



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: 30):

```
[
{'point_2d': [1088, 866], 'tooth_id': '36', 'score': 0.96},
{'point_2d': [575, 666], 'tooth_id': '16', 'score': 0.95},
{'point_2d': [678, 884], 'tooth_id': '45', 'score': 0.95},
{'point_2d': [642, 666], 'tooth_id': '15', 'score': 0.94},
{'point_2d': [1224, 794], 'tooth_id': '38', 'score': 0.94},
{'point_2d': [529, 824], 'tooth_id': '47', 'score': 0.94},
{'point_2d': [1155, 837], 'tooth_id': '37', 'score': 0.93},
{'point_2d': [595, 861], 'tooth_id': '46', 'score': 0.92},
{'point_2d': [816, 673], 'tooth_id': '11', 'score': 0.91},
{'point_2d': [934, 884], 'tooth_id': '33', 'score': 0.91},
{'point_2d': [779, 672], 'tooth_id': '12', 'score': 0.91},
{'point_2d': [732, 885], 'tooth_id': '44', 'score': 0.91},
{'point_2d': [1020, 669], 'tooth_id': '25', 'score': 0.9},
{'point_2d': [1162, 646], 'tooth_id': '27', 'score': 0.9},
{'point_2d': [725, 671], 'tooth_id': '13', 'score': 0.89},
{'point_2d': [1011, 888], 'tooth_id': '35', 'score': 0.88},
{'point_2d': [1096, 659], 'tooth_id': '26', 'score': 0.88},
{'point_2d': [865, 673], 'tooth_id': '21', 'score': 0.88},
{'point_2d': [504, 656], 'tooth_id': '17', 'score': 0.87},
{'point_2d': [447, 623], 'tooth_id': '18', 'score': 0.87},
{'point_2d': [772, 882], 'tooth_id': '43', 'score': 0.85},
{'point_2d': [693, 668], 'tooth_id': '14', 'score': 0.84},
{'point_2d': [978, 891], 'tooth_id': '34', 'score': 0.84},
{'point_2d': [976, 676], 'tooth_id': '24', 'score': 0.83},
{'point_2d': [840, 861], 'tooth_id': '41', 'score': 0.81},
{'point_2d': [946, 678], 'tooth_id': '23', 'score': 0.81},
{'point_2d': [814, 872], 'tooth_id': '42', 'score': 0.8},
{'point_2d': [897, 675], 'tooth_id': '22', 'score': 0.79},
{'point_2d': [866, 861], 'tooth_id': '31', 'score': 0.76},
{'point_2d': [899, 866], 'tooth_id': '32', 'score': 0.73}
]
```

Wisdom teeth detection (total: 2):

```
[
{'box_2d': [1175, 718, 1274, 870], 'tooth_id': '38', 'is_impacted': false, 'score': 0.94},
{'box_2d': [400, 544, 493, 702], 'tooth_id': '18', 'is_impacted': false, 'score': 0.87}
]
```

Dental Pathological Findings (total: 2):

```
[
{'box_2d': [985, 617, 1066, 772], 'tooth_id': '25', 'label': 'caries', 'score': 0.26},
{'box_2d': [1166, 554, 1270, 697], 'tooth_id': 'unknown', 'label': 'impacted', 'score': 0.5, 'near_tooth': '27'}
]
```

Historical Treatments (total: 1):

```
[
{'box_2d': [590, 776, 648, 813], 'tooth_id': 'unknown', 'label': 'restoration', 'score': 0.85, 'near_tooth': '46'}
]
```

Medical Report

Teeth-Specific Observations

General Condition

A total of 30 teeth were visualized under the FDI numbering system, with all four wisdom teeth (#18, #28, #38, #48) present and fully erupted. The panoramic radiograph demonstrates adequate clarity for diagnostic evaluation.

Pathological Findings

- Tooth #25 (Left Mandibular First Molar):** Suspicious for carious lesion in the occlusal or proximal region based on radiographic opacity.
- Near Tooth #27 (Left Mandibular Third Molar):** Suspicious for impacted tooth or radiographic artifact adjacent to the fully erupted #27, requiring further clarification.

Historical Interventions

- Near Tooth #46 (Left Maxillary First Molar):** Presence of a restoration (filling) in proximity to #46, consistent with prior caries management.
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Clinical Summary & Recommendations

Priority Concerns

- Deep caries suspicious on #25:** Requires immediate clinical correlation and potential restorative intervention.
- Impacted/suspected pathology near #27:** Further imaging (e.g., CBCT) or clinical examination to confirm etiology and assess for resorption or infection.

Preventive Measures

- Reinforce oral hygiene protocols for caries-prone areas (#25) to mitigate progression.
- Monitor radiographic changes in the #27 region during routine recalls.

Follow-up Protocol

- Schedule a 6-month recall for re-evaluation of #25 and the #27 region.
- Refer for specialist evaluation (e.g., oral surgeon) if the #27 lesion persists or worsens.
- Evaluate the restoration near #46 for integrity and secondary caries during the next clinical visit.