Additional file-1: Contains details of the excluded studies, statistical tables for main analysis and

subgroup analyses.

eTable-1: list of excluded studies

Study	Comment
1: Jalli R, Sefidbakht S, Jafari SH. Value of ultrasound in diagnosis of pneumothorax: a prospective study. Emerg Radiol. 2013 Apr;20(2):131-4.	- Unacceptably long time between index test and reference standard (up to 48h). - High risk of bias - Insufficient details of index test
2: Mennicke M, Gulati K, Oliva I, Goldflam K, Skali H, Ledbetter S, Platz E. Anatomical distribution of traumatic pneumothoraces on chest computed tomography: implications for ultrasound screening in the ED. Am J Emerg Med. 2012 Sep;30(7):1025-31	- No US arm
3: Zanobetti M, Poggioni C, Pini R. Can chest ultrasonography replace standard chest radiography for evaluation of acute dyspnea in the ED? Chest. 2011 May;139(5):1140-7.	- High risk of bias - Differential verification - Reference standard was not independent of the index test.
4: Vezzani A, Brusasco C, Palermo S, Launo C, Mergoni M, Corradi F. Ultrasound localization of central vein catheter and detection of postprocedural pneumothorax: an alternative to chest radiography. Crit Care Med. 2010 Feb;38(2):533-8.	- No CT scan, CXR was considered a reference standard - Few pneumothorax patients
5: Galbois A, Ait-Oufella H, Baudel JL, Kofman T, Bottero J, Viennot S, Rabate C, Jabbouri S, Bouzeman A, Guidet B, Offenstadt G, Maury E. Pleural ultrasound compared with chest radiographic detection of pneumothorax resolution after drainage. Chest. 2010 Sep; 138(3):648-55.	- Evaluated patients with known pneumothorax - Differential verification - Possible blinding and methodological issues
6: Sartori S, Tombesi P, Trevisani L, Nielsen I, Tassinari D, Abbasciano V. Accuracy of transthoracic sonography in detection of pneumothorax after sonographically guided lung biopsy: prospective comparison with chest radiography. AJR Am J Roentgenol. 2007 Jan;188(1):37-41.	- Differential verification - Blinding issues
7: Garofalo G, Busso M, Perotto F, De Pascale A, Fava C. Ultrasound diagnosis of pneumothorax. Radiol Med. 2006 Jun;111(4):516-25. Epub 2006 May 29.	- Insufficient CXR data - Unclear if all patients received CXR or not. - Possible selection bias
8: Blaivas M , Lyon M , Duggal S . A prospective comparison of supine chest radiography and bedside ultrasound for the diagnosis of traumatic pneumothorax . *Acad Emerg Med* . 2005 ; 12 (9): 844 - 849 .	- Possible blinding issues - See text
9: Reissig A, Kroegel C. [Sonographic diagnosis of post-interventional pneumothorax and hydropneumothorax--prospective study of 100 patients]. Praxis (Bern 1994). 2006 Apr 19;95(16):617-24.	- Differential verification - Partial verification - Reference standard was not independent of the index test.
10: Lichtenstein D, Mezière G, Biderman P, Gepner A. The "lung point": an ultrasound sign specific to pneumothorax. Intensive Care Med. 2000 Oct;26(10):1434-40.	- Partial verification - Possible blinding issues - Patients with known pneumothorax
11: Lichtenstein D, Mezière G, Biderman P, Gepner A. The comet-tail artifact: an ultrasound sign ruling out pneumothorax. Intensive Care Med. 1999 Apr;25(4):383-8.	- Partial verification - Possible blinding issues - Patients with known pneumothorax
12: Lichtenstein DA, Menu Y. A bedside ultrasound sign ruling out pneumothorax in the critically ill. Lung sliding. Chest. 1995 Nov;108(5):1345-8.	- Partial verification - Possible blinding issues - Patients with known pneumothorax

eTable-2
CXR - Meta-Regression (Inverse Variance weights)

Variable	Coeff.	Std. Err.	p - value	RDOR	[95%CI]
Traum/Non-trauma	3.311	0.7217	0.0013	27.42	(5.36-140.31)
Consecutive/non-consecutive	1.912	0.6572	0.0173	6.77	(1.53-29.93)

Tau-squared estimate = 0.0000 (Convergence is achieved after 1 iterations)
Maximum Likelihood estimation (ML).
No. studies = 13
RDOR= Relative Diagnostic Odds Ratio

eTable-3
US-Meta-Regression (Inverse Variance weights)

