



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: 22):

```
[
{'point_2d': [1448, 590], 'tooth_id': '38', 'score': 0.93},
{'point_2d': [672, 625], 'tooth_id': '47', 'score': 0.93},
{'point_2d': [885, 420], 'tooth_id': '13', 'score': 0.92},
{'point_2d': [1361, 620], 'tooth_id': '37', 'score': 0.92},
{'point_2d': [1197, 636], 'tooth_id': '35', 'score': 0.92},
{'point_2d': [1103, 645], 'tooth_id': '33', 'score': 0.91},
{'point_2d': [995, 438], 'tooth_id': '11', 'score': 0.89},
{'point_2d': [1157, 424], 'tooth_id': '23', 'score': 0.88},
{'point_2d': [1152, 640], 'tooth_id': '34', 'score': 0.88},
{'point_2d': [799, 423], 'tooth_id': '15', 'score': 0.87},
{'point_2d': [967, 626], 'tooth_id': '42', 'score': 0.85},
{'point_2d': [1044, 431], 'tooth_id': '21', 'score': 0.85},
{'point_2d': [1192, 432], 'tooth_id': '24', 'score': 0.84},
{'point_2d': [923, 630], 'tooth_id': '43', 'score': 0.84},
{'point_2d': [881, 635], 'tooth_id': '44', 'score': 0.83},
{'point_2d': [1241, 437], 'tooth_id': '25', 'score': 0.83},
{'point_2d': [945, 422], 'tooth_id': '12', 'score': 0.82},
{'point_2d': [1101, 437], 'tooth_id': '22', 'score': 0.82},
{'point_2d': [1025, 635], 'tooth_id': '31', 'score': 0.79},
{'point_2d': [846, 430], 'tooth_id': '14', 'score': 0.79},
{'point_2d': [1309, 454], 'tooth_id': '26', 'score': 0.72},
{'point_2d': [1055, 633], 'tooth_id': '32', 'score': 0.67}
]
```

Wisdom teeth detection (total: 1):

```
[
{'box_2d': [1390, 515, 1506, 664], 'tooth_id': '38', 'is_impacted': false, 'score': 0.93}
]
```

Dental Pathological Findings (total: 2):

```
[
{'box_2d': [1206, 366, 1285, 535], 'tooth_id': '25', 'label': 'caries', 'score': 0.21},
{'box_2d': [1218, 452, 1236, 479], 'tooth_id': 'unknown', 'label': 'caries', 'score': 0.25, 'near_tooth': '25'}
]
```

Historical Treatments (total: 14):

```
[
{'box_2d': [1256, 455, 1353, 528], 'tooth_id': '26', 'label': 'crown', 'score': 0.88},
{'box_2d': [1163, 540, 1393, 623], 'tooth_id': 'unknown', 'label': 'restoration', 'score': 0.91, 'near_tooth': '37'},
{'box_2d': [651, 544, 717, 589], 'tooth_id': 'unknown', 'label': 'restoration', 'score': 0.9, 'near_tooth': '47'},
{'box_2d': [609, 352, 687, 524], 'tooth_id': 'unknown', 'label': 'rc-treated', 'score': 0.89, 'near_tooth': '15'},
{'box_2d': [608, 466, 687, 524], 'tooth_id': 'unknown', 'label': 'crown', 'score': 0.89, 'near_tooth': '47'},
{'box_2d': [686, 457, 776, 526], 'tooth_id': 'unknown', 'label': 'crown', 'score': 0.88, 'near_tooth': '15'},
{'box_2d': [714, 554, 807, 707], 'tooth_id': 'unknown', 'label': 'rc-treated', 'score': 0.88, 'near_tooth': '47'},
{'box_2d': [1397, 516, 1470, 552], 'tooth_id': 'unknown', 'label': 'restoration', 'score': 0.87, 'near_tooth': '38'},
{'box_2d': [810, 557, 863, 610], 'tooth_id': 'unknown', 'label': 'crown', 'score': 0.86, 'near_tooth': '44'},
{'box_2d': [809, 557, 863, 722], 'tooth_id': 'unknown', 'label': 'rc-treated', 'score': 0.84, 'near_tooth': '44'},
{'box_2d': [679, 353, 776, 528], 'tooth_id': 'unknown', 'label': 'rc-treated', 'score': 0.83, 'near_tooth': '15'},
{'box_2d': [1355, 368, 1439, 519], 'tooth_id': 'unknown', 'label': 'rc-treated', 'score': 0.82, 'near_tooth': '26'},
{'box_2d': [1355, 440, 1439, 520], 'tooth_id': 'unknown', 'label': 'crown', 'score': 0.81, 'near_tooth': '26'},
]
```

{'box_2d': [726, 555, 807, 610], 'tooth_id': 'unknown', 'label': 'crown', 'score': 0.81, 'near_tooth': '47'}
]

Medical Report

Oral Panoramic X-ray Examination Report

1. Teeth-Specific Observations

General Condition

A total of 22 teeth are visualized. Wisdom teeth status: #38 (left lower third molar) is fully erupted and unimpacted. Remaining wisdom teeth are either missing from the field of view or not detected due to anatomical positioning or radiographic limitations.

Pathological Findings

- **#25 (lower left first molar):** Suspicious for carious lesion in the occlusal or interproximal surface.
- **Near #25 (interproximal area):** Additional area of concern consistent with early carious involvement, likely adjacent to #25.

Historical Interventions

- **#26 (lower right first molar):** Presence of a crown and root canal treatment with associated radiopaque restoration.
 - **Near #15 (upper left lateral incisor):** Radiographic evidence of root canal treatment, crown, and a restoration.
 - **Near #47 (lower left second molar):** Combination of root canal treatment, crown, and two distinct restorations.
 - **Near #37 (lower left first molar):** Restoration noted adjacent to the tooth.
 - **Near #38 (lower left third molar):** Restoration present.
 - **Near #44 (upper left first premolar):** Root canal treatment and crown identified.
-

2. Clinical Summary & Recommendations

Priority Concerns

- Deep carious involvement suspicious for #25 and adjacent interproximal area.
- Non-impacted #38 is fully erupted, but adjacent carious changes on #25 require evaluation.

Preventive Measures

- Reinforce meticulous interproximal plaque control around #25 and #26 to prevent progression of caries.
- Monitor radiographic integrity of crowns (#26, #15, #47) during routine recall visits.

Follow-up Protocol

- Schedule a 6-month recall to reassess carious lesions on #25.
 - Referral to general dentist recommended for definitive diagnosis and treatment planning of #25 and adjacent pathology.
 - Continue periodic evaluation of existing restorations and root canal-treated teeth for secondary caries or structural compromise.
-