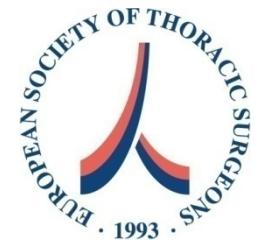


Pulmonary abscess and gangrene

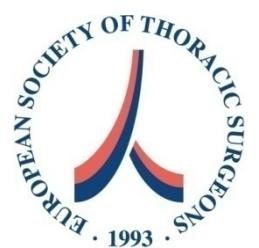
Gonzalo Varela
Thoracic Surgery
Salamanca University Hospital
Spain



Hot Topics in Cardiothoracic Surgery, S. Petersburg 2013



Salamanca, Spain



Salamanca, Spain



Наилучшие пожелания



Lung abscess and necrotizing pneumonia: two different entities

	Necrotizing pneumonia	Abscess
Aspiration	-	+++
Dependent lobes	-	+++
Aerobes	+++	+

Tanaka et al, EJCTS, 2005



Lung abscess



Lung abscess



Images from Web Path

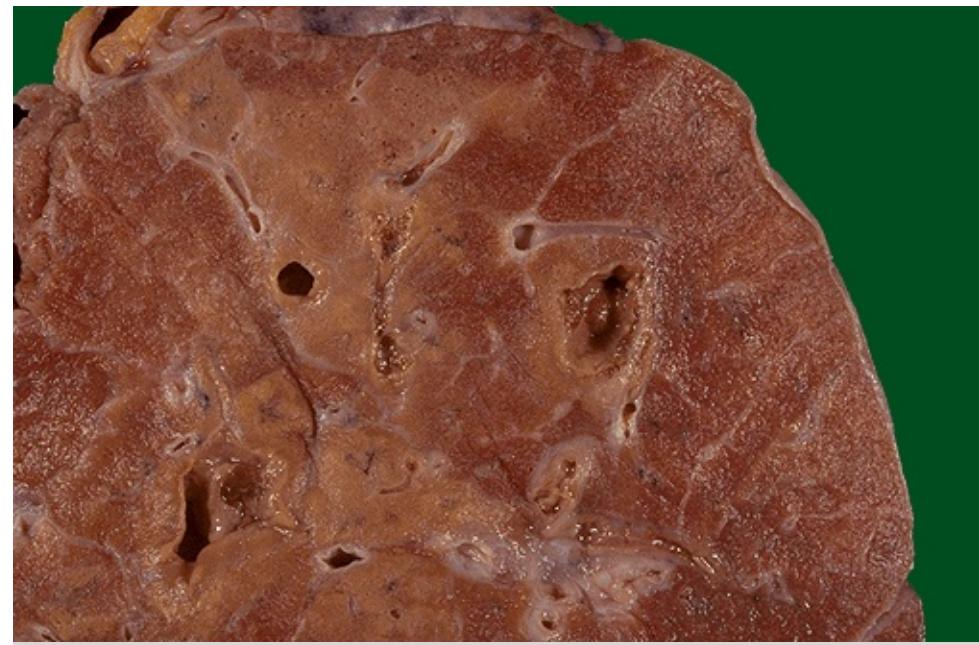


Lung abscess



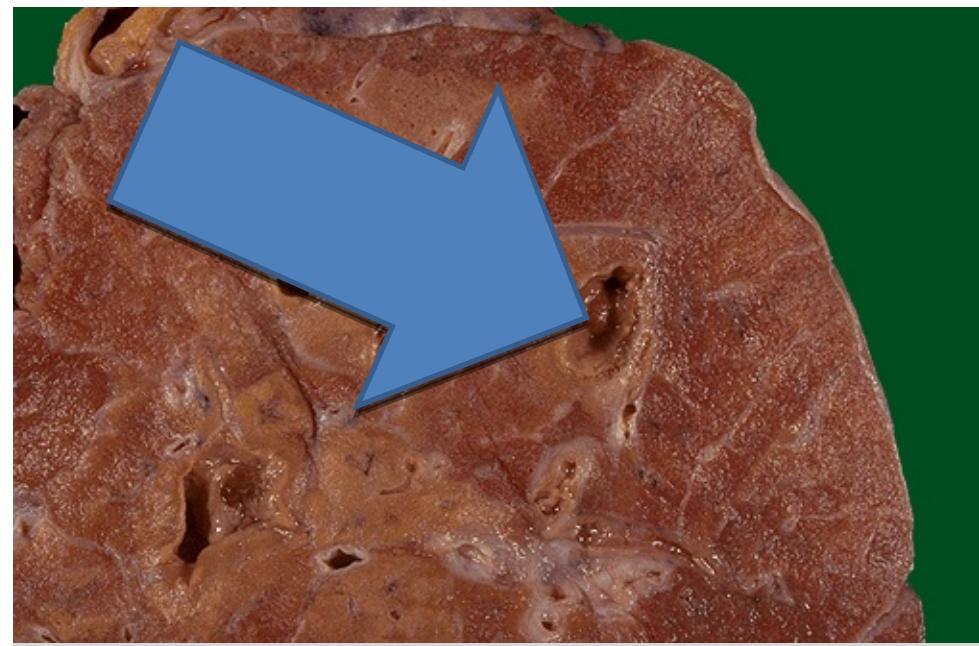
Images from Web Path

Lung abscess