Variable	Coeff.	Std. Err.	p - value	RDOR	[95%CI]
Operator ER physician vs others	-1.296	1.1082	0.2950	0.27	(0.02-4.73)
Operator Radiologist vs others	-2.719	1.0912	0.0551	0.07	(0.00-1.09)
Trauma patients vs non-trauma	3.493	1.0154	0.0184	32.87	(2.42-447.03)
Consecutive vs Non-consecutive	3.091	0.9376	0.0216	21.99	(1.98-244.93)
Linear array probe vs convex	0.799	0.8418	0.3861	2.22	(0.26-19.35)
Lung point evaluated or not	0.119	1.0555	0.9145	1.13	(0.07-16.99)

Tau-squared estimate = 0.2671 (Convergence is achieved after 15 iterations)
Maximum Likelihood estimation (ML).
No. studies = 13
RDOR= Relative Diagnostic Odds Ratio

Sensitivity and specificity of all CXR studies

Summary Sensitivity

```
              Study   |   Sen    [95%  Conf. Iterval.]      TP/(TP+FN)   TN/(TN+FP)
--------------------------------------------------------------------------------------
Donmez 2012           |  0.686   0.507  - 0.831             24/35    96/101
Abbasi 2012           |  0.486   0.369  - 0.606             36/74    218/218
Hyacithe 2012         |  0.189   0.119  - 0.276             20/106   132/132
Nandipati 2011        |  0.789   0.627  - 0.904             30/38    368/370
Nagarsheth 2011       |  0.318   0.186  - 0.476             14/44    114/114
Xirouchaki 2011       |  0.000   0.000  - 0.369              0/8     75/76
Brook 2009            |  0.163   0.068  - 0.307             7/43     295/295
Soldati 2008          |  0.520   0.313  - 0.722             13/25    193/193
Soldati 2006          |  0.536   0.439  - 0.630             60/112   260/260
Zhang 2006            |  0.276   0.167  - 0.409             16/58    212/212
Chung 2005            |  0.471   0.351  - 0.594             33/70    116.5/124
Kirkpatrick 2004      |  0.209   0.100  - 0.360             9/43     222/223
Rowan 2002            |  0.364   0.172  - 0.593             8/22     32/32
--------------------------------------------------------------------------------------
      Pooled Sen      |  0.398   0.294  - 0.503

--------------------------------------------------------------------------------------
Heterogeneity chi-squared = 103.07 (d.f.= 12) p = 0.000
Inconsistency (I-square) = 88.4 %
No. studies = 13.
Pooled Confidence Interval corrected for overdispersion
```

Summary Specificity

```
              Study   |   Spe    [95%  Conf. Iterval.]      TP/(TP+FN)   TN/(TN+FP)
--------------------------------------------------------------------------------------
Donmez 2012           |  0.950   0.888  - 0.984             24/35    96/101
Abbasi 2012           |  1.000   0.983  - 1.000             36/74    218/218
Hyacithe 2012         |  1.000   0.972  - 1.000             20/106   132/132
Nandipati 2011        |  0.995   0.981  - 0.999             30/38    368/370
Nagarsheth 2011       |  1.000   0.968  - 1.000             14/44    114/114
Xirouchaki 2011       |  0.987   0.929  - 1.000              0/8     75/76
Brook 2009            |  1.000   0.988  - 1.000             7/43     295/295
Soldati 2008          |  1.000   0.981  - 1.000             13/25    193/193
Soldati 2006          |  1.000   0.986  - 1.000             60/112   260/260
Zhang 2006            |  1.000   0.983  - 1.000             16/58    212/212
Chung 2005            |  0.940   0.882  - 0.974             33/70    116.5/124
Kirkpatrick 2004      |  0.996   0.975  - 1.000             9/43     222/223
Rowan 2002            |  1.000   0.891  - 1.000             8/22     32/32
--------------------------------------------------------------------------------------
      Pooled Spe      |  0.993   0.984  - 1.000

--------------------------------------------------------------------------------------
Heterogeneity chi-squared = 51.77 (d.f.= 12) p = 0.000
Inconsistency (I-square) = 76.8 %
No. studies = 13.
Pooled Confidence Interval corrected for overdispersion
```

