

Using ultrasound to determine the position of the gap between ribs during surgery

Submission date	Recruitment status	<input checked="" type="checkbox"/> Prospectively registered
12/03/2019	No longer recruiting	<input type="checkbox"/> Protocol
Registration date	Overall study status	<input type="checkbox"/> Statistical analysis plan
06/04/2019	Completed	<input checked="" type="checkbox"/> Results
Last Edited	Condition category	<input type="checkbox"/> Individual participant data
26/05/2020	Surgery	

Plain English summary of protocol

Background and study aims

Incorrect intercostal space positioning can cause inconvenience to surgeons, increasing surgery time and even increasing risk. The accuracy of the surgeon's manual positioning depends on the doctor's rich clinical experience and is also influenced by factors such as the patient's gender and body mass index. Determining the intercostal gap by ultrasound guidance is more intuitive. The focus of this double-blind randomized study was to assess the temporal accuracy of ultrasound in the positioning of the intercostal space and compare it to manual positioning.

Who can participate?

Anesthesiologists and surgeons.

What does the study involve?

The temporal accuracy of ultrasound in the positioning of the intercostal space and compare it to manual positioning.

What are the possible benefits and risks of participating?

There are no benefits or risks of participating.

Where is the study run from?

Henan Provincial People's Hospital.

When is the study starting and how long is it expected to run for?

December 2018 to October 2019.

Who is funding the study?

Wei Zhang, who works at Henan Provincial People's Hospital.

Who is the main contact?

Chenxi Li

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Contact information

Type(s)
Scientific

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Additional identifiers

Clinical Trials Information System (CTIS)
Nil known

ClinicalTrials.gov (NCT)
Nil known

Protocol serial number
2100043

Study information

Scientific Title
The accuracy and efficiency of positioning of the intercostal space under ultrasound guidance compared with manual positioning: an observational study

Study objectives
Compared with manual positioning, the ultrasound-guided rib gap is more accurate and faster.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Not provided at time of registration.

Study design
Observational

Primary study design

Observational

Study type(s)

Other

Health condition(s) or problem(s) studied

Locating the intercostal space during surgery

Interventions

The anesthesiologist and the surgeon participated in the experiment. The surgeon uses the technique to locate the intercostal space and the anesthesiologist uses ultrasound to locate the intercostal space and record the time. After the operation started, after the thoracoscope entered the chest cavity, it is judged whether the positioning of the rib gap was correct by direct vision. There is no follow-up.

Intervention Type

Other

Primary outcome(s)

The accuracy of manual positioning and ultrasonic positioning of the rib gap is measured using the number of people positioned correctly divided by the total number of people.

Key secondary outcome(s)

Total time of manual positioning and ultrasonic positioning of the intercostal space.

Completion date

01/10/2019

Eligibility

Key inclusion criteria

1. Undergoing thoracoscopic lung surgery
2. Aged 18 years or older

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

All

Lower age limit

18 years

Sex

All

Key exclusion criteria

1. Undergoing thoracoscopic single-hole operation
2. Subcutaneous emphysema
3. Rib fractures

Date of first enrolment

01/06/2019

Date of final enrolment

01/10/2019

Locations

Countries of recruitment

China

Study participating centre

Henan Provincial People's Hospital

China

450000

Sponsor information

Organisation

Henan Provincial People's Hospital

ROR

<https://ror.org/03f72zw41>

Funder(s)

Funder type

Hospital/treatment centre

Funder Name

Henan Provincial People's Hospital

Results and Publications

Individual participant data (IPD) sharing plan

The datasets generated and/or analysed during the current study during this study will be included in the subsequent results publication.

IPD sharing plan summary

Other

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	23/05/2020	26/05/2020	Yes	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes
Study website	Study website	11/11/2025	11/11/2025	No	Yes