South Africa

Prof. Alison Grant, Africa Health Research Institute, Durban, South Africa
Dr Emily Wong, Africa Health Research Institute, Durban, South Africa
Dr Al Leslie, Africa Health Research Institute, Durban, South Africa
Prof. Alison Grant, London School of Hygiene & Tropical Medicine, UK
Dr Aaron Karat, London School of Hygiene & Tropical Medicine, UK
Dr Matthew Fentress, London School of Hygiene & Tropical Medicine, UK
Dr Priya Maharaj, Inkosi Albert Luthuli Central Hospital, Durban, South Africa
Dr Patricia Henwood, Brigham and Women's Hospital/Harvard Medical School

Evaluation of ultrasound for screening and diagnosis of pulmonary tuberculosis, KwaZulu Natal, South Africa, 2019-20

Study Documentation

August 25, 2022

Metadata Production

Metadata Producer(s)	Africa Health Research Institute (AHRI)
Identification	DDI.AHRI.PoCUS.AnalyticalDataset.2022.v1

Table of Contents

Evaluation of ultrasound for screening and diagnosis of pulmonary tuberculosis, KwaZulu Natal, South Africa, 2019-20

Overview

Identification	AHRI.Pocus.AnalyticalDataset.2022.v1
Version	V1.0.0

Abstract

Improved tests for screening and diagnosing TB in low-income settings are an essential component of the End TB strategy. Transthoracic ultrasound has generally been considered to perform poorly for the diagnosing pulmonary TB, but newer devices may offer better performance characteristics. The current research was a proof-of-concept study to determine the performance characteristics of thoracic and abdominal ultrasound for the diagnosis of TB in adults compared to a microbiological reference standard under ideal conditions, to inform whether future evaluation and development of the technique is needed.

We recruited participants during the period from October 2019 to March 2020 from two sources:

1) Vukuzazi: A population-based health care screening study (named Vukuzazi), which aimed to describe the frequency and distribution of multimorbidity, including an extensive TB screening component, among adults in the AHRI demographic surveillance area in northern KwaZulu-Natal (Gunda et al., 2021). Participants from this source were eligible if they had undergone a chest radiograph and had results from a sputum sample tested for mycobacteria in the AHRI lab;

2) Clinic: Individuals who attended a primary healthcare clinic in KwaZulu-Natal to start TB treatment.
Participants were eligible to take part in the study if they were adults (aged 18 years or above) and healthy enough to travel and participate in the study. We recruited participants from the Vukuzazi study into four groups based on the following criteria:
- group 1: no TB symptoms, negative sputum Xpert MTB/RIF Ultra, normal chest radiograph;
- group 2: negative sputum Xpert MTB/RIF Ultra, abnormal chest radiograph;
- group 3: positive sputum Xpert MTB/RIF Ultra, abnormal chest radiograph;
- group 4, positive sputum Xpert MTB/RIF Ultra, normal chest radiograph.

Participants sampled from the clinic were classified into group 3. This allowed the comparison of those without evidence of TB (group 1) to those with either microbiological or radiological evidence of TB (groups 2-4). Participants from the clinic completed a questionnaire aligned to that used in Vukuzazi concerning health care history, TB symptoms, and HIV and TB treatment. All participants gave venous blood for testing for HIV antibodies. For the primary analysis all participants underwent comprehensive thoracic and focused abdominal ultrasound examination performed according to the study protocol by clinicians masked to all clinical and imaging data. Experienced ultrasonographers interpreted the resulting ultrasound images for the presence of typical chest radiography features of pulmonary or extrapulmonary TB. A comparison of these features between the study groups allowed us to estimate the sensitivity and specificity of individual and combined ultrasound features to detect TB (microbiological/radiological).

Kind of Data	Clinical Data
Unit of Analysis	Study participant

Scope & Coverage

Keywords	Tuberculosis, Ultrasonography, Point-of-Care Testing, Sputum samples, sputum Xpert MTB/RIF testing, TB symptom screening
Topics	Tuberculosis, Ultrasonography, Point-of-Care Testing
Time Period(s)	2019-2020
Countries	South Africa

<table>
<tr><td colspan="2">

Geographic Coverage

Demographic surveillance area of the Africa Health Research Institute in uMkhanyakude district, KwaZulu-Natal, and a TB clinic near Durban, KwaZulu-Natal.

