| 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: 27):
[
{'point_2d': [1358, 591], 'tooth_id': '38', 'score': 0.95},
{'point_2d': [673, 611], 'tooth_id': '45', 'score': 0.95},
{'point_2d': [595, 598], 'tooth_id': '46', 'score': 0.95},
{'point_2d': [436, 415], 'tooth_id': '18', 'score': 0.95},
{'point_2d': [1158, 622], 'tooth_id': '36', 'score': 0.93},
{'point_2d': [1298, 412], 'tooth_id': '27', 'score': 0.92},
{'point_2d': [1075, 633], 'tooth_id': '35', 'score': 0.91},
{'point_2d': [777, 627], 'tooth_id': '43', 'score': 0.91},
{'point_2d': [749, 391], 'tooth_id': '13', 'score': 0.91},
{'point_2d': [984, 402], 'tooth_id': '22', 'score': 0.9},
{'point_2d': [987, 637], 'tooth_id': '33', 'score': 0.9},
{'point_2d': [512, 416], 'tooth_id': '17', 'score': 0.89},
{'point_2d': [1033, 631], 'tooth_id': '34', 'score': 0.89},
{'point_2d': [905, 619], 'tooth_id': '31', 'score': 0.88},
{'point_2d': [932, 396], 'tooth_id': '21', 'score': 0.88},
{'point_2d': [722, 612], 'tooth_id': '44', 'score': 0.88},
{'point_2d': [828, 612], 'tooth_id': '42', 'score': 0.88},
{'point_2d': [815, 391], 'tooth_id': '12', 'score': 0.86},
{'point_2d': [864, 391], 'tooth_id': '11', 'score': 0.86},
{'point_2d': [938, 626], 'tooth_id': '32', 'score': 0.86},
{'point_2d': [1123, 421], 'tooth_id': '25', 'score': 0.85},
{'point_2d': [651, 391], 'tooth_id': '15', 'score': 0.85},
{'point_2d': [868, 617], 'tooth_id': '41', 'score': 0.84},
{'point_2d': [708, 391], 'tooth_id': '14', 'score': 0.84},
{'point_2d': [1192, 405], 'tooth_id': '26', 'score': 0.83},
{'point_2d': [1069, 421], 'tooth_id': '24', 'score': 0.8},
{'point_2d': [1035, 399], 'tooth_id': '23', 'score': 0.78}
]

Wisdom teeth detection (total: 2):
[
{'box_2d': [1288, 500, 1428, 681], 'tooth_id': '38', 'is_impacted': false, 'score': 0.95},
{'box_2d': [387, 326, 486, 504], 'tooth_id': '18', 'is_impacted': false, 'score': 0.95}
]

Dental Pathological Findings (total: 1):
[
{'box_2d': [1149, 449, 1171, 480], 'tooth_id': 'unknown', 'label': 'caries', 'score': 0.54, 'near_tooth': '25'}
]

Historical Treatments (total: 1):
[
{'box_2d': [1136, 542, 1174, 572], 'tooth_id': 'unknown', 'label': 'restoration', 'score': 0.65, 'near_tooth': '36'}
]

Medical Report

Teeth-Specific Observations

1. **General Condition**

A total of 27 teeth are visualized, with full visibility of anatomical landmarks. Wisdom teeth #38 (upper right) and #18 (lower left) are present and not impacted. Dental arch alignment and interproximal spacing appear within normal limits.

2. **Pathological Findings**

A suspicious lesion suggestive of early carious involvement is noted near tooth #26 (upper right first molar), adjacent to the interproximal area. The radiographic appearance warrants further clinical correlation.

3. **Historical Interventions**

A definitive restoration is observed near tooth #36 (lower right first molar), consistent with prior restorative treatment.

Clinical Summary & Recommendations

1. **Priority Concerns**

- Early carious lesion near #26: Requires immediate clinical evaluation to confirm extent and initiate preventive or restorative intervention.

- Monitoring of restoration integrity near #36 to assess for secondary caries or marginal breakdown.

2. **Preventive Measures**

- Reinforce oral hygiene protocols for #26 and adjacent teeth to mitigate caries progression.

- Consider fluoride application or sealant placement for caries-prone areas.

3. **Follow-up Protocol**

- Schedule a 6-month recall for radiographic and clinical reassessment of the suspicious lesion near #26.

- Re-evaluate the restoration on #36 during the next routine appointment to confirm its stability.

- Refer to a general dentist for definitive diagnosis and treatment planning for #26.