

## **Protocolo de revisión sistemática**

### **Ultrasonido pulmonar en el manejo de pacientes con COVID-19: una revisión sistemática de 418 pacientes**

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#### **Review question**

What is the published evidence on the use of pulmonary ultrasound in the diagnosis, follow-up and discharge criteria of patients with COVID-19, as well as its correlation with RT, CT and RT-PCR?

#### **Searches**

The following databases will be searched using search algorithms: 1) Pubmed, 2) Scopus, and 3) Google scholar. The search terms will be adapted to each database. There will be no restrictions on language.

We will review the references of included studies in order to find more potential eligible studies. The complete search strategy for each database, the number of hits retrieved, and the reasons for exclusion of any studies at the full text stage of selection will be recorded, and provided as appendices. The last updating search will be run on julio 2020.

#### **Search terms for Pubmed:**

("2019/12/01"[Date - Publication]: "2020/07/05"[Date - Publication]) AND (((lung or chest or pulmo\* or thora\*) and (ultraso\* or sonog\* or echography)) and (Covid\* or SARS\* or coronavirus\*))

#### **Search terms for Scopus:**

[[ TITLE-ABS-KEY ( \*coronavirus OR sars\* OR covid\* ) AND TITLE-ABS-KEY ( ultraso\* OR \*sonography OR echography ) ) AND ( LIMIT-TO ( PUBYEAR , 2020 ) OR LIMIT-TO ( PUBYEAR , 2019 ) ) AND ( LIMIT-TO ( SUBJAREA , "MEDI" ) ) AND ( LIMIT-TO ( LANGUAGE , "English" ) OR LIMIT-TO ( LANGUAGE , "Spanish" ) ) ]]

#### **Search terms for Google Scholar**

(((lung or chest or pulmo\* or thora\*) and (ultraso\* or sonog\* or echography)) and (Covid\* or SARS\* or coronavirus\*))

**Types of study to be included**

All primary articles including case series (articles that included more than one patient) and case reports, including those published as letters to the editor who have used UP as part of the diagnostic evaluation and / or clinical follow-up of patients with COVID -19 confirmed by RT-PCR.

We will exclude the next type of studies: those studies in which modifications have been made to the conventional UP technique.

**Condition or domain being studied**

We will focus on the use of PU in diagnosis and / or follow-up and / or discharge criteria in patients with Covid-19 confirmed by RT-PCR.

We will compare the sensitivity and specificity of UP compared with RT-PCR, tomography and chest radiography in the diagnosis of Covid-19.

**Participants/population**

Patients with a confirmed diagnosis of covid-19 by RT-PCR without age or sex restriction.

**Intervention(s), exposure(s)**

UP in diagnosis and / or follow-up and / or discharge criteria in patients with Covid-19 confirmed by RT-PCR

**Comparator(s)/control**

RT-PCR, chest tomography, chest radiography

**Main outcome(s)**

Sensitivity, specificity, qualitative correlation, quantitative correlation, findings in the UP

**Additional outcome(s)**

None.

**Data extraction (selection and coding)**

Duplicates articles will be removed using Endnote software, then two reviewers will screen titles and abstracts, and will identify potentially relevant studies for inclusion. They will assess inclusion criteria by reading the full texts of the potentially relevant studies selected. These process will be performed in an independent fashion, and disagreements will be resolved by a discussion to achieve consensus.

### **Risk of bias (quality) assessment**

Since we expect that most of the studies (or all of them) will be clinical cases or case series, we decided not to perform a risk of bias assessment.

### **Strategy for data synthesis**

We will report the characteristics of the studies (including ICU, age, transducer type, protocol type, correlation between PU and radiography or tomography, and findings in the PU).

### **Contact details for further information**

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### **Organisational affiliation of the review**

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01 june 2020

**Anticipated completion date**

15 july 2020

**Funding sources/sponsors**

None

**Conflicts of interest:**

none

**Language:**

spanish

**Country**

Peru