</td></tr>
<tr><td colspan="2">

Universe

As above, participants were drawn from two populations. The first population was that covered by the ongoing ARHI demographic surveillance located in rural KwaZulu-Natal which was established in 2000 (Gareta et al., 2021). In 2018, within the ongoing surveillance, the 'Vukuzazi' study offered community-wide health screening and bio-sampling to understand the frequency and distribution of major health care needs in the population (Gunda et al., 2021). For this study we selected adult (18 years and above) participants of Vukuzazi who had completed the full set of TB screening tests and were healthy enough to travel to Durban to undergo the imaging for this the study. This allowed us to sample healthy participants and participants with varying degrees of microbiological and radiological evidence for TB. The second population were adults (18 years and above) who attended a primary healthcare clinic in KwaZulu-Natal to start TB treatment who had microbiologically-confirmed TB.

</td></tr>
</table>

Producers & Sponsors

Primary Investigator(s)	Prof. Alison Grant, Africa Health Research Institute, Durban, South Africa Dr Emily Wong, Africa Health Research Institute, Durban, South Africa Dr Al Leslie, Africa Health Research Institute, Durban, South Africa Prof. Alison Grant, London School of Hygiene & Tropical Medicine, UK Dr Aaron Karat, London School of Hygiene & Tropical Medicine, UK Dr Matthew Fentress, London School of Hygiene & Tropical Medicine, UK Dr Priya Maharaj, Inkosi Albert Luthuli Central Hospital, Durban, South Africa Dr Patricia Henwood, Brigham and Women's Hospital/Harvard Medical School
Other Producer(s)	Africa Health Research Institute (AHRI)
Funding Agency/ies	Bill & Melinda Gates Foundation (BMGF) , Full funding
Other Acknowledgment(s)	Dickman Gareta , Data management , Africa Health Research Institute Njabulo Dayi , Data management , Africa Health Research Institute Njabulo Myeza , Data management , Africa Health Research Institute Mthokozisi Mnomiya , Data collection , Africa Health Research Institute Thabani Mtshali , Data collection , Africa Health Research Institute Zoey Mhlane , Data collection , Africa Health Research Institute Nokwanda Ngcobo , Data collection , Africa Health Research Institute Theresa Smit and the AHRI Laboratory Team , Lab data collection and analysis , Africa Health Research Institute Dilshaad Khan , Data collection , Department of Pulmonology and Critical Care, Inkosi Albert Luthuli Central Hospital, Durban, South Africa Mohammed Mitha , Data collection , Department of Pulmonology and Critical Care, Inkosi Albert Luthuli Central Hospital, Durban, South Africa Philip Caligiuri , Data analysis , Department of Pulmonology and Critical Care, Inkosi Albert Luthuli Central Hospital, Durban, South Africa Stephen Olivier , Statistical analysis , Africa Health Research Institute Dirhona Ramjit , Study coordination , Africa Health Research Institute Anita Edwards , Study coordination , Africa Health Research Institute Farina Karim , Study coordination , Africa Health Research Institute Tansy Edwards , Advised on approach to statistical analysis , LSHTM Butterfly Network , Provided an ultrasound device , Butterfly

Sampling

Sampling Procedure

Sample size was based on precision estimates. With 50 participants with bacteriologically-confirmed TB, we calculated that we would be able to demonstrate ultrasound sensitivity of 80% with a 95% confidence interval (CI) of 67%-89%, and with 100 participants without active TB, we would be able to demonstrate specificity of ultrasound of 80% with a 95% CI of 71%-87%. The study was designed to be exploratory, with a relatively small number of participants, aiming to estimate sensitivity and specificity relatively imprecisely to guide whether larger-scale evaluation was warranted. We did not calculate predictive values because our sample purposively included more people with active TB than would usually be found in routine populations being screened for TB, and thus predictive values from this study could not be generalized.

Data Collection

Data Collection Dates	start 2019-10-01 end 2020-03-30

Accessibility

Access Conditions

The representative of the Receiving Organization agrees to comply with the following conditions:

