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': [1130, 645], 'tooth_id': '36', 'score': 0.96},
{'point_2d': [699, 654], 'tooth_id': '45', 'score': 0.95},
{'point_2d': [508, 426], 'tooth_id': '17', 'score': 0.94},
{'point_2d': [1049, 653], 'tooth_id': '35', 'score': 0.94},
{'point_2d': [620, 649], 'tooth_id': '46', 'score': 0.93},
{'point_2d': [1251, 419], 'tooth_id': '27', 'score': 0.93},
{'point_2d': [789, 675], 'tooth_id': '43', 'score': 0.93},
{'point_2d': [590, 443], 'tooth_id': '16', 'score': 0.93},
{'point_2d': [540, 616], 'tooth_id': '47', 'score': 0.93},
{'point_2d': [953, 479], 'tooth_id': '22', 'score': 0.92},
{'point_2d': [1220, 611], 'tooth_id': '37', 'score': 0.92},
{'point_2d': [1165, 442], 'tooth_id': '26', 'score': 0.91},
{'point_2d': [903, 477], 'tooth_id': '21', 'score': 0.9},
{'point_2d': [744, 671], 'tooth_id': '44', 'score': 0.9},
{'point_2d': [1042, 464], 'tooth_id': '24', 'score': 0.9},
{'point_2d': [800, 477], 'tooth_id': '12', 'score': 0.9},
{'point_2d': [655, 445], 'tooth_id': '15', 'score': 0.89},
{'point_2d': [1093, 450], 'tooth_id': '25', 'score': 0.89},
{'point_2d': [964, 671], 'tooth_id': '33', 'score': 0.89},
{'point_2d': [1000, 464], 'tooth_id': '23', 'score': 0.89},
{'point_2d': [1000, 664], 'tooth_id': '34', 'score': 0.88},
{'point_2d': [748, 465], 'tooth_id': '13', 'score': 0.88},
{'point_2d': [847, 481], 'tooth_id': '11', 'score': 0.88},
{'point_2d': [829, 668], 'tooth_id': '42', 'score': 0.86},
{'point_2d': [703, 460], 'tooth_id': '14', 'score': 0.85},
{'point_2d': [922, 672], 'tooth_id': '32', 'score': 0.81},
{'point_2d': [862, 663], 'tooth_id': '41', 'score': 0.77},
{'point_2d': [894, 663], 'tooth_id': '31', 'score': 0.75}
]

Wisdom teeth detection (total: 0):
[
]

Dental Pathological Findings (total: 3):
[
{'box_2d': [884, 391, 981, 560], 'tooth_id': '22', 'label': 'calculus', 'score': 0.35},
{'box_2d': [806, 397, 929, 559], 'tooth_id': '21', 'label': 'calculus', 'score': 0.53},
{'box_2d': [865, 354, 908, 581], 'tooth_id': '21', 'label': 'calculus', 'score': 0.4}
]

Historical Treatments (total: 0):
[
]

Medical Report

Teeth-Specific Observations

1. **General Condition**

A total of 28 permanent teeth are visualized with clear anatomical localization. No wisdom teeth (third molars) are detected in the panoramic field. All identified teeth demonstrate normal anatomical alignment and spatial distribution per FDI numbering system.

2. **Pathological Findings**

Areas of concern noted for **calculus deposits**:

- Suspicious for calculus accumulation on **#21 (right lateral incisor)**.

- Suspicious for calculus accumulation on **#22 (right central incisor)**.

- Additional areas of concern for calculus near **#22**.

3. **Historical Interventions**

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

Clinical Summary & Recommendations

1. **Priority Concerns**

- Suspicious calculus deposits require evaluation for potential subgingival plaque buildup on **#21** and **#22**.

- Immediate attention recommended to prevent progression to periodontal disease.

2. **Preventive Measures**

- Reinforce biofilm control through improved interproximal cleaning (e.g., flossing, interdental brushes) for anterior teeth.

- Schedule professional prophylaxis for calculus removal.

3. **Follow-up Protocol**

- **Referral to hygienist** for scaling and root planing of #21 and #22.

- **6-month recall** for monitoring periodontal health.

- Reinforce patient education on plaque control techniques.