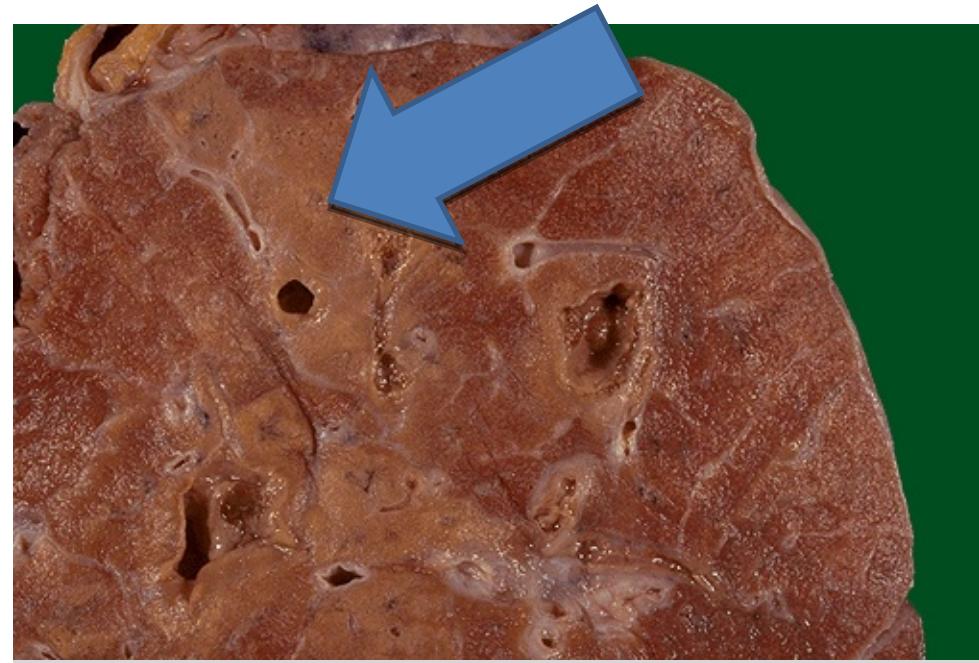
Images from Web Path

Lung abscess



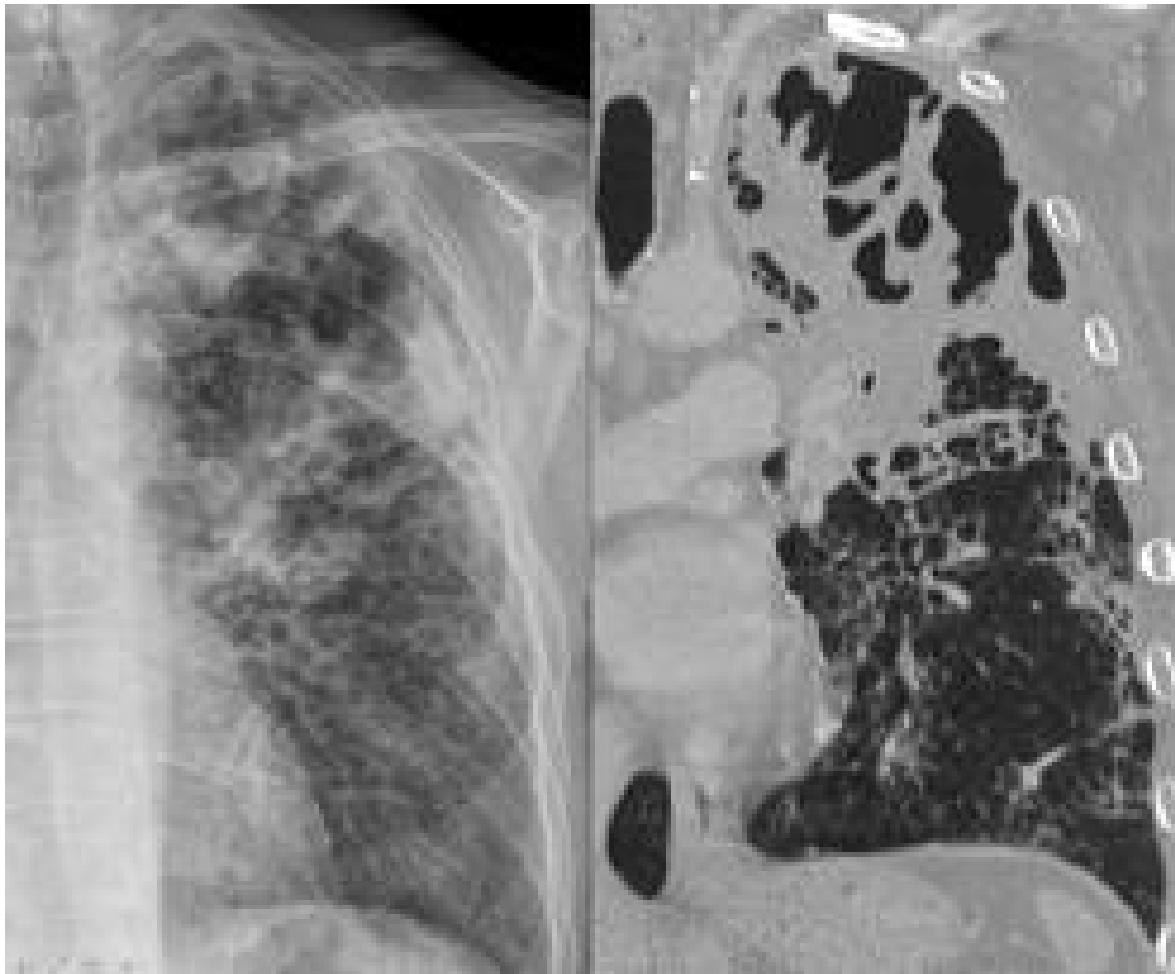
Images from Web Path

Lung abscess

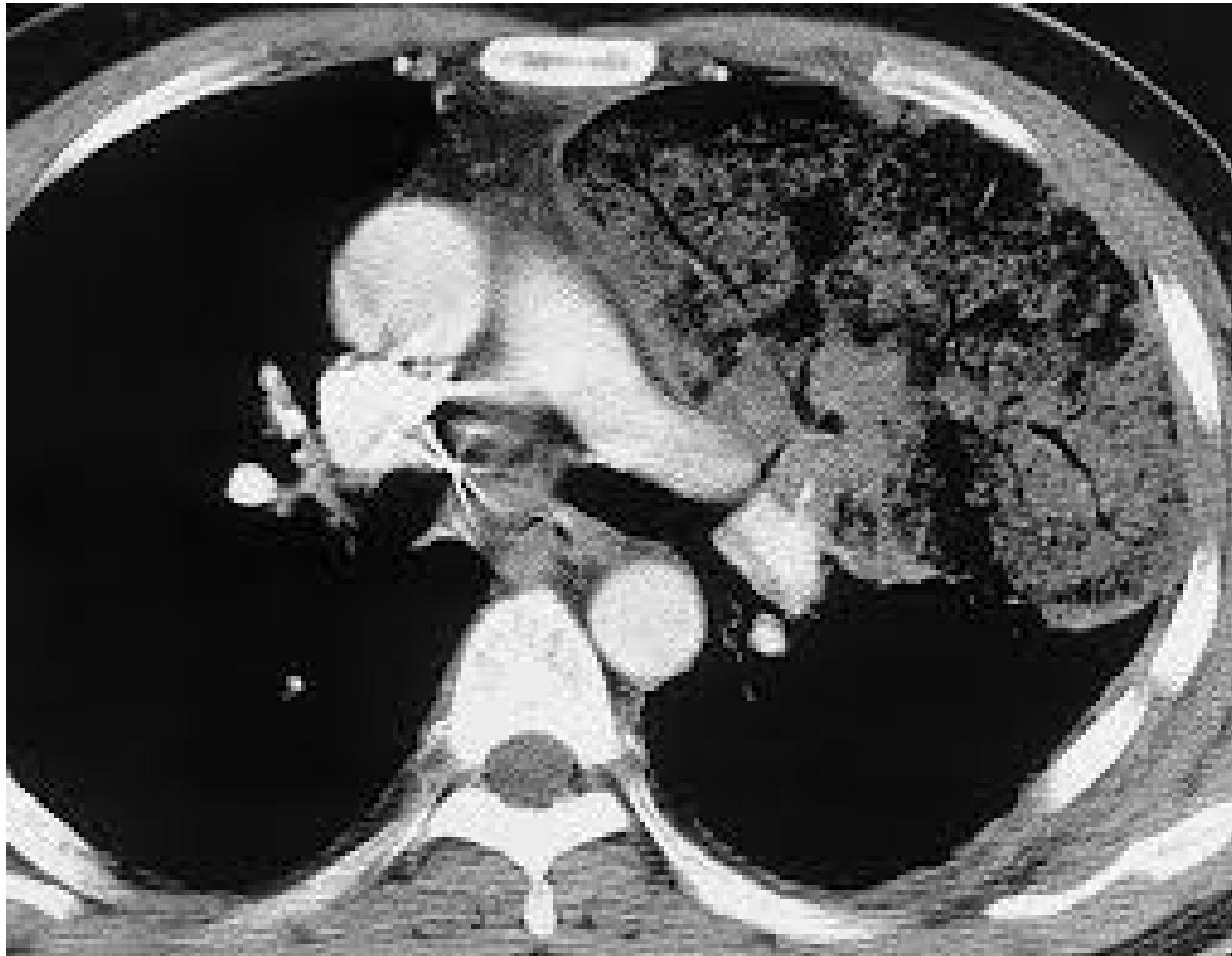


Images from Web Path

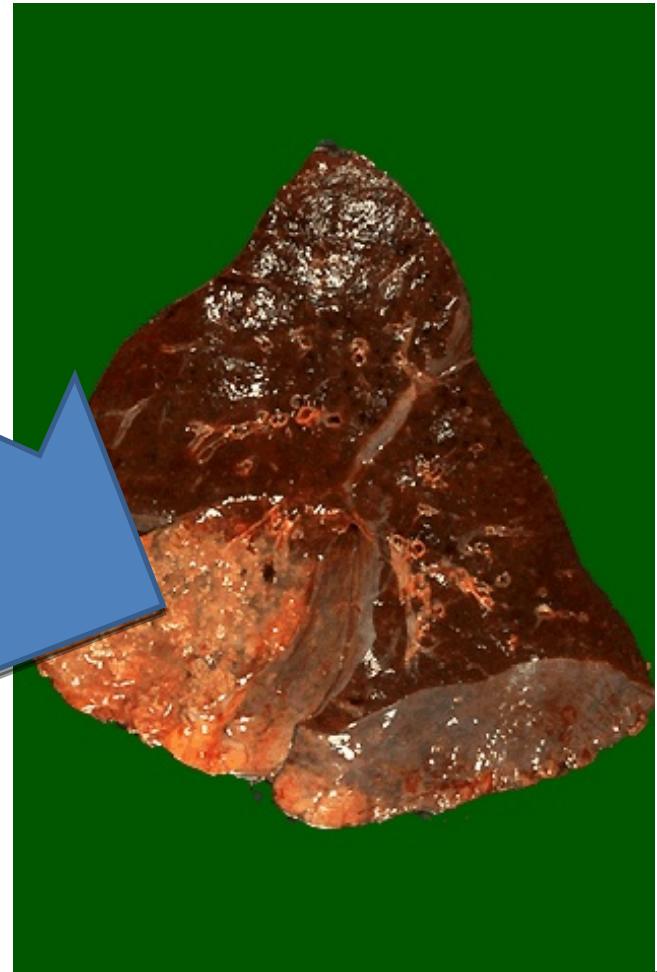
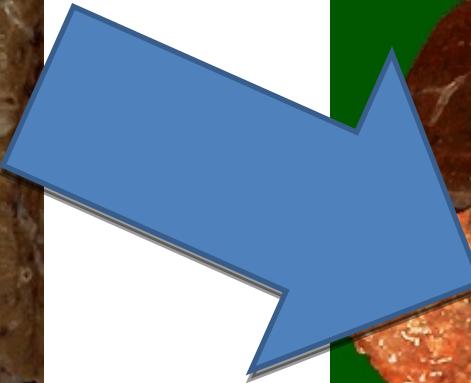
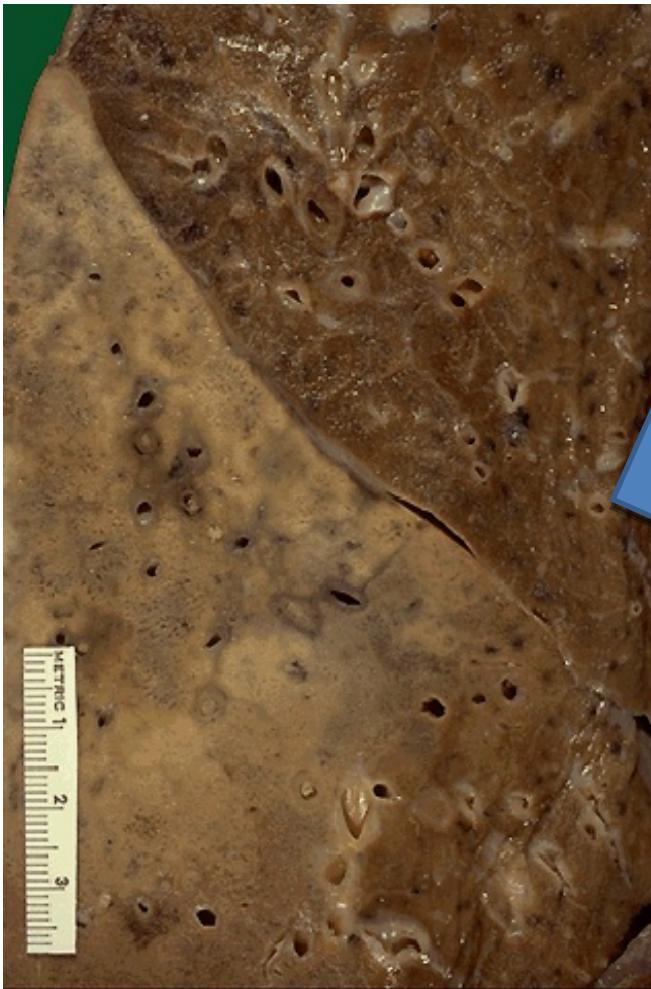
Necrotizing pneumonia



