



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: 25):

```
[
{'point_2d': [643, 638], 'tooth_id': '45', 'score': 0.96},
{'point_2d': [476, 401], 'tooth_id': '17', 'score': 0.95},
{'point_2d': [1252, 596], 'tooth_id': '37', 'score': 0.94},
{'point_2d': [481, 588], 'tooth_id': '47', 'score': 0.94},
{'point_2d': [1238, 421], 'tooth_id': '27', 'score': 0.93},
{'point_2d': [825, 484], 'tooth_id': '11', 'score': 0.92},
{'point_2d': [953, 483], 'tooth_id': '22', 'score': 0.92},
{'point_2d': [694, 455], 'tooth_id': '13', 'score': 0.91},
{'point_2d': [762, 476], 'tooth_id': '12', 'score': 0.91},
{'point_2d': [695, 655], 'tooth_id': '44', 'score': 0.91},
{'point_2d': [738, 670], 'tooth_id': '43', 'score': 0.91},
{'point_2d': [893, 490], 'tooth_id': '21', 'score': 0.91},
{'point_2d': [1031, 664], 'tooth_id': '34', 'score': 0.9},
{'point_2d': [564, 436], 'tooth_id': '16', 'score': 0.9},
{'point_2d': [947, 671], 'tooth_id': '32', 'score': 0.9},
{'point_2d': [991, 679], 'tooth_id': '33', 'score': 0.9},
{'point_2d': [1091, 649], 'tooth_id': '35', 'score': 0.89},
{'point_2d': [894, 667], 'tooth_id': '31', 'score': 0.89},
{'point_2d': [1148, 444], 'tooth_id': '26', 'score': 0.88},
{'point_2d': [799, 662], 'tooth_id': '42', 'score': 0.87},
{'point_2d': [1011, 465], 'tooth_id': '23', 'score': 0.85},
{'point_2d': [1063, 463], 'tooth_id': '25', 'score': 0.85},
{'point_2d': [642, 457], 'tooth_id': '14', 'score': 0.83},
{'point_2d': [852, 660], 'tooth_id': '41', 'score': 0.81},
{'point_2d': [642, 458], 'tooth_id': '15', 'score': 0.64}
]
```

Wisdom teeth detection (total: 0):

```
[
]
```

Dental Pathological Findings (total: 2):

```
[
{'box_2d': [1111, 389, 1208, 567], 'tooth_id': '26', 'label': 'caries', 'score': 0.19},
{'box_2d': [534, 601, 620, 658], 'tooth_id': 'unknown', 'label': 'root-stump', 'score': 0.89, 'near_tooth': '45'}
]
```

Historical Treatments (total: 1):

```
[
{'box_2d': [1099, 572, 1221, 708], 'tooth_id': 'unknown', 'label': 'rc-treated', 'score': 0.93, 'near_tooth': '35'}
]
```

Medical Report

Teeth-Specific Observations

General Condition

A total of 25 teeth are visualized within the panoramic field. No wisdom teeth (third molars) are present or impacted. The overall dental arch alignment and spacing appear within normal limits.

Pathological Findings

1. **Tooth #26:** Suspicious for caries in the proximal region. The low confidence score necessitates further clinical evaluation to confirm lesion extent.
2. **Near tooth #45:** A root stump is present with radiographic features suggestive of incomplete extraction or residual root fragment.

Historical Interventions

1. **Near tooth #35:** A root canal-treated tooth is identified, evidenced by radiopaque filling material within the root canal system.
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Clinical Summary & Recommendations

Priority Concerns

1. **Tooth #26:** Requires immediate assessment for caries progression and potential restoration.
2. **Tooth #45:** Presence of a root stump warrants evaluation for infection risk or need for surgical removal.

Preventive Measures

1. Reinforce oral hygiene protocols, emphasizing interproximal cleaning for high-risk areas (#26).
2. Monitor radiographic changes in the apical region of #35 during subsequent visits to ensure long-term success of root canal therapy.

Follow-up Protocol

1. Schedule a 6-month recall for re-evaluation of #26 and #45.
2. Refer to an endodontist for advanced management of #26 caries and surgical consultation for the root stump near #45 if symptomatic.