

# 2022 Yılında Diş Hekimliği Alanındaki Önemli Gelişmeler

## Important Developments in Dentistry in 2022

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### **Abstract**

The year 2022 has witnessed significant developments in the field of dentistry. This article covers innovations in digital dentistry, 3D printing technologies, artificial intelligence, regenerative dentistry, and biomaterials. The use of digital dentistry and 3D printing technologies has increased patient satisfaction and accelerated treatment processes. Artificial intelligence has made great strides in diagnosis and treatment planning. Regenerative dentistry has offered more biologically compatible solutions using stem cell therapies and biomaterials. Nano and biomaterials have been effective in preventing infection and inflammation in dental implantology. Laser technologies in aesthetic dentistry have increased patient satisfaction with minimally invasive methods. These advancements have made it possible to provide better services in dentistry.

**Key words:** Dentistry, 2022, development

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### **Introduction**

The year 2022 has witnessed significant developments in the field of dentistry. This article covers innovations in digital dentistry, 3D printing technologies, artificial intelligence, regenerative dentistry, and biomaterials. The use of digital dentistry and 3D printing technologies has increased patient satisfaction and accelerated treatment processes. Artificial intelligence has made great strides in diagnosis and treatment planning. Regenerative dentistry has offered more biologically compatible solutions using stem cell therapies and biomaterials. Nano and biomaterials have been effective in preventing infection and inflammation in dental implantology. Laser

technologies in aesthetic dentistry have increased patient satisfaction with minimally invasive methods. These advancements have made it possible to provide better services in dentistry.

### **Digital Dentistry and 3D Printing Technologies**

Digital dentistry saw a significant boost in 2022. The use of 3D printing technologies has revolutionized the production of dental prostheses. Dentists can now produce prostheses, crowns, and bridges more quickly and accurately. The increased use of these technologies has significantly improved patient satisfaction and treatment quality. Additionally, the use of digital modeling and intraoral scanners has become

widespread, providing great convenience in diagnosis and treatment processes (1,2).

### **Artificial Intelligence and Machine Learning**

Artificial intelligence (AI) and machine learning have become widely used to optimize diagnosis and treatment processes in dentistry. AI has made significant advances, particularly in the identification and treatment planning of dental implants. Research conducted in 2022 has shown that AI algorithms can identify dental implant systems with high accuracy, enabling dentists to diagnose more accurately and quickly (3).

### **Regenerative Dentistry and Biomaterials**

Regenerative dentistry has been rapidly developing with advancements in biomedical engineering research. Clinical studies using cell sources such as dental pulp, periodontal ligament, and gingival stem cells have shown promising results in tissue regeneration. For instance, stem cells obtained from dental pulp have been shown to be effective in treating periodontal diseases and bone regeneration. These advancements offer more natural and biologically compatible solutions in dental treatments.

### **Aesthetic Dentistry and Laser Technologies**

Aesthetic dentistry made significant advances with the use of minimally invasive methods and laser technologies in 2022. Laser technologies became widely used in procedures such as teeth whitening, gum contouring, and cavity treatment. These technologies offer less painful procedures and faster recovery times, thus enhancing patient satisfaction (4).

This editorial highlights some of the significant advancements in dentistry in 2022. These developments have enabled dentists to provide better services to their patients, indicating a promising future for further innovations in dental practices.

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