Necrotizing pneumonia

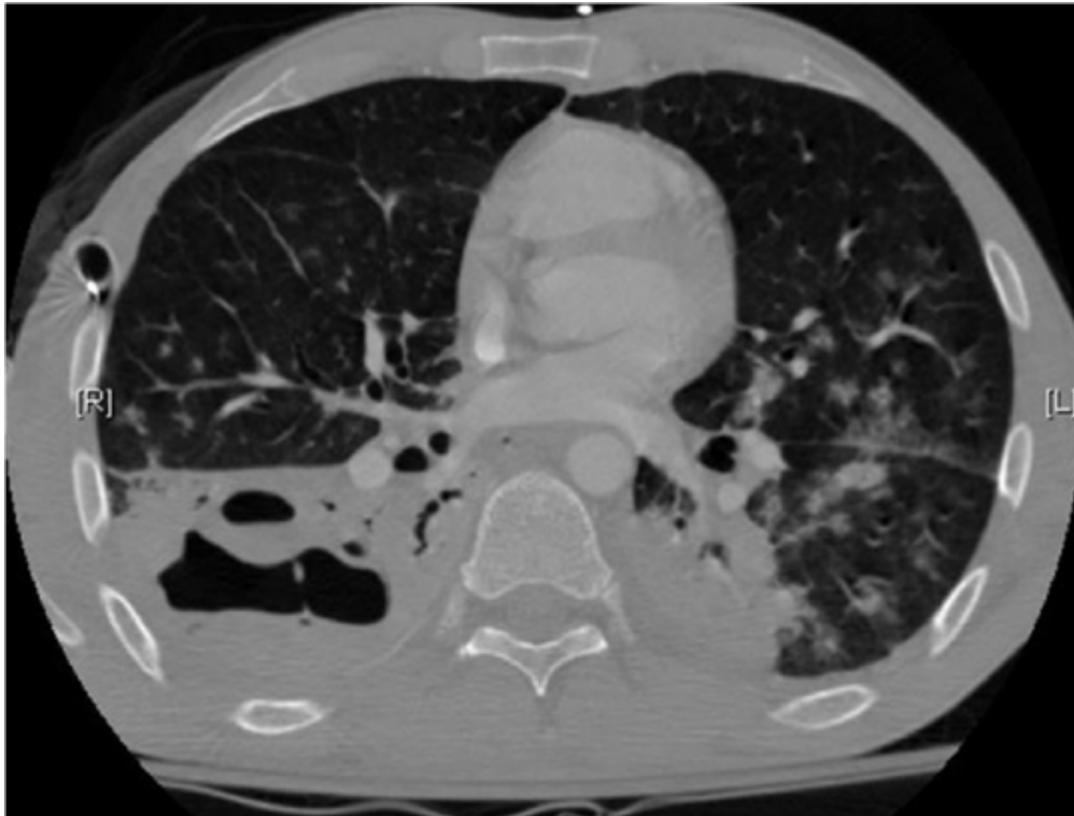


Necrotizing pneumonia



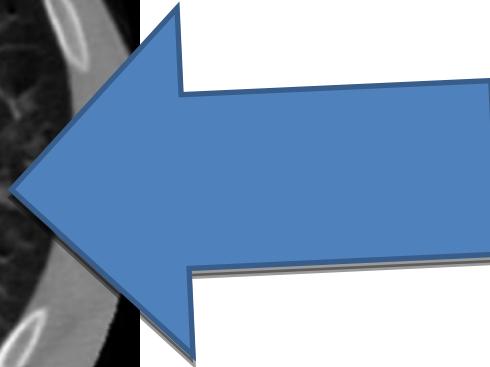
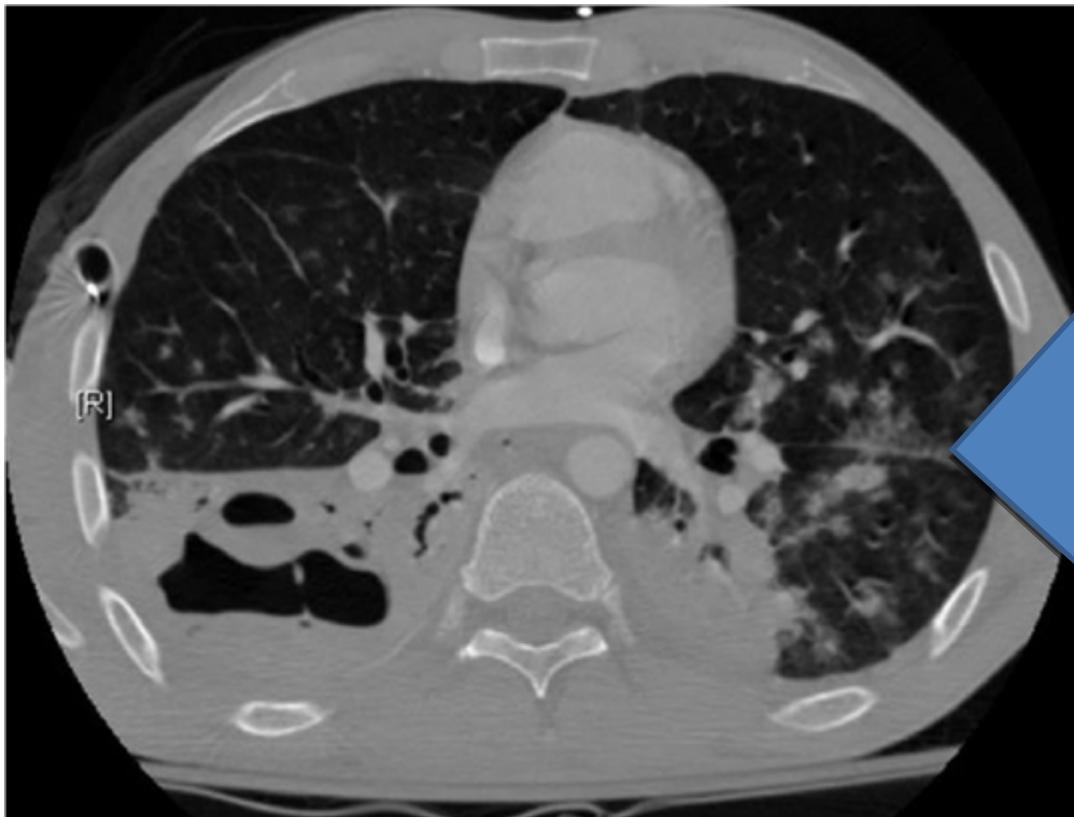
Images from Web Path

