1110, 608], 'tooth_id': 'unknown', 'label': 'caries', 'score': 0.41, 'near_tooth': '35'},
{'box_2d': [1014, 679, 1054, 711], 'tooth_id': 'unknown', 'label': 'periapical radiolucency', 'score': 0.4, 'near_tooth': '33'},
{'box_2d': [481, 461, 498, 488], 'tooth_id': 'unknown', 'label': 'caries', 'score': 0.33, 'near_tooth': '17'},
{'box_2d': [801, 472, 834, 533], 'tooth_id': 'unknown', 'label': 'caries', 'score': 0.28, 'near_tooth': '12'},
{'box_2d': [471, 541, 510, 586], 'tooth_id': 'unknown', 'label': 'caries', 'score': 0.27, 'near_tooth': '47'},
{'box_2d': [956, 365, 1034, 573], 'tooth_id': 'unknown', 'label': 'caries', 'score': 0.23, 'near_tooth': '23'},
{'box_2d': [614, 409, 716, 609], 'tooth_id': 'unknown', 'label': 'caries', 'score': 0.19, 'near_tooth': '13'}
]

Historical Treatments (total: 7):
[
{'box_2d': [895, 352, 977, 534], 'tooth_id': 'unknown', 'label': 'rc-treated', 'score': 0.93, 'near_tooth': '23'},
{'box_2d': [951, 378, 1014, 544], 'tooth_id': 'unknown', 'label': 'rc-treated', 'score': 0.87, 'near_tooth': '23'},
{'box_2d': [487, 363, 575, 520], 'tooth_id': 'unknown', 'label': 'rc-treated', 'score': 0.87, 'near_tooth': '17'},
{'box_2d': [626, 379, 694, 551], 'tooth_id': 'unknown', 'label': 'rc-treated', 'score': 0.82, 'near_tooth': '13'},
{'box_2d': [839, 342, 895, 528], 'tooth_id': 'unknown', 'label': 'rc-treated', 'score': 0.8, 'near_tooth': '12'},
{'box_2d': [542, 464, 800, 548], 'tooth_id': 'unknown', 'label': 'restoration', 'score': 0.78, 'near_tooth': '13'},
{'box_2d': [895, 462, 952, 532], 'tooth_id': 'unknown', 'label': 'crown', 'score': 0.5, 'near_tooth': '12'}

]

Medical Report

Oral Panoramic Radiographic Examination Report

1. Teeth-Specific Observations

General Condition

A total of 16 teeth are visualized within the panoramic field. Wisdom teeth #38 (right maxillary) and #28 (left mandibular) are present and unimpacted.

Pathological Findings

- **Root Stumps**:

- Clear indication of root stumps near teeth #27 (score 0.93), #47 (0.88), and #33 (0.82).

- Suspicious for root stumps near teeth #23 (0.80), #35 (0.78), and #35 (0.78).

- **Caries**:

- Evidence of caries near teeth #23 (0.65) and #12 (0.28).

- Areas of concern noted for suspected caries near teeth #35 (0.41), #17 (0.33), #47 (0.27), and #13 (0.19).

- **Periapical Radiolucency**:

- Suspicious for periapical radiolucency near tooth #33 (0.40).

- **Additional Concerns**:

- Areas of carious involvement observed near tooth #23 (0.23) and #13 (0.19) require further clinical correlation.

Historical Interventions

- **Restorative Treatments**:

- Presence of a crown near tooth #12.

- Evidence of restorations near teeth #13 and #23.

- **Endodontic Therapy**:

- Root canal-treated teeth identified near #12, #13, #17, and #23.

2. Clinical Summary & Recommendations

Priority Concerns

- Root stumps near teeth #27, #47, and #33 indicate prior extractions requiring documentation.

- Root canal-treated teeth at #12, #13, #17, and #23 necessitate evaluation for long-term prognosis.

- Suspicious carious lesions near teeth #23, #12, and #35 warrant clinical correlation to rule out active decay.

Preventive Measures

- Reinforce oral hygiene protocols to mitigate caries progression in high-risk areas (#23, #12).

- Monitor suspected root stumps near teeth #23 and #35 for potential bony irregularities.

Follow-up Protocol

- Schedule 3-month recall for reassessment of carious lesions near #23 and #35.

- Refer to endodontist for evaluation of periapical radiolucency near #33.

- Consider radiographic correlation for low-confidence caries near #17 and #47.

Generated by AI Radiologist Assistant