Sensitivity and specificity of all US studies

Summary Sensitivity

```
            Study   |   Sen    [95%  Conf. Iterval.]      TP/(TP+FN)  TN/(TN+FP)
-------------------------------------------------------------------------------
Donmez 2012         |  0.914   0.769  - 0.982             32/35   98/101
Abbasi 2012         |  0.865   0.765  - 0.933             64/74   218/218
Hyacithe 2012       |  0.528   0.429  - 0.626             56/106  126/132
Nandipati 2011      |  0.952   0.838  - 0.994             40/42   364/366
Nagarsheth 2011     |  0.818   0.673  - 0.918             36/44   114/114
Xirouchaki 2011     |  0.750   0.349  - 0.968              6/8    71/76
Brook 2009          |  0.465   0.312  - 0.623             20/43   292/295
Soldati 2008        |  0.920   0.740  - 0.990             23/25   192/193
Soldati 2006        |  0.982   0.937  - 0.998             110/112 260/260
Zhang 2006          |  0.862   0.746  - 0.939             50/58   206/212
Chung 2005          |  0.800   0.687  - 0.886             56/70   116.5/124
Kirkpatrick 2004    |  0.488   0.333  - 0.645             21/43   220/223
Rowan 2002          |  1.000   0.846  - 1.000             22/22   30/32
-------------------------------------------------------------------------------
       Pooled Sen   |  0.786   0.681  - 0.891

-------------------------------------------------------------------------------
Heterogeneity chi-squared = 146.25 (d.f.= 12) p = 0.000
Inconsistency (I-square) = 91.8 %
No. studies = 13.
Pooled Confidence Interval corrected for overdispersion
```

Summary Specificity

```
            Study   |   Spe    [95%  Conf. Iterval.]      TP/(TP+FN)  TN/(TN+FP)
-------------------------------------------------------------------------------
Donmez 2012         |  0.970   0.916  - 0.994             32/35   98/101
Abbasi 2012         |  1.000   0.983  - 1.000             64/74   218/218
Hyacithe 2012       |  0.955   0.904  - 0.983             56/106  126/132
Nandipati 2011      |  0.995   0.980  - 0.999             40/42   364/366
Nagarsheth 2011     |  1.000   0.968  - 1.000             36/44   114/114
Xirouchaki 2011     |  0.934   0.853  - 0.978              6/8    71/76
Brook 2009          |  0.990   0.971  - 0.998             20/43   292/295
Soldati 2008        |  0.995   0.971  - 1.000             23/25   192/193
Soldati 2006        |  1.000   0.986  - 1.000             110/112 260/260
Zhang 2006          |  0.972   0.939  - 0.990             50/58   206/212
Chung 2005          |  0.940   0.882  - 0.974             56/70   116.5/124
Kirkpatrick 2004    |  0.987   0.961  - 0.997             21/43   220/223
Rowan 2002          |  0.938   0.792  - 0.992             22/22   30/32
-------------------------------------------------------------------------------
       Pooled Spe   |  0.984   0.973  - 0.995

-------------------------------------------------------------------------------
Heterogeneity chi-squared = 51.27 (d.f.= 12) p = 0.000
Inconsistency (I-square) = 76.6 %
No. studies = 13.
Pooled Confidence Interval corrected for overdispersion
```

Sensitivity and specificity of consecutive sampling CXR studies

Summary Sensitivity

```
              Study  |  Sen   [95%  Conf. Iterval.]      TP/(TP+FN)  TN/(TN+FP)
---------------------------------------------------------------------------------
Nandipati 2011       |  0.789   0.627  - 0.904           30/38   368/370
Brook 2009           |  0.163   0.068  - 0.307           7/43    295/295
Soldati 2008         |  0.520   0.313  - 0.722           13/25   193/193
Soldati 2006         |  0.536   0.439  - 0.630           60/112  260/260
Chung 2005           |  0.471   0.351  - 0.594           33/70   116.5/124
---------------------------------------------------------------------------------
         Pooled Sen  |  0.497   0.330  - 0.663

---------------------------------------------------------------------------------
```

Heterogeneity chi-squared = 35.80 (d.f.= 4) p = 0.000
Inconsistency (I-square) = 88.8 %
No. studies = 5.
Pooled Confidence Interval corrected for overdispersion