Necrotizing pneumonia



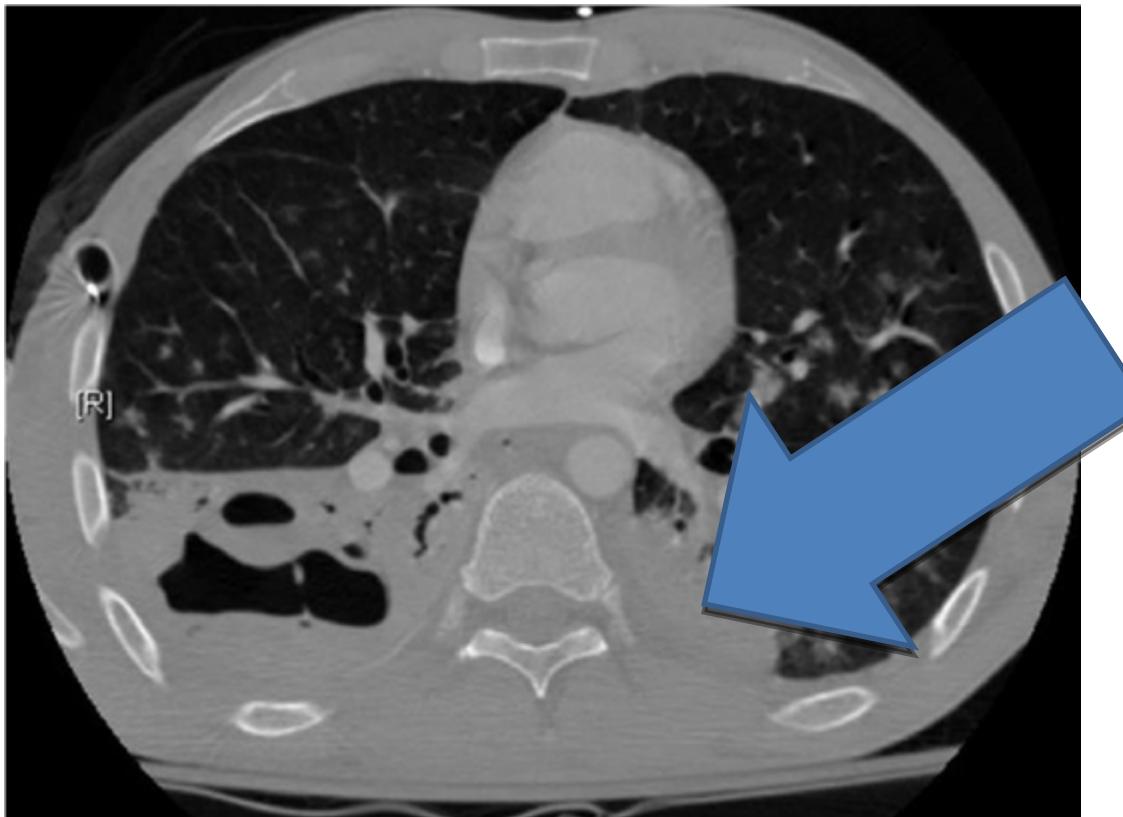
Images from Can Resp J, 2006

Necrotizing pneumonia



Images from Can Resp J, 2006

Necrotizing pneumonia



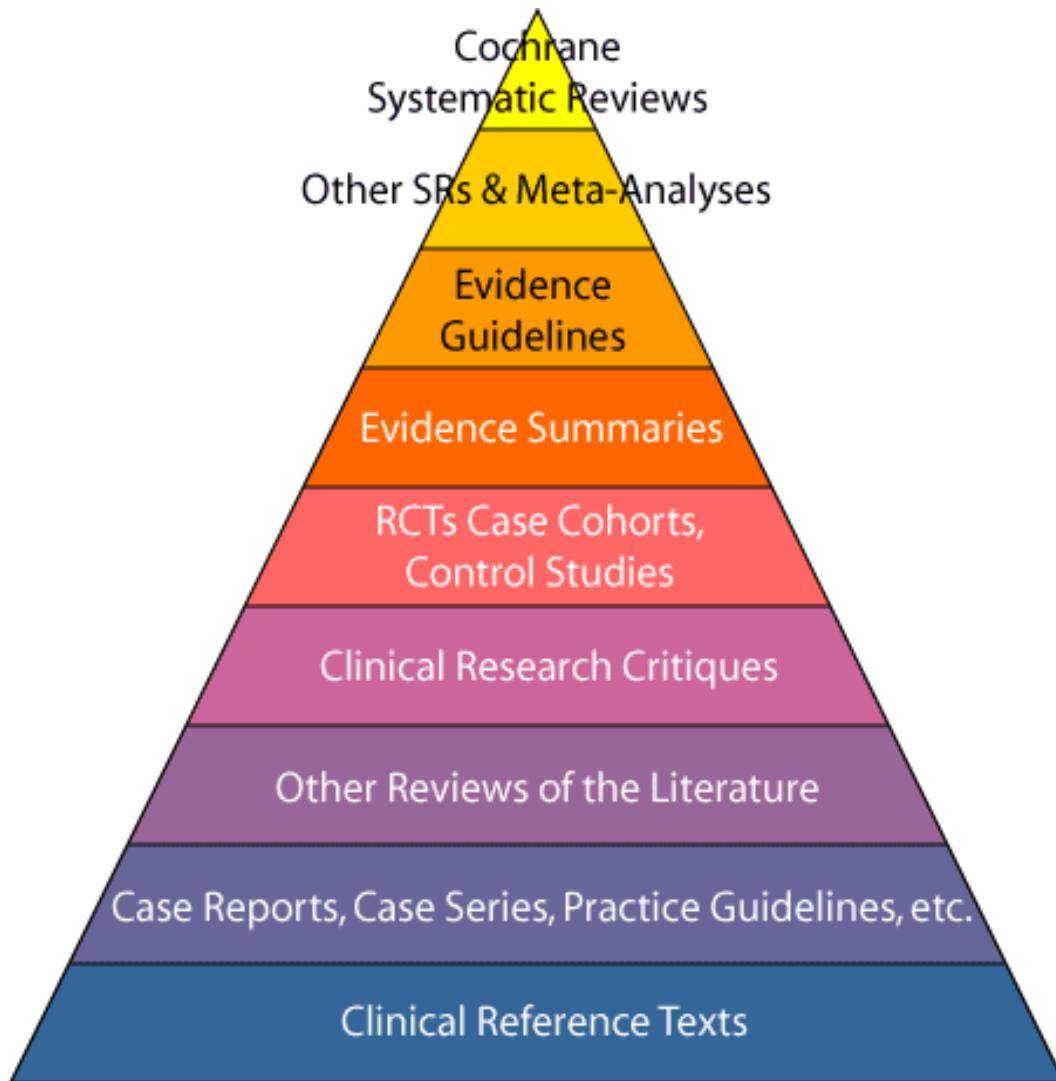
