



GE Healthcare

Motion Freeze

*A pioneering solution to compensate for involuntary respiratory motion artifacts on interventional CBCT.**

ACCESS THE FULL POTENTIAL OF CBCT

Physicians agree: CBCT is essential to improve the feasibility, effectiveness, and safety of challenging interventional radiology procedures.

CBCT images can be used throughout an interventional procedure. However, involuntary respiratory motion artifacts often get in the way. This common barrier in CBCT imaging of the liver¹ may decrease image quality as well as a physician's ability to fully understand a tumor's angioarchitecture and contrast uptakes.

3D – GET IT RIGHT

Physicians estimate that in up to 40%² of CBCT acquisitions on non-sedated patients, images are discarded due to such artifacts, forcing them to choose between proceeding without CBCT images or redoing the acquisition.

In up to 25%² of those cases, physicians chose to attempt a second acquisition – at the expense of patients (who receive increased contrast media injection and radiation dose), and the clinical team (incurring potential time delays and diminished workflow efficiency).

REFINE

Involuntary respiratory motion artifacts

RECOVER

Vascular CBCT images that would have otherwise been discarded

BEFORE

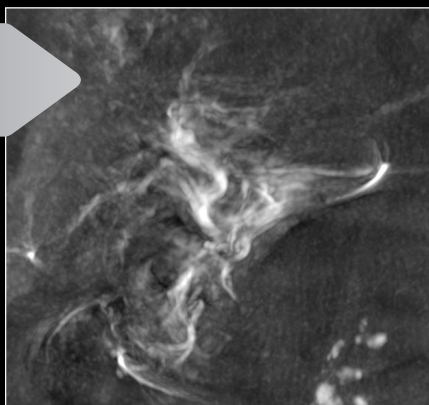


Figure 1:
CBCT reconstruction affected by involuntary respiratory motion artifacts

AFTER



Figure 2:
CBCT reconstruction with Motion Freeze

Tempted to toss your CBCT images?

Rather than 'retake', access the benefits of Motion Freeze:

PIONEERING SOLUTION

The first solution commercialized to compensate artifacts induced by involuntary respiratory motion for interventional CBCT.³

ENABLING EFFICIENCY

With a fast post-reconstruction option, stream-line procedure workflow which can help to recover,⁴ rather than discard, initial CBCT acquisitions.

NO ADDITIONAL DOSE OR CONTRAST MEDIA

By potentially reducing the need to repeat CBCT acquisitions, Motion Freeze may help minimize radiation dose and contrast media injection.

FACILITATING ACCESS TO ADVANCED SOLUTIONS

Involuntary respiratory motion artifacts can result in a failure to detect tumor feeding vessels, while using advanced solutions for automated vessel detection⁵ (such as FlightPlan for Liver, an ASSIST brand) may result in improved local tumor response.⁶

By helping to salvage, rather than discard, initial CBCT images, Motion Freeze may enable access to advanced solutions.

1. Tacher, V., Radaelli, A., Lin, M., and Geschwind, J.-F. (2015). How I Do It: Cone-Beam CT during Transarterial Chemoembolization for Liver Cancer. *Radiology* 274, 320–334.
2. Based on the quantitative assessment of 6 recognized Interventional Radiologists specialized in the field of Interventional Oncology, using various intervention angiography systems from different vendors.
3. Based on competitive research, among major players in interventional imaging.
4. Visibility of small details by refining & increasing small contrasted structures in CBCT images.
5. Iwazawa, J., Ohue, S., Hashimoto, N., Muramoto, O., and Mitani, T. (2013). Clinical utility and limitations of tumor-feeder detection software for liver cancer embolization. *Eur. J. Radiol.* 82, 1665–1671.
6. Cornelis, F.H., Borgheresi, A., Petre, E.N., Santos, E., Solomon, S.B., and Brown, K. (2017). Hepatic Arterial Embolization Using Cone Beam CT with Tumor Feeding Vessel Detection Software: Impact on Hepatocellular Carcinoma Response. *Cardiovasc. Intervent. Radiol.*

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* The improvement related to Motion Freeze depends on the acquisition conditions, table position, patient, type of motion, anatomical location and clinical practice.
Motion Freeze is an optional feature of 3DXR (part of GE vascular systems IGS 5, IGS 6 and IGS 7 or IGS 7OR). 3DXR and Motion Freeze may not be available in all markets. Refer to your sales representative.