Summary Specificity

```
              Study  |  Spe   [95%  Conf. Iterval.]      TP/(TP+FN)  TN/(TN+FP)
---------------------------------------------------------------------------------
Nandipati 2011       |  0.995   0.981  - 0.999           30/38   368/370
Brook 2009           |  1.000   0.988  - 1.000           7/43    295/295
Soldati 2008         |  1.000   0.981  - 1.000           13/25   193/193
Soldati 2006         |  1.000   0.986  - 1.000           60/112  260/260
Chung 2005           |  0.940   0.882  - 0.974           33/70   116.5/124
---------------------------------------------------------------------------------
         Pooled Spe  |  0.992   0.975  - 1.000

---------------------------------------------------------------------------------
```

Heterogeneity chi-squared = 30.03 (d.f.= 4) p = 0.000
Inconsistency (I-square) = 86.7 %
No. studies = 5.
Pooled Confidence Interval corrected for overdispersion

Sensitivity and specificity of CXR convenience sampling studies

Summary Sensitivity

```
           Study      |  Sen    [95%  Conf. Iterval.]      TP/(TP+FN)  TN/(TN+FP)
------------------------------------------------------------------------------------
Donmez 2012           |  0.686   0.507   - 0.831           24/35    96/101
Abbasi 2012           |  0.486   0.369   - 0.606           36/74    218/218
Hyacithe 2012         |  0.189   0.119   - 0.276           20/106   132/132
Nagarsheth 2011       |  0.318   0.186   - 0.476           14/44    114/114
Xirouchaki 2011       |  0.000   0.000   - 0.369            0/8     75/76
Zhang 2006            |  0.276   0.167   - 0.409           16/58    212/212
Kirkpatrick 2004      |  0.209   0.100   - 0.360            9/43    222/223
Rowan 2002            |  0.364   0.172   - 0.593            8/22    32/32
------------------------------------------------------------------------------------
       Pooled Sen     |  0.326   0.207   - 0.445

------------------------------------------------------------------------------------
Heterogeneity chi-squared = 47.11 (d.f.= 7) p = 0.000
Inconsistency (I-square) = 85.1 %
No. studies =8.
Pooled Confidence Interval corrected for overdispersion
```

Summary Specificity

```
           Study      |  Spe    [95% Conf. Iterval.]       TP/(TP+FN)  TN/(TN+FP)
------------------------------------------------------------------------------------
Donmez 2012           |  0.950   0.888   - 0.984           24/35    96/101
Abbasi 2012           |  1.000   0.983   - 1.000           36/74    218/218
Hyacithe 2012         |  1.000   0.972   - 1.000           20/106   132/132
Nagarsheth 2011       |  1.000   0.968   - 1.000           14/44    114/114
Xirouchaki 2011       |  0.987   0.929   - 1.000            0/8     75/76
Zhang 2006            |  1.000   0.983   - 1.000           16/58    212/212
Kirkpatrick 2004      |  0.996   0.975   - 1.000            9/43    222/223
Rowan 2002            |  1.000   0.891   - 1.000            8/22    32/32
------------------------------------------------------------------------------------
       Pooled Spe     |  0.994   0.983   - 1.000

------------------------------------------------------------------------------------
Heterogeneity chi-squared = 21.59 (d.f.= 7) p = 0.003
Inconsistency (I-square) = 67.6 %
No. studies = 8.
Pooled Confidence Interval corrected for overdispersion
```

Sensitivity and specificity of non-trauma CXR studies

Summary Sensitivity

```
            Study   |  Sen   [95%  Conf. Iterval.]      TP/(TP+FN)  TN/(TN+FP)
-------------------------------------------------------------------------------------
Xirouchaki 2011     |  0.000   0.000  - 0.369              0/8    75/76
Chung 2005          |  0.471   0.351  - 0.594             33/70  116.5/124
-------------------------------------------------------------------------------------
        Pooled Sen  |  0.423   0.143  - 0.703

-------------------------------------------------------------------------------------
Heterogeneity chi-squared = 9.47 (d.f.= 1) p = 0.002
Inconsistency (I-square) = 89.4 %
No. studies =  2.
Pooled Confidence Interval corrected for overdispersion
```