Images from Can Resp J, 2006

Literature search

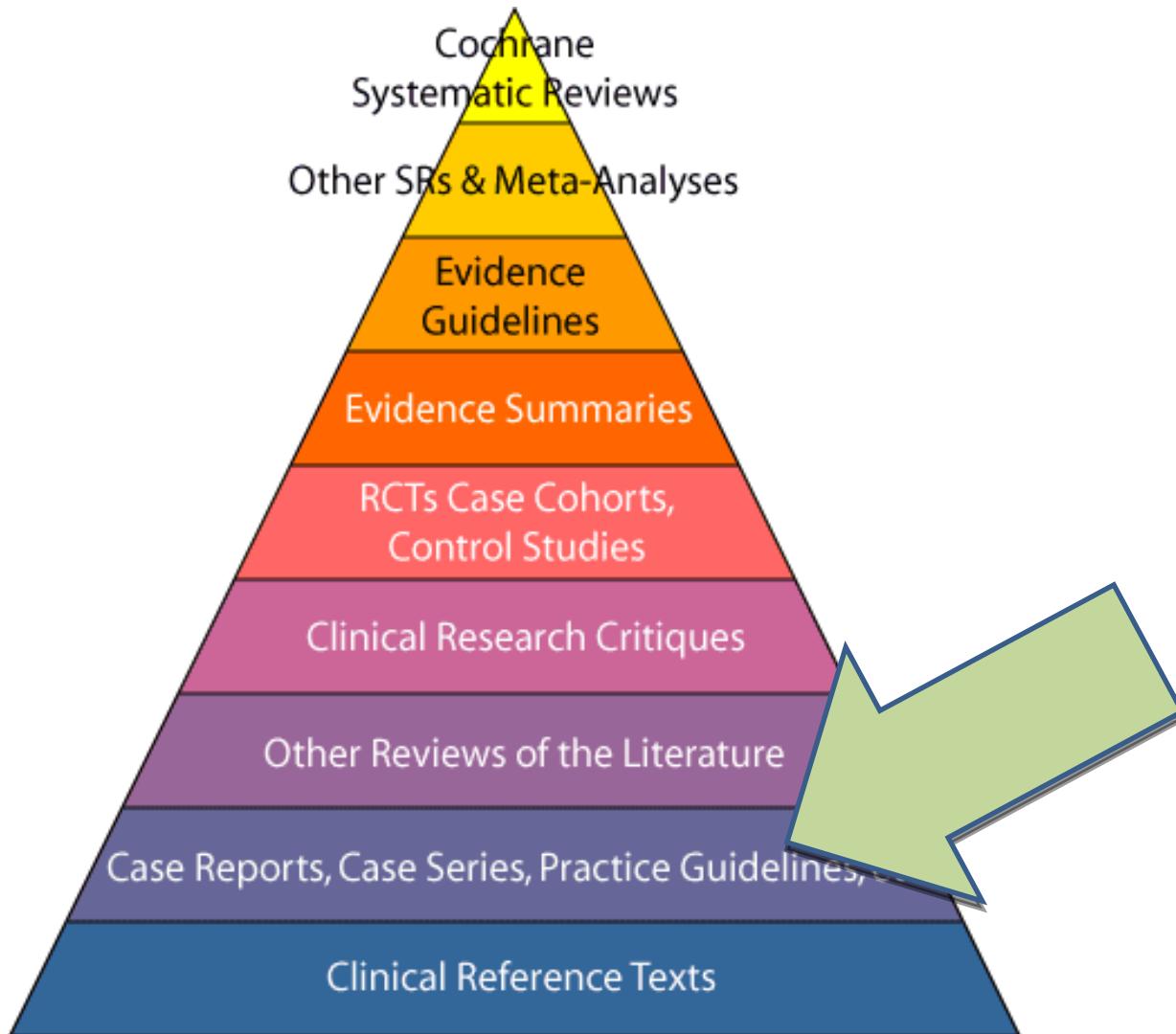
- Lung abscess
 - Recommended management
 - Evidences for surgical therapy
- Necrotizing pneumonia
 - Results of surgical therapy