1. Access to the restricted data will be limited to the Lead Researcher and other members of the research team listed in this request.
2. Copies of the restricted data or any data created on the basis of the original data will not be copied or made available to anyone other than those mentioned in this Data Access Agreement, unless formally authorized by the Data Archive.
3. The data will only be processed for the stated statistical and research purpose. They will be used for solely for reporting of aggregated information, and not for investigation of specific individuals or organizations. Data will not in any way be used for any administrative, proprietary or law enforcement purposes.
4. The Lead Researcher must state if it is their intention to match the restricted microdata with any other micro-dataset. If any matching is to take place, details must be provided of the datasets to be matched and of the reasons for the matching. Any datasets created as a result of matching will be considered to be restricted and must comply with the terms of this Data Access Agreement.
5. The Lead Researcher undertakes that no attempt will be made to identify any individual person, family, business, enterprise or organization. If such a unique disclosure is made inadvertently, no use will be made of the identity of any person or establishment discovered and full details will be reported to the Data Archive. The identification will not be revealed to any other person not included in the Data Access Agreement.
6. The Lead Researcher will implement security measures to prevent unauthorized access to licensed microdata acquired from the Data Archive. The microdata must be destroyed upon the completion of this research, unless the Data Archive obtains satisfactory guarantee that the data can be secured and provides written authorization to the Receiving Organization to retain them. Destruction of the microdata will be confirmed in writing by the Lead Researcher to the Data Archive.
7. Any books, articles, conference papers, theses, dissertations, reports, or other publications that employ data obtained from the Data Archive will cite the source of data in accordance with the citation requirement provided with the dataset.
8. An electronic copy of all reports and publications based on the requested data will be sent to the Data Archive.
9. The original collector of the data, the Data Archive, and the relevant funding agencies bear no responsibility for use of the data or for interpretations or inferences based upon such uses.
10. This agreement will come into force on the date that approval is given for access to the restricted dataset and remain in force until the completion date of the project or an earlier date if the project is completed ahead of time.
11. If there are any changes to the project specification, security arrangements, personnel or organization detailed in this application form, it is the responsibility of the Lead Researcher to seek the agreement of the Data Archive to these changes. Where there is a change to the employer organization of the Lead Researcher this will involve a new application being made and termination of the original project.
12. Breaches of the agreement will be taken seriously and the Data Archive will take action against those responsible for the lapse if willful or accidental. Failure to comply with the directions of the Data Archive will be deemed to be a major breach of the agreement and may involve recourse to legal proceedings. The Data Archive will maintain and share with partner data archives a register of those individuals and organizations which are responsible for breaching the terms of the Data Access Agreement and will impose sanctions on release of future data to these parties.

Citation Requirements

Grant, A. et al. (2022) "Evaluation of ultrasound for screening and diagnosis of pulmonary tuberculosis, KwaZulu Natal, South Africa, 2019-20." Africa Health Research Institute. doi: 10.23664/AHRI.POCUS.ANALYTICALDATASET.2022.V1

Files Description

Dataset contains 1 file(s)

AHRI.Pocus.AnalyticalDataset.2022.v1	
# Cases	92
# Variable(s)	40

Evaluation of ultrasound for screening and diagnosis of pulmonary tuberculosis, KwaZulu Natal, South Africa, 2019-20 - Files Description

- 8 -

Variables List

Dataset contains 40 variable(s)

File AHRI.Pocus.AnalyticalDataset.2022.v1

#	Name	Label	Type	Format	Valid	Invalid	Question
1	PocusId	PoCUS Unique Identifier	discrete	character-11	92	0	-
2	Site	Site	discrete	character-8	92	0	-
3	TBBacter ..	TB (Bacteriologic)	discrete	numeric-10.0	84	8	-
4	TB_bact_ ..	TB (Bacteriologic or Radiologic)	discrete	numeric-10.0	92	0	-
5	TBBacter ..	TB (Bacteriologic vs Healthy - Excludes CXR abnormalities)	discrete	numeric-10.0	71	21	-
6	Sex	Sex	discrete	numeric-10.0	92	0	-
7	Age	Age (years)	continuous	numeric-10.0	92	0	-
8	HIVStatus	HIV Status	discrete	numeric-10.0	92	0	-
9	OnArt	On ART self reported	discrete	numeric-10.0	48	44	-
10	CD4	CD4 Lymphocytes Abs	continuous	numeric-10.0	43	49	-
11	TBSymptom	Any TB symptoms	discrete	numeric-10.0	92	0	-
12	CurrSmoker	Current smoker	discrete	numeric-10.0	92	0	-
13	BMI	Body Mass Index	continuous	numeric-10.0	92	0	-
14	BMICat	Body Mass Index (Categories)	discrete	numeric-10.0	92	0	-
15	HighBSug ..	Raised blood sugar (Ever been informed by health care worker)	discrete	numeric-10.0	44	48	-
16	TBStatus	TB group	discrete	numeric-10.0	92	0	-
17	PrevTB	Prior TB treatment	discrete	numeric-10.0	92	0	-
18	Consolid ..	Any consolidation	discrete	numeric-10.0	92	0	-
19	Consolid ..	Consolidation (Upper)	discrete	numeric-10.0	92	0	-
20	SPC	Small Subpleural consolidation	discrete	numeric-10.0	92	0	-
21	SPCUpper	Small Subpleural consolidation (Upper)	discrete	numeric-10.0	92	0	-
22	SSPCNumber	Small Subpleural consolidation (Number)	discrete	numeric-10.0	92	0	-
23	SPC2More	Small Subpleural consolidation (2 or more)	discrete	numeric-10.0	92	0	-
24	B1B2Patt ..	(B-lines) B1 or B2 pattern	discrete	numeric-10.0	92	0	-
25	B2Pattern	(B-lines) B2 pattern	discrete	numeric-10.0	92	0	-
26	IPL	Irregular pleural line	discrete	numeric-10.0	92	0	-
27	PleuralE ..	Pleural effusion (any)	discrete	numeric-10.0	92	0	-
28	CavityAny	Any cavity	discrete	numeric-10.0	92	0	-
29	Pericard ..	Pericardial effusion	discrete	numeric-10.0	92	0	-
30	HepaticL ..	Hepahtic lesions	discrete	numeric-10.0	92	0	-