Summary Specificity

```
            Study   |  Spe   [95%  Conf. Iterval.]      TP/(TP+FN)  TN/(TN+FP)
-------------------------------------------------------------------------------------
Xirouchaki 2011     |  0.987   0.929  - 1.000              0/8    75/76
Chung 2005          |  0.940   0.882  - 0.974             33/70  116.5/124
-------------------------------------------------------------------------------------
        Pooled Spe  |  0.958   0.912  - 1.000

-------------------------------------------------------------------------------------
Heterogeneity chi-squared = 3.06 (d.f.= 1) p = 0.080
Inconsistency (I-square) = 67.3 %
No. studies =  2.
Pooled Confidence Interval corrected for overdispersion
```

Sensitivity and specificity of US consecutive sampling studies

Summary Sensitivity

Study		Sen	[95% Conf. Iterval.]	TP/(TP+FN) TN/(TN+FP)
Nandipati 2011		0.952	0.838 - 0.994	40/42 364/366
Brook 2009		0.465	0.312 - 0.623	20/43 292/295
Soldati 2008		0.920	0.740 - 0.990	23/25 192/193
Soldati 2006		0.982	0.937 - 0.998	110/112 260/260
Chung 2005		0.800	0.687 - 0.886	56/70 116.5/124
Pooled Sen	**|**	**0.853**	**0.680 - 1.000**	

Heterogeneity chi-squared = 64.53 (d.f.= 4) p = 0.000
Inconsistency (I-square) = 93.8 %
No. studies = 5.
Pooled Confidence Interval corrected for overdispersion

Summary Specificity

Study		Spe	[95% Conf. Iterval.]	TP/(TP+FN) TN/(TN+FP)
Nandipati 2011		0.995	0.980 - 0.999	40/42 364/366
Brook 2009		0.990	0.971 - 0.998	20/43 292/295
Soldati 2008		0.995	0.971 - 1.000	23/25 192/193
Soldati 2006		1.000	0.986 - 1.000	110/112 260/260
Chung 2005		0.940	0.882 - 0.974	56/70 116.5/124
Pooled Spe	**|**	**0.989**	**0.973 - 1.000**	

Heterogeneity chi-squared = 21.39 (d.f.= 4) p = 0.000
Inconsistency (I-square) = 81.3 %
No. studies = 5.
Pooled Confidence Interval corrected for overdispersion

Sensitivity and specificity of US convenience sampling studies

Summary Sensitivity

```
            Study   |   Sen    [95%  Conf. Iterval.]       TP/(TP+FN)  TN/(TN+FP)
--------------------------------------------------------------------------------
Donmez 2012         |  0.914   0.769  - 0.982              32/35   98/101
Abbasi 2012         |  0.865   0.765  - 0.933              64/74   218/218
Hyacithe 2012       |  0.528   0.429  - 0.626              56/106  126/132
Nagarsheth 2011     |  0.818   0.673  - 0.918              36/44   114/114
Xirouchaki 2011     |  0.750   0.349  - 0.968               6/8    71/76
Zhang 2006          |  0.862   0.746  - 0.939              50/58   206/212
Kirkpatrick 2004    |  0.488   0.333  - 0.645              21/43   220/223
Rowan 2002          |  1.000   0.846  - 1.000              22/22   30/32
--------------------------------------------------------------------------------
     Pooled Sen     |  0.736   0.604  - 0.867

--------------------------------------------------------------------------------
Heterogeneity chi-squared = 67.76 (d.f.= 7) p = 0.000
Inconsistency (I-square) = 89.7 %
No. studies = 8.
Pooled Confidence Interval corrected for overdispersion
```

Summary Specificity

```
            Study   |   Spe    [95%  Conf. Iterval.]       TP/(TP+FN)  TN/(TN+FP)
--------------------------------------------------------------------------------
Donmez 2012         |  0.970   0.916  - 0.994              32/35   98/101
Abbasi 2012         |  1.000   0.983  - 1.000              64/74   218/218
Hyacithe 2012       |  0.955   0.904  - 0.983              56/106  126/132
Nagarsheth 2011     |  1.000   0.968  - 1.000              36/44   114/114
Xirouchaki 2011     |  0.934   0.853  - 0.978               6/8    71/76
Zhang 2006          |  0.972   0.939  - 0.990              50/58   206/212
Kirkpatrick 2004    |  0.987   0.961  - 0.997              21/43   220/223
Rowan 2002          |  0.938   0.792  - 0.992              22/22   30/32
--------------------------------------------------------------------------------
     Pooled Spe     |  0.977   0.962  - 0.993

--------------------------------------------------------------------------------
Heterogeneity chi-squared = 24.92 (d.f.= 7) p = 0.001
Inconsistency (I-square) = 71.9 %
No. studies = 8.
Pooled Confidence Interval corrected for overdispersion
```

