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## **Innovations in Oral Pathology: From Molecular Diagnostics to Personalized Medicine**

**Dr Vaneeta Bhosle**

MDS(OMFS), Tilak Nagar, Thane, Maharashtra 421201

**Email Id: [serviceheb@gmail.com](mailto:serviceheb@gmail.com)**

### **ABSTRACT:**

Oral pathology plays an essential role in diagnosing and managing diseases of the oral and perioral regions. Recent technological innovations and scientific developments have significantly transformed the field, particularly through advancements in molecular diagnostics, imaging techniques, and personalized treatment approaches. This article reviews key recent advancements in oral pathology, with a focus on the improved diagnosis of oral cancer, emerging tools for non-invasive detection, and the integration of artificial intelligence (AI) in clinical practice. Furthermore, it explores the potential impact of genetic testing, liquid biopsies, and personalized medicine in enhancing patient care and treatment outcomes. Despite the promising advancements, challenges in implementing these innovations within clinical settings persist. This article concludes by discussing the future directions of oral pathology, emphasizing the importance of continuous research and innovation.

**Keywords:** Oral Cancer, Molecular Diagnostics, Liquid Biopsy, Artificial Intelligence

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