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': [1601, 881], 'tooth_id': '36', 'score': 0.95},
{'point_2d': [713, 566], 'tooth_id': '17', 'score': 0.95},
{'point_2d': [924, 890], 'tooth_id': '45', 'score': 0.94},
{'point_2d': [1719, 840], 'tooth_id': '37', 'score': 0.93},
{'point_2d': [809, 877], 'tooth_id': '46', 'score': 0.93},
{'point_2d': [1421, 597], 'tooth_id': '23', 'score': 0.93},
{'point_2d': [1080, 592], 'tooth_id': '13', 'score': 0.93},
{'point_2d': [674, 836], 'tooth_id': '47', 'score': 0.92},
{'point_2d': [1634, 582], 'tooth_id': '26', 'score': 0.92},
{'point_2d': [1428, 910], 'tooth_id': '34', 'score': 0.92},
{'point_2d': [932, 592], 'tooth_id': '15', 'score': 0.91},
{'point_2d': [1492, 895], 'tooth_id': '35', 'score': 0.91},
{'point_2d': [995, 895], 'tooth_id': '44', 'score': 0.91},
{'point_2d': [1741, 565], 'tooth_id': '27', 'score': 0.9},
{'point_2d': [1363, 927], 'tooth_id': '33', 'score': 0.9},
{'point_2d': [827, 584], 'tooth_id': '16', 'score': 0.89},
{'point_2d': [1364, 600], 'tooth_id': '22', 'score': 0.88},
{'point_2d': [1544, 591], 'tooth_id': '25', 'score': 0.88},
{'point_2d': [1079, 895], 'tooth_id': '43', 'score': 0.88},
{'point_2d': [1003, 584], 'tooth_id': '14', 'score': 0.85},
{'point_2d': [1474, 595], 'tooth_id': '24', 'score': 0.84},
{'point_2d': [1242, 914], 'tooth_id': '31', 'score': 0.84},
{'point_2d': [1155, 606], 'tooth_id': '12', 'score': 0.84},
{'point_2d': [1153, 896], 'tooth_id': '42', 'score': 0.8},
{'point_2d': [1281, 582], 'tooth_id': '21', 'score': 0.79},
{'point_2d': [1211, 607], 'tooth_id': '11', 'score': 0.78},
{'point_2d': [1286, 918], 'tooth_id': '32', 'score': 0.78},
{'point_2d': [1195, 901], 'tooth_id': '41', 'score': 0.67}
]

Wisdom teeth detection (total: 0):
[
]

Dental Pathological Findings (total: 4):
[
{'box_2d': [1757, 366, 1880, 571], 'tooth_id': 'unknown', 'label': 'impacted', 'score': 0.94, 'near_tooth': '27'},
{'box_2d': [1763, 688, 1886, 913], 'tooth_id': 'unknown', 'label': 'impacted', 'score': 0.77, 'near_tooth': '37'},
{'box_2d': [471, 695, 625, 916], 'tooth_id': 'unknown', 'label': 'impacted', 'score': 0.63, 'near_tooth': '47'},
{'box_2d': [1473, 637, 1508, 699], 'tooth_id': 'unknown', 'label': 'caries', 'score': 0.25, 'near_tooth': '24'}
]

Historical Treatments (total: 1):
[
{'box_2d': [779, 749, 887, 798], 'tooth_id': 'unknown', 'label': 'restoration', 'score': 0.81, 'near_tooth': '46'}
]

Medical Report

Teeth-Specific Observations

1. **General Condition**

A total of 28 teeth were visualized on the panoramic radiograph. No wisdom teeth (third molars) are present or detectable within the field of view. The remaining teeth demonstrate variable visibility, with anterior teeth (#11, #21) and molars (#31, #41) showing lower detection confidence.

2. **Pathological Findings**

- **Impacted tooth near #27**: Clear indication of an impacted tooth adjacent to #27, consistent with a buccal or distal impaction.

- **Impacted tooth near #37**: Suspicious for an impacted tooth adjacent to #37; further imaging or clinical evaluation is warranted.

- **Impacted tooth near #47**: Areas of concern noted for an impacted tooth near #47, with low confidence in localization.

- **Caries near #24**: Suspicious for early carious lesion on #24, requiring confirmation with supplemental imaging or clinical examination.

3. **Historical Interventions**

- **Restoration on #46**: Definitive evidence of a prior restoration (filling) on #46. No additional restorative work was identified.

Clinical Summary & Recommendations

1. **Priority Concerns**

- Impacted tooth near #27 requires evaluation for surgical removal or orthodontic intervention.

- Suspicious caries on #24 necessitates immediate confirmation and treatment planning.

- Impacted teeth near #37 and #47 should be monitored for potential complications (e.g., resorption, infection).

2. **Preventive Measures**

- Reinforce oral hygiene protocols, emphasizing interdental cleaning around impacted teeth (#27, #37, #47).

- Monitor suspicious carious lesion on #24 during 6-month follow-up.

3. **Follow-up Protocol**

- Refer to oral surgeon for assessment of impacted teeth (#27, #37, #47).

- Schedule a 6-month recall for re-evaluation of caries on #24 and impacted tooth status.

- Consider bitewing radiographs to clarify carious lesion on #24.