



## 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.
- 

## **\*\*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.
- 

Generated using FDI tooth numbering system. All findings based on panoramic imaging interpretation.