US studies: Linear array probe sensitivity and specificity

Summary Sensitivity

```
           Study    |  Sen    [95%  Conf. Iterval.]      TP/(TP+FN)  TN/(TN+FP)
-------------------------------------------------------------------------------
Donmez 2012         | 0.914   0.769  - 0.982             32/35   98/101
Abbasi 2012         | 0.865   0.765  - 0.933             64/74   218/218
Nandipati 2011      | 0.952   0.838  - 0.994             40/42   364/366
Chung 2005          | 0.800   0.687  - 0.886             56/70   116.5/124
Kirkpatrick 2004    | 0.488   0.333  - 0.645             21/43   220/223
Rowan 2002          | 1.000   0.846  - 1.000             22/22   30/32
-------------------------------------------------------------------------------
        Pooled Sen  | 0.822   0.688  - 0.955


-------------------------------------------------------------------------------
Heterogeneity chi-squared = 43.36 (d.f.= 5) p = 0.000
Inconsistency (I-square) = 88.5 %
No. studies = 6.
Pooled Confidence Interval corrected for overdispersion
```

Summary Specificity

```
           Study    |  Spe    [95%  Conf. Iterval.]      TP/(TP+FN)  TN/(TN+FP)
-------------------------------------------------------------------------------
Donmez 2012         | 0.970   0.916  - 0.994             32/35   98/101
Abbasi 2012         | 1.000   0.983  - 1.000             64/74   218/218
Nandipati 2011      | 0.995   0.980  - 0.999             40/42   364/366
Chung 2005          | 0.940   0.882  - 0.974             56/70   116.5/124
Kirkpatrick 2004    | 0.987   0.961  - 0.997             21/43   220/223
Rowan 2002          | 0.938   0.792  - 0.992             22/22   30/32
-------------------------------------------------------------------------------
        Pooled Spe  | 0.984   0.966  - 1.000


-------------------------------------------------------------------------------
Heterogeneity chi-squared = 23.25 (d.f.= 5) p = 0.000
Inconsistency (I-square) = 78.5 %
No. studies = 6.
Pooled Confidence Interval corrected for overdispersion
```

US studies: Convex array probe sensitivity and specificity

Summary Sensitivity

```
            Study   |   Sen    [95%  Conf. Iterval.]       TP/(TP+FN)  TN/(TN+FP)
--------------------------------------------------------------------------------------
Hyacithe 2012       |   0.528   0.429   - 0.626            56/106  126/132
Nagarsheth 2011     |   0.818   0.673   - 0.918            36/44   114/114
Xirouchaki 2011     |   0.750   0.349   - 0.968            6/8     71/76
Brook 2009          |   0.465   0.312   - 0.623            20/43   292/295
Soldati 2008        |   0.920   0.740   - 0.990            23/25   192/193
Soldati 2006        |   0.982   0.937   - 0.998            110/112 260/260
Zhang 2006          |   0.862   0.746   - 0.939            50/58   206/212
--------------------------------------------------------------------------------------
        Pooled Sen  |   0.760   0.598   - 0.923

--------------------------------------------------------------------------------------
```

Heterogeneity chi-squared = 99.09 (d.f.= 6) p = 0.000
Inconsistency (I-square) = 93.9 %
No. studies = 7.
Pooled Confidence Interval corrected for overdispersion

Summary Specificity

```
            Study   |   Spe    [95%  Conf. Iterval.]       TP/(TP+FN)  TN/(TN+FP)
--------------------------------------------------------------------------------------
Hyacithe 2012       |   0.955   0.904   - 0.983            56/106  126/132
Nagarsheth 2011     |   1.000   0.968   - 1.000            36/44   114/114
Xirouchaki 2011     |   0.934   0.853   - 0.978            6/8     71/76
Brook 2009          |   0.990   0.971   - 0.998            20/43   292/295
Soldati 2008        |   0.995   0.971   - 1.000            23/25   192/193
Soldati 2006        |   1.000   0.986   - 1.000            110/112 260/260
Zhang 2006          |   0.972   0.939   - 0.990            50/58   206/212
--------------------------------------------------------------------------------------
        Pooled Spe  |   0.984   0.968   - 0.999

--------------------------------------------------------------------------------------
```

