National Institutes of Health
Clinical Center

Radiographic Marker for Portable Chest and Abdominal X-Rays

Summary (1024-character limit)

The NIH Clinical Center seeks parties to license a method and apparatus that can significantly improve the diagnostic performance of portable chest (CXR) and abdominal x-rays.

NIH Reference Number

E-063-2011

Product Type

- Diagnostics

Keywords

- Radiography
- Imaging
- Chest x-ray
- Abdominal x-ray.

Collaboration Opportunity

This invention is available for licensing.

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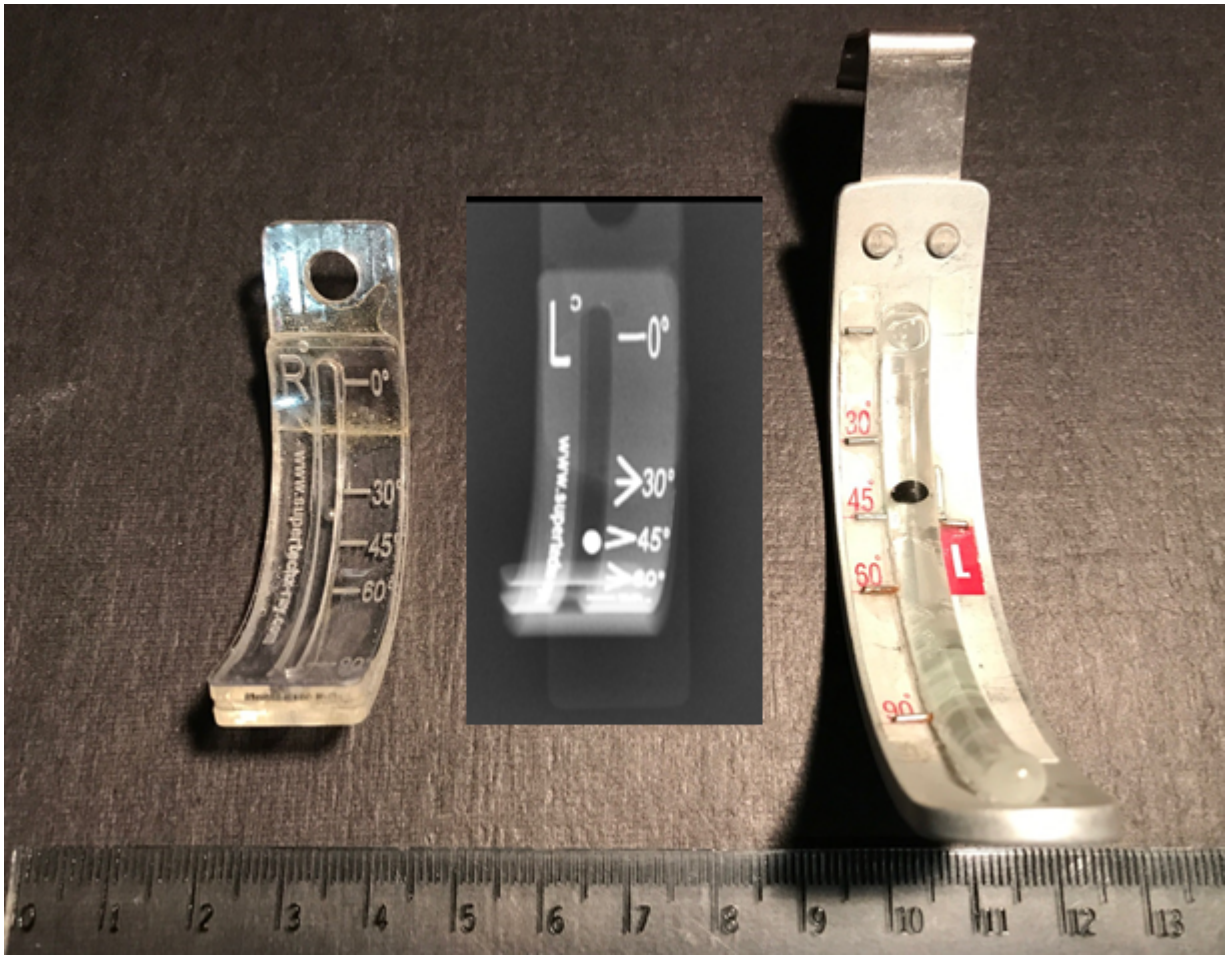
Description of Technology

The NIH Clinical Center seeks parties interested to license a method and apparatus that can significantly improve the diagnostic performance of portable chest (CXR) and abdominal x-rays. This device (see image below) quantifies angulation of a patient to provide for a better comparison of day-to-day improvement. Potential applications include portable chest and abdominal x-rays performed at patient's hospital bedside.

Development Status:

- A performance of a visual prototype was demonstrated. The visual prototype was imaged at 5 selected angles with a chest phantom. Initial in-vitro results demonstrate that angles can be quantified to within 30 degrees.
- Improved prototypes with more accuracy are currently being manufactured for patient use. In-vivo

studies will soon be underway to validate clinical utility.



Potential Commercial Applications

- Portable chest and abdominal x-rays

Competitive Advantages

- Currently, there is no quantitative marker to indicate degree of the upright position. This technology introduces a simple dynamic marker that can quantify the angle at a glance for the radiologist to best compare patient condition over time.
- The technology improves performance of CXR, allowing reliable comparisons of patient conditions over time. Thus, better therapies can be planned and unnecessary CT (Computerized Tomography) can be prevented.
- The technology improves care for Intensive Care Unit patients, as developing effusion and the need for immediate drainage (as one of many examples) can be more effectively assessed with the apparatus.

Inventor(s)

Les Folio (NIHCC)

Development Stage

- Prototype

Publications

I. Pneumatikos et al. Pleural effusions in critically ill patients. [PMID: 18824883]

M. Fartoukh, et al Clinically documented pleural effusions in medical ICU patients: how useful is routine thoracentesis? [PMID: 11796448]

Patent Status

- **U.S. Patent Issued:** U.S. Patent Number 9,541,822, Filed 14 Mar 2011, Issued 10 Jan 2017

Therapeutic Area

- Musculoskeletal