Fire Dental AI
Advice-Support
System

Automatically Detects the Clinical Outcome,
Quick and Accurate Diagnosis

DIGIRAY

Fire Dental AI
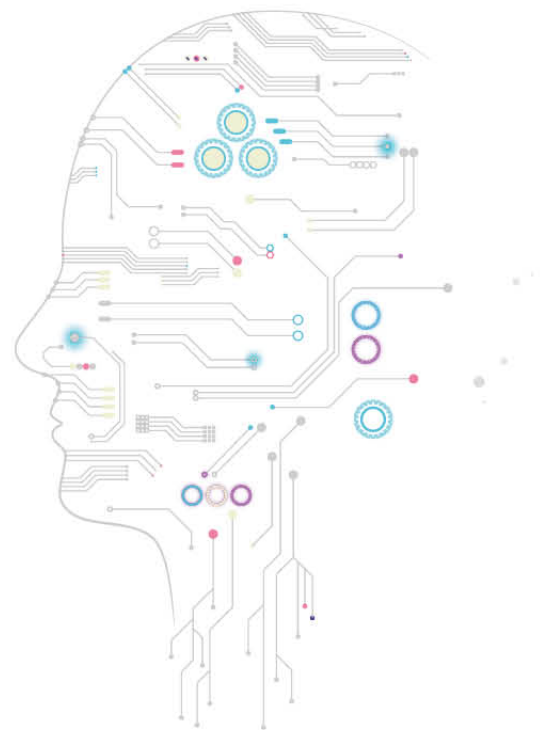# Advice-Support
System

Through technological convergence and development,
Digiray offers a new **paradigm** to dentistry.
Digiray hopes to make dental diagnosis **faster and more accurate**, providing **better service** for the patients.

Today Artificial intelligence (AI) is driving the global IT industry. In this age of AI, machines having the ability to think and judge are not far from the reality. Beyond the simple work, there are more and more cases where artificial intelligence is used in professional fields, such as accounting, law, and medical care.

Artificial intelligence (AI) is progressing rapidly by performing numerous functions. It recognizes and classifies voices and images, overcomes the language barrier, performs autonomous driving and writes articles. Furthermore, it is starting to recognize human emotions through deep learning. In the near future, AI will be used in almost every area of our daily lives.

Digiray will be the world's first company to commercialize AI in the field of dentistry by introducing Fire Dental AI Advice-Support System. It is an innovative way of interpreting oral images, designed to help overloaded and stressed dentists. By doing so, it hopes to improve patient care and service.

Dental diagnostics is a difficult challenge for dentists throughout the dental industry. The ability to accurately diagnose dental imaging is highly dependent on the dentist's experience, concentration, equipment, work environment and academic background. Fire Dental AI's advice-support system assists practitioners with diagnostics to automatically detect and highlight clinical results, facilitating fast and accurate diagnosis.

Fire Dental AI Advice-Support System

Fire Dental AI Advice-Support System is a S/W made based on AI.

The system detects Dental Carries and Periapical Leison by examining the penetration from an x-ray immediately after it's taken.

Fire Dental AI Advice-Support System is a S/W made based on AI. It provides comprehensive information on the patient's dental condition and allows users to receive immediate and complete reports on the detection results. As a result, it identifies the suspected areas of patients' dental caries and periapical lesion. This Advice-Support System helps dentists to make faster and more an accurate diagnosis.
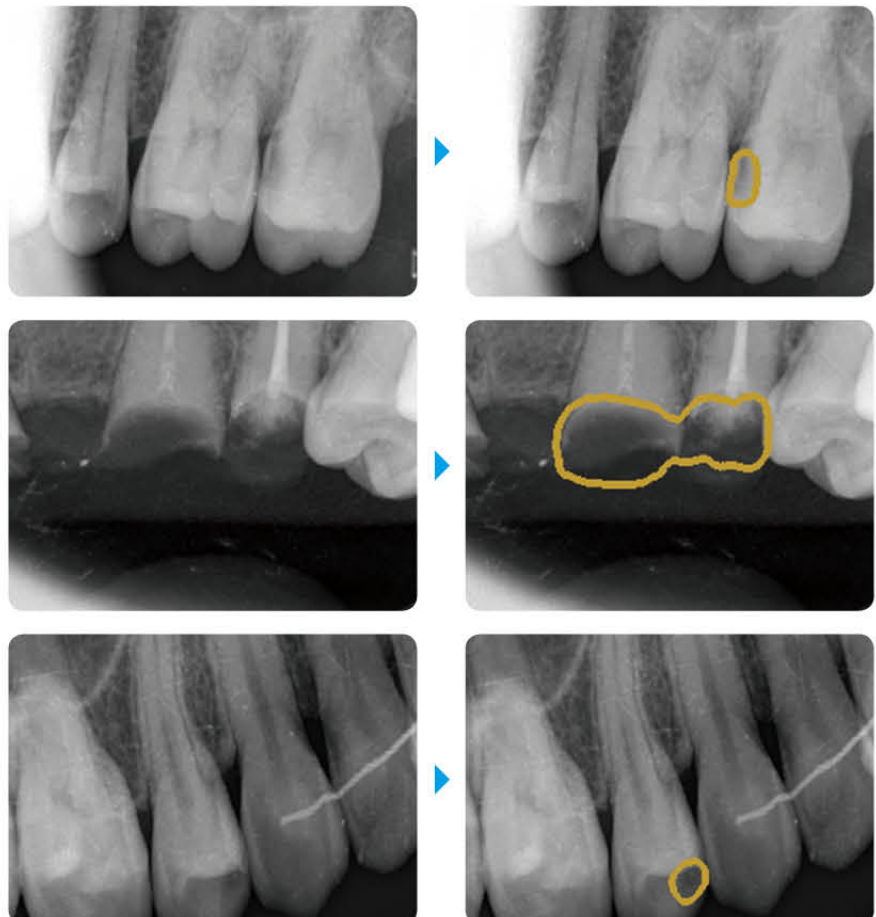
Diagnostic Precision
Innovative Dental care System