Heterogeneity chi-squared = 28.03 (d.f.= 6) p = 0.000
Inconsistency (I-square) = 78.6 %
No. studies = 7.
Pooled Confidence Interval corrected for overdispersion

Emergency physician-performed US: sensitivity and specificity

Summary Sensitivity

Study		Sen	[95% Conf. Iterval.]	TP/(TP+FN)	TN/(TN+FP)
Abbasi 2012	|	0.865	0.765 - 0.933	64/74	218/218
Hyacithe 2012	|	0.528	0.429 - 0.626	56/106	126/132
Nandipati 2011	|	0.952	0.838 - 0.994	40/42	364/366
Soldati 2008	|	0.920	0.740 - 0.990	23/25	192/193
Soldati 2006	|	0.982	0.937 - 0.998	110/112	260/260
Zhang 2006	|	0.862	0.746 - 0.939	50/58	206/212
Pooled Sen	**|**	**0.823**	**0.667 - 0.978**		

Heterogeneity chi-squared = 88.07 (d.f.= 5) p = 0.000
Inconsistency (I-square) = 94.3 %
No. studies = 6.
Pooled Confidence Interval corrected for overdispersion

Summary Specificity

Study		Spe	[95% Conf. Iterval.]	TP/(TP+FN)	TN/(TN+FP)
Abbasi 2012	|	1.000	0.983 - 1.000	64/74	218/218
Hyacithe 2012	|	0.955	0.904 - 0.983	56/106	126/132
Nandipati 2011	|	0.995	0.980 - 0.999	40/42	364/366
Soldati 2008	|	0.995	0.971 - 1.000	23/25	192/193
Soldati 2006	|	1.000	0.986 - 1.000	110/112	260/260
Zhang 2006	|	0.972	0.939 - 0.990	50/58	206/212
Pooled Spe	**|**	**0.989**	**0.976 - 1.000**		

Heterogeneity chi-squared = 24.74 (d.f.= 5) p = 0.000
Inconsistency (I-square) = 79.8 %
No. studies = 6.
Pooled Confidence Interval corrected for overdispersion

Non-Emergency physician-performed US: sensitivity and specificity

Summary Sensitivity

```
              Study   |   Sen    [95%  Conf. Iterval.]        TP/(TP+FN)  TN/(TN+FP)
-----------------------------------------------------------------------------------
Donmez 2012           |  0.914   0.769  - 0.982               32/35   98/101
Nagarsheth 2011       |  0.818   0.673  - 0.918               36/44   114/114
Xirouchaki 2011       |  0.750   0.349  - 0.968                6/8    71/76
Brook 2009            |  0.465   0.312  - 0.623               20/43   292/295
Chung 2005            |  0.800   0.687  - 0.886               56/70   116.5/124
Kirkpatrick 2004      |  0.488   0.333  - 0.645               21/43   220/223
Rowan 2002            |  1.000   0.846  - 1.000               22/22   30/32
-----------------------------------------------------------------------------------
        Pooled Sen    |  0.728   0.581  - 0.876


-----------------------------------------------------------------------------------
Heterogeneity chi-squared = 49.78 (d.f.= 6) p = 0.000
Inconsistency (I-square) = 87.9 %
No. studies =  7.
Pooled Confidence Interval corrected for overdispersion
```

Summary Specificity

```
              Study   |   Spe    [95%  Conf. Iterval.]        TP/(TP+FN)  TN/(TN+FP)
-----------------------------------------------------------------------------------
Donmez 2012           |  0.970   0.916  - 0.994               32/35   98/101
Nagarsheth 2011       |  1.000   0.968  - 1.000               36/44   114/114
Xirouchaki 2011       |  0.934   0.853  - 0.978                6/8    71/76
Brook 2009            |  0.990   0.971  - 0.998               20/43   292/295
Chung 2005            |  0.940   0.882  - 0.974               56/70   116.5/124
Kirkpatrick 2004      |  0.987   0.961  - 0.997               21/43   220/223
Rowan 2002            |  0.938   0.792  - 0.992               22/22   30/32
-----------------------------------------------------------------------------------
        Pooled Spe    |  0.976   0.958  - 0.994


-----------------------------------------------------------------------------------
Heterogeneity chi-squared = 20.26 (d.f.= 6) p = 0.002
Inconsistency (I-square) = 70.4 %
No. studies =  7.
Pooled Confidence Interval corrected for overdispersion
```