File AHRI.Pocus.AnalyticalDataset.2022.v1

#	Name	Label	Type	Format	Valid	Invalid	Question
31	LAN	Periaortic Lymphadenopathy	discrete	numeric-10.0	92	0	-
32	Ascites	Ascites	discrete	numeric-10.0	92	0	-
33	LUS1FASH1	Any thoracic or FASH pathology	discrete	numeric-10.0	92	0	-
34	LUS1	Any Thoracic pathology	discrete	numeric-10.0	92	0	-
35	LUS2	Thoracic combo 1	discrete	numeric-10.0	92	0	-
36	LUS3	Thoracic combo 2	discrete	numeric-10.0	92	0	-
37	LUS4	Thoracic combo 3	discrete	numeric-10.0	92	0	-
38	FASH2	FASH combo 1	discrete	numeric-10.0	92	0	-
39	LUS2FASH2	Thoracic combo 1 or FASH combo 1	discrete	numeric-10.0	92	0	-
40	FASH1	Any FASH pathology	discrete	numeric-10.0	92	0	-

Variables Description

Dataset contains 40 variable(s)

File : AHRI.Pocus.AnalyticalDataset.2022.v1

PocusId: PoCUS Unique Identifier

Information	[Type= discrete] [Format=character] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Site: Site

Information	[Type= discrete] [Format=character] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

TBBacteriologic: TB (Bacteriologic)

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=84 /-] [Invalid=8 /-]

Value	Label	Cases	Percentage
0	No	50	59.5%
1	Yes	34	40.5%
Sysmiss		8	

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

TB_bact_rad: TB (Bacteriologic or Radiologic)

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	50	54.3%
1	Yes	42	45.7%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

TBBacteriologicHealthy: TB (Bacteriologic vs Healthy - Excludes CXR abnormalities)

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=71 /-] [Invalid=21 /-]

Value	Label	Cases	Percentage
0	No	37	52.1%
1	Yes	34	47.9%
Sysmiss		21	

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

Sex: Sex

Information	[Type= discrete] [Format=numeric] [Range= 1-2] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
1	Male	53	57.6%
2	Female	39	42.4%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

Age: Age (years)

Information	[Type= continuous] [Format=numeric] [Range= 18-74] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-] [Mean=41.88 /-] [StdDev=13.742 /-]

HIVStatus: HIV Status

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]

File : AHRI.Pocus.AnalyticalDataset.2022.v1

HIVStatus: HIV Status

Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	Negative	43	46.7%
1	Positive	49	53.3%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

OnArt: On ART self reported

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=48 /-] [Invalid=44 /-]

Value	Label	Cases	Percentage
0	No	13	27.1%
1	Yes	35	72.9%
Sysmiss		44	

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

CD4: CD4 Lymphocytes Abs

Information	[Type= continuous] [Format=numeric] [Range= 66-1356] [Missing=*]
Statistics [NW/ W]	[Valid=43 /-] [Invalid=49 /-] [Mean=631.791 /-] [StdDev=324.908 /-]

