



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': [682, 765], 'tooth_id': '45', 'score': 0.95},
{'point_2d': [1238, 734], 'tooth_id': '37', 'score': 0.92},
{'point_2d': [1217, 558], 'tooth_id': '27', 'score': 0.92},
{'point_2d': [584, 539], 'tooth_id': '16', 'score': 0.92},
{'point_2d': [503, 532], 'tooth_id': '17', 'score': 0.92},
{'point_2d': [1100, 768], 'tooth_id': '35', 'score': 0.91},
{'point_2d': [893, 581], 'tooth_id': '21', 'score': 0.91},
{'point_2d': [808, 768], 'tooth_id': '43', 'score': 0.9},
{'point_2d': [741, 763], 'tooth_id': '44', 'score': 0.89},
{'point_2d': [699, 562], 'tooth_id': '14', 'score': 0.89},
{'point_2d': [796, 570], 'tooth_id': '12', 'score': 0.89},
{'point_2d': [1044, 767], 'tooth_id': '34', 'score': 0.88},
{'point_2d': [947, 576], 'tooth_id': '22', 'score': 0.88},
{'point_2d': [582, 752], 'tooth_id': '47', 'score': 0.88},
{'point_2d': [1086, 565], 'tooth_id': '25', 'score': 0.88},
{'point_2d': [647, 564], 'tooth_id': '15', 'score': 0.87},
{'point_2d': [840, 578], 'tooth_id': '11', 'score': 0.87},
{'point_2d': [1148, 566], 'tooth_id': '26', 'score': 0.86},
{'point_2d': [747, 555], 'tooth_id': '13', 'score': 0.86},
{'point_2d': [1009, 775], 'tooth_id': '33', 'score': 0.86},
{'point_2d': [1037, 564], 'tooth_id': '24', 'score': 0.85},
{'point_2d': [994, 565], 'tooth_id': '23', 'score': 0.84},
{'point_2d': [930, 772], 'tooth_id': '31', 'score': 0.84},
{'point_2d': [968, 773], 'tooth_id': '32', 'score': 0.83},
{'point_2d': [1283, 563], 'tooth_id': '28', 'score': 0.81},
{'point_2d': [895, 767], 'tooth_id': '41', 'score': 0.8},
{'point_2d': [854, 761], 'tooth_id': '42', 'score': 0.78},
{'point_2d': [506, 706], 'tooth_id': '48', 'score': 0.69}
]
```

Wisdom teeth detection (total: 2):

```
[
{'box_2d': [1247, 482, 1320, 645], 'tooth_id': '28', 'is_impacted': false, 'score': 0.81},
{'box_2d': [432, 632, 579, 780], 'tooth_id': '48', 'is_impacted': false, 'score': 0.69}
]
```

Dental Pathological Findings (total: 2):

```
[
{'box_2d': [751, 467, 869, 679], 'tooth_id': '12', 'label': 'calculus', 'score': 0.37},
{'box_2d': [704, 495, 775, 702], 'tooth_id': '13', 'label': 'caries', 'score': 0.33}
]
```

Historical Treatments (total: 0):

```
[
]
```

Medical Report

Teeth-Specific Observations

1. General Condition

A total of 28 teeth are visualized within the panoramic field. The maxillary right third molar (#48) and mandibular right third molar (#28) are present and unimpacted. No evidence of other third molars is observed.

2. Pathological Findings

- **Tooth #12 (Left Lateral Incisor):** Areas of concern noted for suspected calculus deposition.
- **Tooth #13 (Left Canine):** Suspicious for early carious lesion in the proximal region.

3. Historical Interventions

No prior restorative, endodontic, or prosthetic treatments are observed.

Clinical Summary & Recommendations

1. Priority Concerns

- Suspected calculus on #12 requiring professional scaling.
- Suspected carious involvement on #13 necessitating further diagnostic evaluation (e.g., intraoral radiograph or visual inspection).

2. Preventive Measures

- Reinforce oral hygiene practices, particularly interdental cleaning for #12 and #13.
- Initiate caries preventive measures (e.g., fluoride application, fissure sealants) for #13 if lesion remains non-cavitated.

3. Follow-up Protocol

- Schedule a 6-month recall for reassessment of calculus and caries progression.
- Refer to a general dentist for definitive management of #13 caries.
- Consider prophylaxis for suspected calculus on #12 to mitigate periodontal risk.