



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: 23):

```
[
  {'point_2d': [665, 666], 'tooth_id': '45', 'score': 0.94},
  {'point_2d': [1078, 676], 'tooth_id': '35', 'score': 0.92},
  {'point_2d': [1214, 477], 'tooth_id': '27', 'score': 0.91},
  {'point_2d': [975, 708], 'tooth_id': '33', 'score': 0.91},
  {'point_2d': [969, 508], 'tooth_id': '22', 'score': 0.91},
  {'point_2d': [754, 485], 'tooth_id': '13', 'score': 0.9},
  {'point_2d': [1146, 496], 'tooth_id': '26', 'score': 0.9},
  {'point_2d': [912, 503], 'tooth_id': '21', 'score': 0.89},
  {'point_2d': [803, 499], 'tooth_id': '12', 'score': 0.89},
  {'point_2d': [774, 697], 'tooth_id': '43', 'score': 0.89},
  {'point_2d': [1025, 685], 'tooth_id': '34', 'score': 0.88},
  {'point_2d': [727, 680], 'tooth_id': '44', 'score': 0.88},
  {'point_2d': [896, 686], 'tooth_id': '31', 'score': 0.87},
  {'point_2d': [1013, 498], 'tooth_id': '23', 'score': 0.87},
  {'point_2d': [1275, 453], 'tooth_id': '28', 'score': 0.86},
  {'point_2d': [936, 708], 'tooth_id': '32', 'score': 0.84},
  {'point_2d': [854, 498], 'tooth_id': '11', 'score': 0.83},
  {'point_2d': [822, 678], 'tooth_id': '42', 'score': 0.83},
  {'point_2d': [656, 471], 'tooth_id': '15', 'score': 0.8},
  {'point_2d': [851, 676], 'tooth_id': '41', 'score': 0.8},
  {'point_2d': [1268, 603], 'tooth_id': '47', 'score': 0.71},
  {'point_2d': [587, 480], 'tooth_id': '16', 'score': 0.67},
  {'point_2d': [699, 475], 'tooth_id': '14', 'score': 0.65}
]
```

Wisdom teeth detection (total: 1):

```
[
  {'box_2d': [1243, 379, 1308, 528], 'tooth_id': '28', 'is_impacted': false, 'score': 0.86}
]
```

Dental Pathological Findings (total: 4):

```
[
  {'box_2d': [1100, 448, 1187, 621], 'tooth_id': '26', 'label': 'caries', 'score': 0.2},
  {'box_2d': [859, 359, 929, 584], 'tooth_id': '21', 'label': 'calculus', 'score': 0.36},
  {'box_2d': [383, 551, 507, 642], 'tooth_id': 'unknown', 'label': 'root-stump', 'score': 0.57, 'near_tooth': '16'},
  {'box_2d': [1209, 554, 1330, 688], 'tooth_id': 'unknown', 'label': 'impacted', 'score': 0.47, 'near_tooth': '47'}
]
```

Historical Treatments (total: 1):

```
[
  {'box_2d': [553, 485, 624, 564], 'tooth_id': '16', 'label': 'restoration', 'score': 0.68}
]
```

Medical Report

ORAL PANORAMIC X-RAY EXAMINATION REPORT

****Teeth-Specific Observations****

General Condition

A total of 23 teeth are visualized, with complete eruption of the posterior dentition. Wisdom teeth status: #28 is fully erupted and unimpacted; other wisdom teeth (#18, #38, #48) are not visualized in the field.

Pathological Findings

1. **#26**: Suspicious for caries with radiolucent demineralization noted in the mesial aspect.
2. **#21**: Area of concern for supragingival calculus accumulation on the lingual surface.
3. **Near tooth #16**: Suspicious for a root stump adjacent to the apical region, consistent with prior extraction remnants.
4. **Near tooth #47**: Area of concern for impacted structure (likely a residual fragment or supernumerary tooth) adjacent to the apical third of #47.

Historical Interventions

1. **#16**: Presence of a composite restoration with well-defined margins and no evidence of secondary caries.
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****Clinical Summary & Recommendations****

Priority Concerns

1. **Deep suspicious caries on #26** requiring immediate endodontic evaluation to prevent pulpal involvement.
2. **Impacted structure near #47** necessitating cone-beam CT imaging to assess its relationship with adjacent anatomic structures.

Preventive Measures

1. Reinforce biofilm control measures for calculus-prone areas (#21).
2. Monitor radiopaque root stump near #16 for signs of resorption or infection.

Follow-up Protocol

1. Schedule endodontic referral for #26 within 2 weeks.
 2. Order CBCT imaging for impacted fragment near #47 to guide surgical planning.
 3. 6-month recall for radiographic and clinical monitoring of all suspicious findings.
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Generated using FDI tooth numbering system. All findings based on panoramic imaging interpretation.