PERSONALIZED VACUUM BELL FOR PECTUS EXCAVATUM TREATMENT

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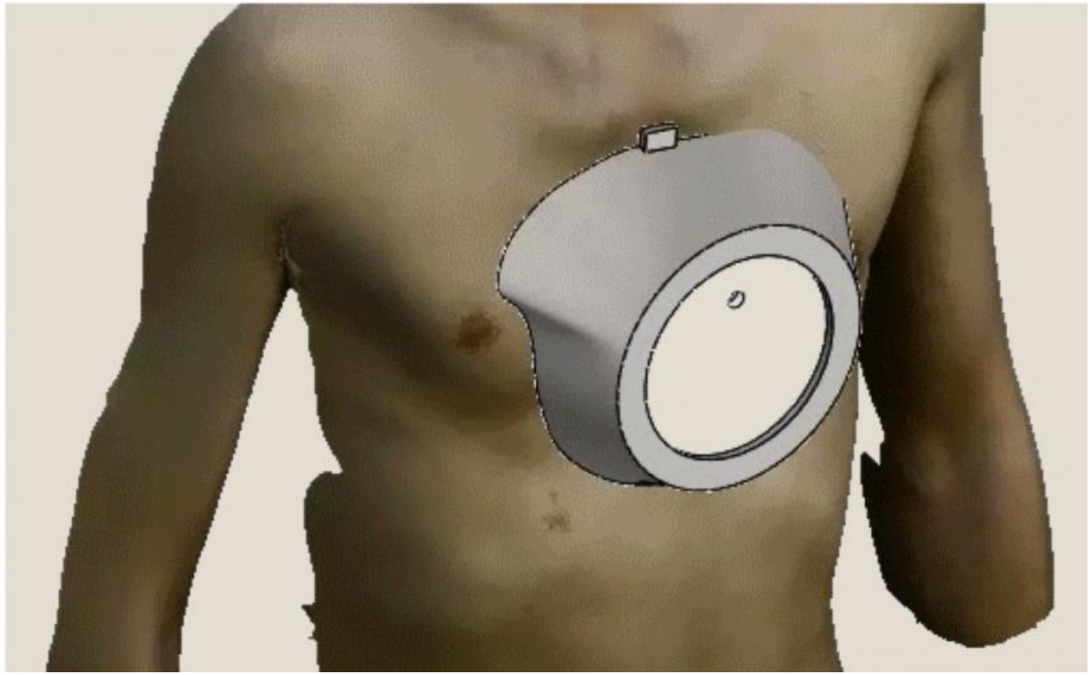
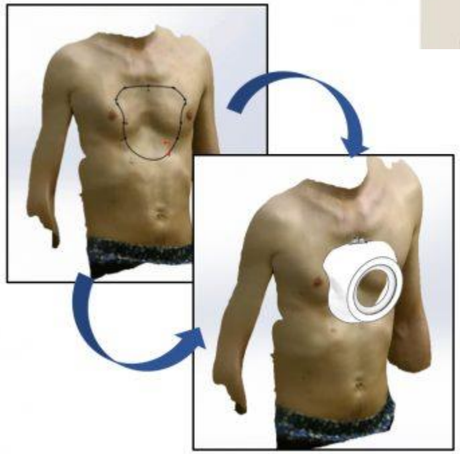
The invention

The aim of this invention is to create a Vacuum Bell, customized on patient anatomy, suitable for the pectus excavatum correction. This personalization allows a better adherence to the chest with consequent increase in more effectiveness in terms of achievable depression and, therefore, reduction of treatment time and better comfort perceived by the patient.

The Vacuum Bell and the relative construction method claimed in the patent allow the design and the manufacturing of customized equipment for the treatment of pectus excavatum. This Vacuum bell is able to ensure a more efficient and shorter treatment since it is conformed to the patient anatomy. In particular, the design procedure consists of first scanning the chest on which the boundaries of the area to be treated are defined. Finally, a CAD procedure allows the automatic development of the three-dimensional model of the vacuum bell to be manufactured with different techniques such as additive manufacturing ones.

Images





Industrial application

The patented technology is designed for the customization of medical devices suitable for the correction of pectus excavatum.

The advantages of the technology are many:

1. Customized device;
2. Increased ergonomics;
3. Increased treatment efficacy;
4. Reduced treatment times;
5. Greater depressions in the area to be treated;
6. Treatment of asymmetrical hollow chests.

Possible Developments

The patent is available for outright assignment, as well as for exclusive and non-exclusive licensing. Licenses are available for the remaining term of the patent titles.

The Research Group is available for new collaborative and third-party research activities, in-depth technical investigations, scientific advice, also aimed at raising the TRL of the technology.

The TRL of the invention is 3.

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