HealthManagement
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Respiratory Motion Management for CT

Over the past decade, many papers[1-3] have been published concerning the challenges of respiratory movement during radiation therapy. It is well known that normal breathing can cause severe motion artifacts during a CT scan. For diagnostic scans, the patient is usually scanned during a deep inspiration breath-hold which minimizes internal motion. This option is unsatisfactory for CT Simulation which is being performed in preparation for radiation treatment. Since radiation treatment times are of longer duration, patients cannot maintain a stable breath-hold throughout the treatment session.

Therefore, it is highly desirable that CT image volumes are generated for the entire respiratory cycle.

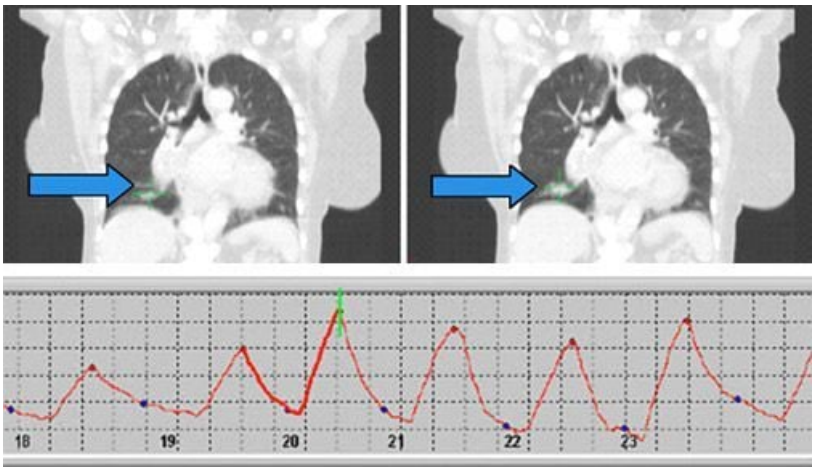

Image: Inhale irregularity in respiratory signal.

For further information please download the complete white paper: **Respiratory Motion Management for CT [PDF]**

References:

1. K. Ohara et al. "Irradiation Synchronized with Respiration Gate" Radiat. Oncol. Biol. Phys 17, 853-857 (1989).
2. J. Balter et al. "Uncertainties in CT based Radiation Therapy Treatment Planning Associated with Patient Breathing" Radiat. Oncol. Biol. Phys. 36, 390 (1996)
3. P. Keall, G. Starkschall et al. â€œAcquiring 4D Thoracic CT scans using a Multislice Helical Method Phys. Med. Biol. 49, 2053-2069 (2004)

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