
WRITING SAMPLE – PEN OF JEN
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SEO Keywords are highlighted in yellow.

i-CAT 3D Imaging

Safer 3D Panoramic Imaging

Burke & Redford Orthodontics is committed to offering our patients the safest and most advanced treatment options, which is why we use i-CAT® for our **advanced 3D radiography**. The i-CAT® provides high-quality images, low dose radiation options, and fully featured treatment planning software.

The **dental cone beam has become industry standard technology**, and i-CAT® is one of the pioneers—winning numerous awards and accolades from educators, evaluators, and dental publications. The i-CAT® was voted the best cone beam CT scanner for several years running, which is why we choose to use it in our office.

How i-CAT® 3D Imaging Works

The i-CAT® is an x-ray system that uses a cone beam (which is merely an x-ray beam shaped like a cone) to move around a patient to produce a large number of high-quality images of the mouth and head area. The result is a single scan that shows a 3D image of teeth, soft tissues, nerve pathways, and bone.

This 3D image provides clear and precise data on exact tooth positions and their relationship to mouth anatomy. Combined with the i-CAT®'s flexible planning and treatment tools, Dr. Burke and Dr. Redford gain an **improved understanding of patients' conditions**—allowing them to determine the most effective and least-invasive treatment plan.

This **3D treatment planning** has several advantages over conventional 2D x-ray images, which were often distorted and had magnification errors. With i-CAT®, the images are 100% accurate and without distortion. For the **imaging sciences**, moving from 2D x-rays to 3D x-rays was like going from analog to digital.

How 3D Panoramic Imaging Is Used

Orthodontists use the images from the i-CAT® in several ways, including:

- Orthodontic evaluation and treatment planning.
- Identifying the precise root locations of each tooth, including root angulations.
- Conducting airway assessments related to sleep apnea issues.
- Diagnosing and treating TMJ disorders.

- Identifying impacted or missing teeth.
- Assessing third molar positions.

The i-CAT® also **finds supernumerary teeth** and their exact locations. Supernumerary teeth is a fancy term for “extra” teeth—a condition known as hypodontia. Issues related to supernumerary teeth include:

- Interference with the normal eruption of permanent teeth
- Crowding, displacement, and misalignment of teeth
- Chewing problems
- Fusion with permanent teeth
- Cosmetic issues.

Supernumerary teeth should be identified and treated as soon as possible. With the i-CAT®, these extra teeth can be easily identified, and a treatment plan can be determined.

Benefits of the i-CAT®

The i-CAT® offer numerous benefits—primarily related to patient health, comfort, and safety. These benefits include:

- **Extremely low-dose radiation for patient safety.** The i-CAT® **QuickScan gives high resolution 3D panoramic images** at a radiation dose that is comparable to a 2D panoramic image. This makes it safe to use on both children and adults. No radiation remains in the body after use, and there are no side effects.
- **Fast scans.** A complete scan takes less than 10 seconds but provides comprehensive and high-quality images. The images can be easily shared with patients and referring physicians.
- **Painless and non-invasive.** Patients sit in the i-CAT® unit on the padded chair and rest their chin on a chin rest. The unit revolves around the patient to complete the scan. There is no need to put anything in the mouth or “bite down” on x-ray film.
- **Open environment.** The i-CAT® unit provides an open environment and plenty of space so patients won’t feel claustrophobic.

Contact Burke & Redford Orthodontists in Temecula or Lake Elsinore by calling our main office at (951) 699-8011, or fill out the consultation form on our website anytime. We will schedule a time that works with your schedule.