TBSymptom: Any TB symptoms

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	58	63.0%
1	Yes	34	37.0%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

CurrSmoker: Current smoker

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	71	77.2%
1	Yes	21	22.8%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

BMI: Body Mass Index

Information	[Type= continuous] [Format=numeric] [Range= 7.62084482508347-54.942767950052] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-] [Mean=23.165 /-] [StdDev=6.731 /-]

BMICat: Body Mass Index (Categories)

Information	[Type= discrete] [Format=numeric] [Range= 1-4] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
1	Underweight	20	21.7%
2	Normal	49	53.3%
3	Overweight	11	12.0%

File : AHRI.Pocus.AnalyticalDataset.2022.v1

BMICat: Body Mass Index (Categories)

Value	Label	Cases	Percentage
4	Obese	12	13.0%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

HighBSugarInformedEver: Raised blood sugar (Ever been informed by health care worker)

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=44 /-] [Invalid=48 /-]

Value	Label	Cases	Percentage
0	No	41	93.2%
1	Yes	3	6.8%
Sysmiss		48	

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

TBStatus: TB group

Information	[Type= discrete] [Format=numeric] [Range= 1-4] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
1	TB positive Micro	34	37.0%
2	Abnormal CXR TB	8	8.7%
3	Abnormal CXR not TB	13	14.1%
4	Healthy	37	40.2%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

PrevTB: Prior TB treatment

Information	[Type= discrete] [Format=numeric] [Range= 0-3] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	20	21.7%
1	Yes	69	75.0%
3	Unknown	3	3.3%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

ConsolidationAny: Any consolidation

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	60	65.2%
1	Yes	32	34.8%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

ConsolidationUpper: Consolidation (Upper)

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	76	82.6%
1	Yes	16	17.4%

File : AHRI.Pocus.AnalyticalDataset.2022.v1

ConsolidationUpper: Consolidation (Upper)

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

SPC: Small Subpleural consolidation

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	54	58.7%
1	Yes	38	41.3%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

SPCUpper: Small Subpleural consolidation (Upper)

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	74	80.4%
1	Yes	18	19.6%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

SSPCNumber: Small Subpleural consolidation (Number)

Information	[Type= discrete] [Format=numeric] [Range= 0-9] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

SPC2More: Small Subpleural consolidation (2 or more)

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	67	72.8%
1	Yes	25	27.2%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

B1B2Pattern: (B-lines) B1 or B2 pattern

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	76	82.6%
1	Yes	16	17.4%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

B2Pattern: (B-lines) B2 pattern

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	90	97.8%
1	Yes	2	2.2%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

File : AHRI.Pocus.AnalyticalDataset.2022.v1

IPL: Irregular pleural line

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	48	52.2%
1	Yes	44	47.8%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

PleuralEffusionAny: Pleural effusion (any)

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	87	94.6%
1	Yes	5	5.4%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

CavityAny: Any cavity

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	86	93.5%
1	Yes	6	6.5%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

PericardialEff: Pericardial effusion

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	78	84.8%
1	Yes	14	15.2%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

HepaticLesions: Hepahtic lesions

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	91	98.9%
1	Yes	1	1.1%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

LAN: Periaortic Lymphadenopathy

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	91	98.9%
1	Yes	1	1.1%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

File : AHRI.Pocus.AnalyticalDataset.2022.v1

Ascites: Ascites

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	90	97.8%
1	Yes	2	2.2%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

LUS1FASH1: Any thoracic or FASH pathology

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	29	31.5%
1	Yes	63	68.5%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

LUS1: Any Thoracic pathology

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	34	37.0%
1	Yes	58	63.0%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

LUS2: Thoracic combo 1

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	47	51.1%
1	Yes	45	48.9%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

LUS3: Thoracic combo 2

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	50	54.3%
1	Yes	42	45.7%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

LUS4: Thoracic combo 3

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	54	58.7%
1	Yes	38	41.3%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

File : AHRI.Pocus.AnalyticalDataset.2022.v1

FASH2: FASH combo 1

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	77	83.7%
1	Yes	15	16.3%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

LUS2FASH2: Thoracic combo 1 or FASH combo 1

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	41	44.6%
1	Yes	51	55.4%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

FASH1: Any FASH pathology

Information	[Type= discrete] [Format=numeric] [Range= 0-1] [Missing=*]
Statistics [NW/ W]	[Valid=92 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	No	76	82.6%
1	Yes	16	17.4%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.