



## 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.