The evidence in Medicine



The evidence in Medicine



Radiological confirmation

Radiological confirmation



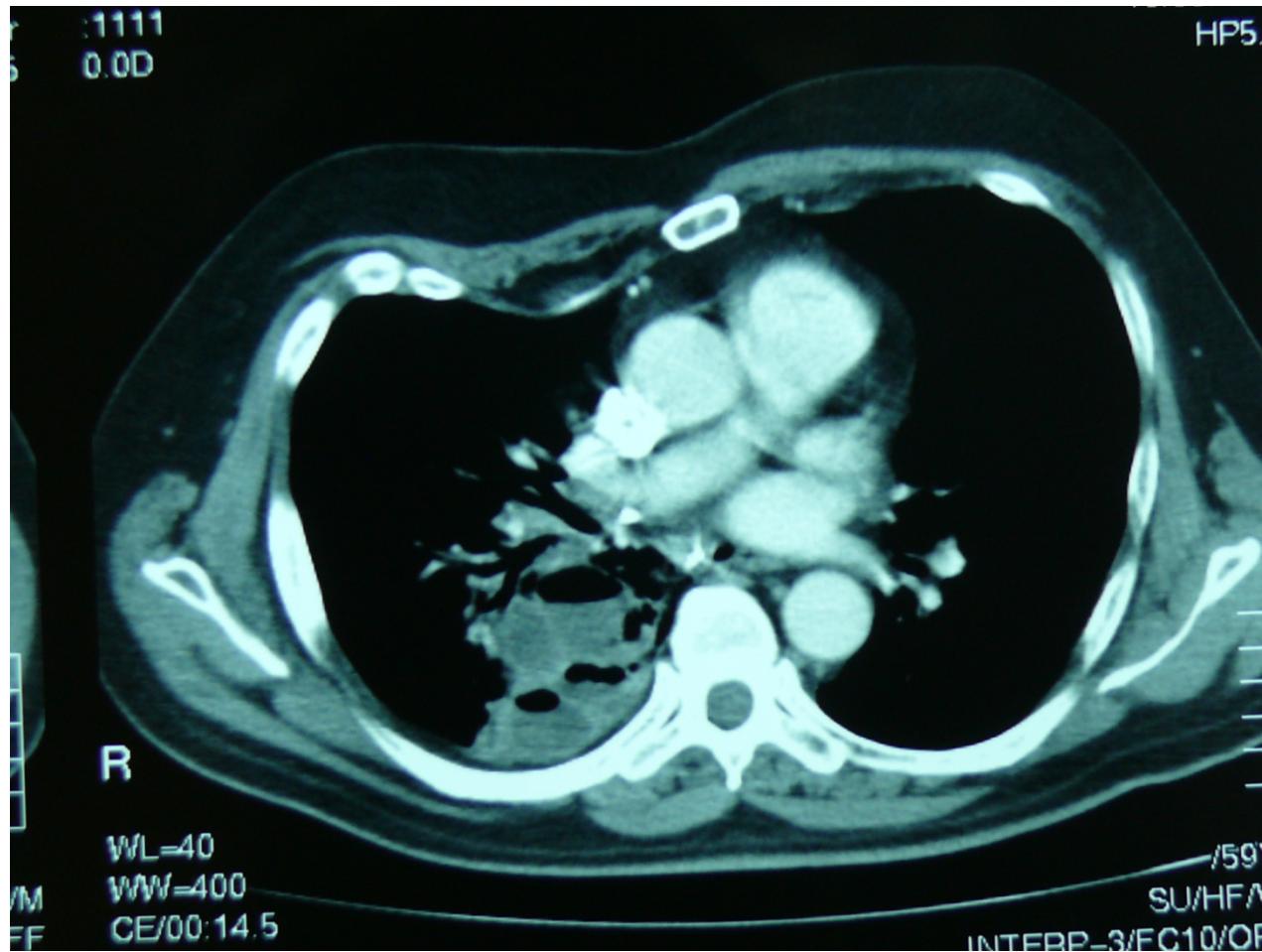
Rule-out specific causes

- Bronchial obstruction
- Bronchial carcinoma
- Sequestration
- Hydatidic disease

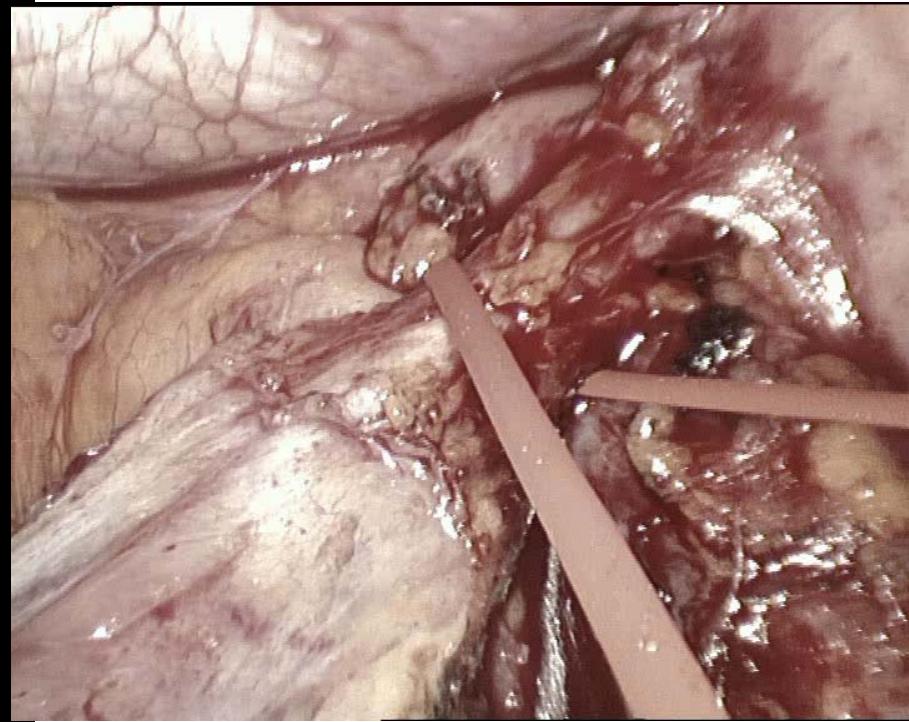
Necrotizing pneumonia?