Dental Caries

One of the main causes of dental caries is plaque, a bacterial membrane formed on the tooth surface. When we eat, food residues remain in our mouth. When plaque-forming bacteria use these food residues or sugars in the mouth to produce acid, hard tissues of the tooth, such as enamel, dentin and cement, get attacked and damaged, resulting in dental caries.

To examine dental caries, a clinical visual examination, which uses an explorer and dental mirror, is done to check for damages or discoloration of the tooth surface. The examination is implemented in the following order: taking->inspection->palpation. This requires a great amount of meticulous work, as an exact interpretation of range and condition of caries is required.
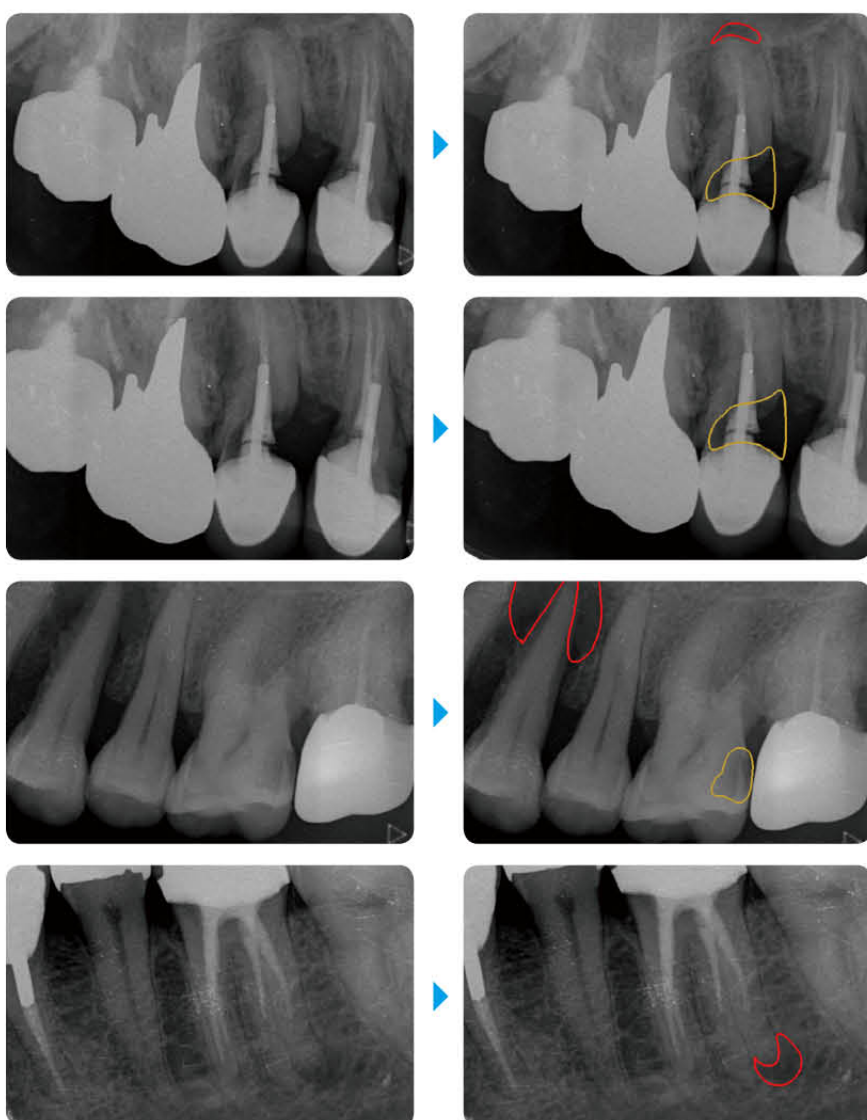
Fire Dental AI Advice-Support System helps resolve the aforementioned challenge. It analyzes the radiographic image immediately after X-ray shots are taken and detects the suspected areas of dental caries. This provides comprehensive information on the patient's dental condition, allowing users to judge the results accurately.

Periapical Lesion

If several lesions at the root end develop due to a gum boil, x-ray image interpretations may reveal multiple readings, including periapical cyst and periapical granuloma and periapical abscess. As the image interpreting specialists look for periapical lesions that usual dentists overlook, accurate image reading is required to catch dental disease as early as possible.

Fire Dental AI Advice-Support System analyzes the radiographic image immediately after X-ray shots to detect the suspected areas of the periapical lesion. This provides comprehensive information on the patient's dental condition, allowing users to judge the results accurately and quickly.

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A Global Pioneer in the Convergence of AI and Dentistry

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