



## 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: 27):

```
[  
{'point_2d': [829, 431], 'tooth_id': '11', 'score': 0.94},  
{'point_2d': [712, 625], 'tooth_id': '45', 'score': 0.93},  
{'point_2d': [571, 652], 'tooth_id': '47', 'score': 0.93},  
{'point_2d': [993, 649], 'tooth_id': '33', 'score': 0.92},  
{'point_2d': [493, 471], 'tooth_id': '17', 'score': 0.91},  
{'point_2d': [1149, 637], 'tooth_id': '36', 'score': 0.91},  
{'point_2d': [1190, 442], 'tooth_id': '26', 'score': 0.91},  
{'point_2d': [811, 647], 'tooth_id': '43', 'score': 0.9},  
{'point_2d': [1295, 621], 'tooth_id': '38', 'score': 0.9},  
{'point_2d': [648, 612], 'tooth_id': '46', 'score': 0.9},  
{'point_2d': [708, 429], 'tooth_id': '13', 'score': 0.9},  
{'point_2d': [1078, 645], 'tooth_id': '35', 'score': 0.89},  
{'point_2d': [1035, 641], 'tooth_id': '34', 'score': 0.89},  
{'point_2d': [1218, 642], 'tooth_id': '37', 'score': 0.89},  
{'point_2d': [427, 476], 'tooth_id': '18', 'score': 0.89},  
{'point_2d': [895, 426], 'tooth_id': '21', 'score': 0.88},  
{'point_2d': [499, 636], 'tooth_id': '48', 'score': 0.88},  
{'point_2d': [1123, 432], 'tooth_id': '25', 'score': 0.88},  
{'point_2d': [857, 633], 'tooth_id': '42', 'score': 0.87},  
{'point_2d': [909, 624], 'tooth_id': '31', 'score': 0.87},  
{'point_2d': [760, 631], 'tooth_id': '44', 'score': 0.86},  
{'point_2d': [1320, 468], 'tooth_id': '28', 'score': 0.85},  
{'point_2d': [942, 629], 'tooth_id': '32', 'score': 0.84},  
{'point_2d': [959, 428], 'tooth_id': '22', 'score': 0.81},  
{'point_2d': [766, 434], 'tooth_id': '12', 'score': 0.78},  
{'point_2d': [1015, 431], 'tooth_id': '23', 'score': 0.64},  
{'point_2d': [1072, 435], 'tooth_id': '24', 'score': 0.64}  
]
```

Wisdom teeth detection (total: 4):

```
[  
{'box_2d': [1235, 556, 1354, 687], 'tooth_id': '38', 'is_impacted': false, 'score': 0.9},  
{'box_2d': [388, 402, 466, 550], 'tooth_id': '18', 'is_impacted': false, 'score': 0.89},  
{'box_2d': [437, 576, 561, 697], 'tooth_id': '48', 'is_impacted': false, 'score': 0.88},  
{'box_2d': [1278, 397, 1362, 538], 'tooth_id': '28', 'is_impacted': false, 'score': 0.85}  
]
```

Dental Pathological Findings (total: 1):

```
[  
{'box_2d': [1152, 471, 1176, 501], 'tooth_id': 'unknown', 'label': 'caries', 'score': 0.32, 'near_tooth': '26'}  
]
```

Historical Treatments (total: 0):

```
[  
]
```

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## Medical Report

## **Teeth-Specific Observations**

### **1. General Condition**

A total of 27 teeth are visualized in the panoramic image. All four wisdom teeth (#18, #28, #38, #48) are present and non-impacted. The dental arch exhibits no evidence of significant resorption or bony expansion.

### **2. Pathological Findings**

An area of concern is noted near tooth #26, suspicious for early carious lesion. No other pathological changes, including periapical radiolucency, impacted teeth, or calculus, are observed.

### **3. Historical Interventions**

No prior restorations, crowns, root canal treatments, or implants are identified.

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## **Clinical Summary & Recommendations**

### **1. Priority Concerns**

- **Area of suspected caries near #26:** Requires clinical correlation and further diagnostic evaluation to confirm and address.

### **2. Preventive Measures**

- Reinforce patient education on interproximal plaque control, particularly in the region of #26.
- Emphasize regular fluoride application and dietary counseling to mitigate caries risk.

### **3. Follow-up Protocol**

- **6-month recall** for radiographic monitoring of the suspicious area near #26.
- **Referral to general dentist or pediatric dentist** for direct clinical assessment of the suspected caries.
- Schedule follow-up imaging if there is no improvement in oral hygiene compliance or risk factors persist.