



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': [1203, 685], 'tooth_id': '36', 'score': 0.95},
{'point_2d': [1327, 491], 'tooth_id': '27', 'score': 0.94},
{'point_2d': [1136, 688], 'tooth_id': '35', 'score': 0.93},
{'point_2d': [566, 460], 'tooth_id': '17', 'score': 0.92},
{'point_2d': [726, 463], 'tooth_id': '15', 'score': 0.92},
{'point_2d': [497, 429], 'tooth_id': '18', 'score': 0.92},
{'point_2d': [656, 472], 'tooth_id': '16', 'score': 0.91},
{'point_2d': [1093, 462], 'tooth_id': '23', 'score': 0.91},
{'point_2d': [713, 656], 'tooth_id': '46', 'score': 0.9},
{'point_2d': [998, 469], 'tooth_id': '21', 'score': 0.89},
{'point_2d': [1135, 476], 'tooth_id': '24', 'score': 0.89},
{'point_2d': [1086, 677], 'tooth_id': '34', 'score': 0.89},
{'point_2d': [1187, 489], 'tooth_id': '25', 'score': 0.88},
{'point_2d': [785, 664], 'tooth_id': '45', 'score': 0.88},
{'point_2d': [1252, 490], 'tooth_id': '26', 'score': 0.88},
{'point_2d': [842, 667], 'tooth_id': '44', 'score': 0.88},
{'point_2d': [774, 462], 'tooth_id': '14', 'score': 0.88},
{'point_2d': [1045, 473], 'tooth_id': '22', 'score': 0.87},
{'point_2d': [1041, 668], 'tooth_id': '33', 'score': 0.87},
{'point_2d': [895, 457], 'tooth_id': '12', 'score': 0.86},
{'point_2d': [896, 661], 'tooth_id': '43', 'score': 0.85},
{'point_2d': [938, 458], 'tooth_id': '11', 'score': 0.82},
{'point_2d': [973, 643], 'tooth_id': '31', 'score': 0.82},
{'point_2d': [542, 625], 'tooth_id': '48', 'score': 0.81},
{'point_2d': [929, 650], 'tooth_id': '42', 'score': 0.77},
{'point_2d': [1289, 672], 'tooth_id': '37', 'score': 0.76},
{'point_2d': [1007, 654], 'tooth_id': '32', 'score': 0.75},
{'point_2d': [950, 643], 'tooth_id': '41', 'score': 0.68}
]
```

Wisdom teeth detection (total: 2):

```
[
{'box_2d': [448, 354, 547, 503], 'tooth_id': '18', 'is_impacted': false, 'score': 0.92},
{'box_2d': [480, 556, 603, 694], 'tooth_id': '48', 'is_impacted': false, 'score': 0.81}
]
```

Dental Pathological Findings (total: 4):

```
[
{'box_2d': [1323, 609, 1412, 740], 'tooth_id': 'unknown', 'label': 'impacted', 'score': 0.9, 'near_tooth': '37'},
{'box_2d': [687, 595, 735, 665], 'tooth_id': 'unknown', 'label': 'caries', 'score': 0.67, 'near_tooth': '46'},
{'box_2d': [686, 594, 718, 639], 'tooth_id': 'unknown', 'label': 'caries', 'score': 0.65, 'near_tooth': '46'},
{'box_2d': [687, 693, 728, 747], 'tooth_id': 'unknown', 'label': 'periapical radiolucency', 'score': 0.38, 'near_tooth': '46'}
]
```

Historical Treatments (total: 3):

```
[
{'box_2d': [1241, 599, 1337, 744], 'tooth_id': '37', 'label': 'rc-treated', 'score': 0.62},
{'box_2d': [801, 367, 873, 534], 'tooth_id': 'unknown', 'label': 'rc-treated', 'score': 0.89, 'near_tooth': '12'},
{'box_2d': [1260, 605, 1317, 670], 'tooth_id': 'unknown', 'label': 'restoration', 'score': 0.62, 'near_tooth': '37'}
]
```

Medical Report

Oral Panoramic Radiographic Examination Report

Teeth-Specific Observations

General Condition

- **Total visualized teeth:** 28 teeth (FDI numbering system).
- **Wisdom teeth status:**
- #18 (mandibular left third molar) and #48 (maxillary left third molar) are fully erupted and unimpacted.
- **Overall dental alignment:** No significant malpositioning or crowding observed.

Pathological Findings

1. **Impacted tooth near #37 (mandibular right first molar):** Clear indication of an impacted tooth adjacent to #37.
2. **Caries suspicious in proximity to #46 (maxillary left first molar):** Two suspicious carious lesions detected near #46.
3. **Periapical radiolucency near #46:** Areas of concern noted for periapical radiolucency adjacent to #46, requiring further evaluation.

Historical Interventions

1. **Root canal-treated tooth #37:** Evidence of prior root canal therapy.
 2. **Restoration near #37:** A restoration is present adjacent to the root canal-treated tooth.
 3. **Root canal-treated tooth near #12 (maxillary right first premolar):** A rc-treated tooth detected in proximity to #12.
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Clinical Summary & Recommendations

Priority Concerns

1. **Impacted tooth near #37:** Requires clinical correlation to assess for potential impaction-related complications (e.g., periodontal issues, caries).
2. **Caries suspicion near #46:** Confirmatory diagnosis and intervention necessary to prevent progression.
3. **Periapical radiolucency near #46:** Indicates possible apical pathology; endodontic evaluation is warranted.

Preventive Measures

- **Oral hygiene reinforcement:** Emphasize biofilm control around #37 and #46 to mitigate caries risk.
- **Calculus monitoring:** Although no calculus is explicitly noted, routine scaling is recommended to maintain periodontal health.

Follow-up Protocol

1. **6-month recall:** To monitor the impacted tooth near #37 and carious lesions near #46.
 2. **Referral to endodontist:** For #46 to assess the periapical radiolucency and confirm the need for treatment.
 3. **Review of historical interventions:** Confirm the integrity of restorations near #37 and evaluate the long-term success of root canal therapy in #37 and #12.
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Generated by AI assistant; clinical interpretation by a licensed oral radiologist is essential for definitive diagnosis.