Pulmonary sequestration



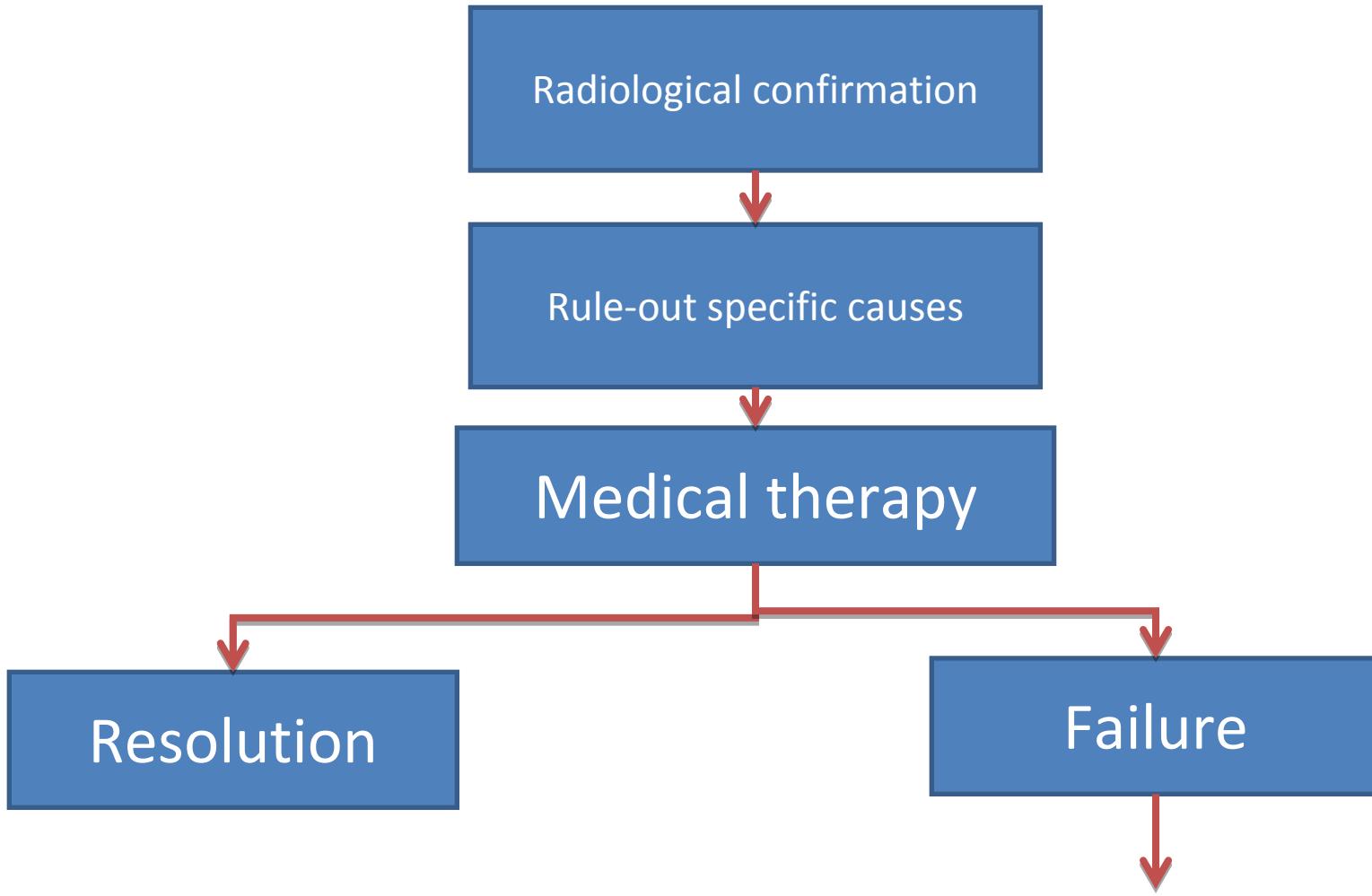
Pulmonary sequestration

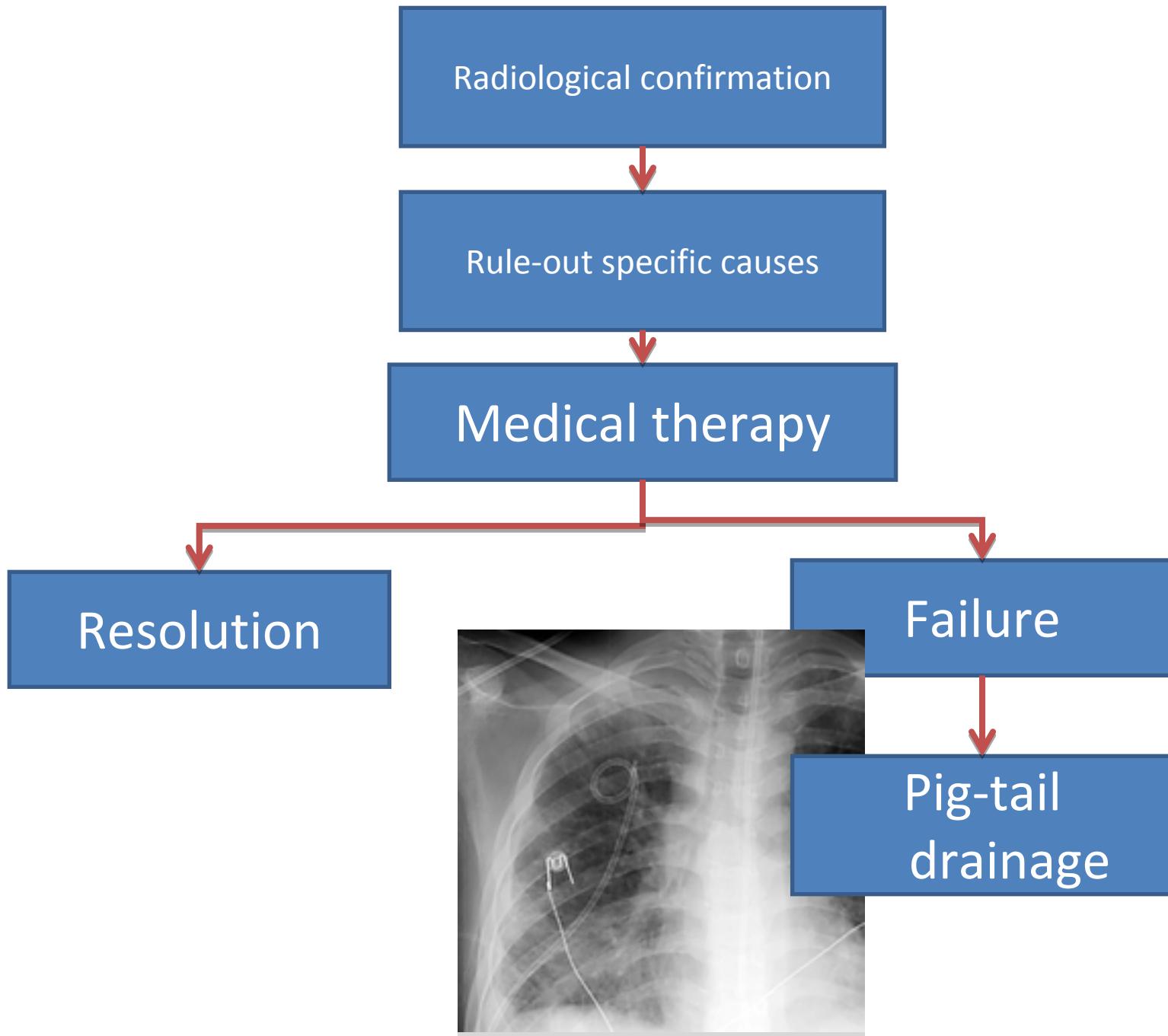


Radiological confirmation

Rule-out specific causes

Medical therapy





Pig-tail drainage

- 19 cases treated
 - 8 resolution
 - 5 pneumothorax
 - 2 haemoptysis
 - 2 bronchial fistula (operated)
 - 2 failure (operated)

Yunes et al, 2009



Pig-tail drainage

- 335 cases treated
 - 209 success
 - Immunodepressed success 53%
 - Immunocompetent 73%
 - 15 death (sepsis)

Yunes et al, 2009



Pig-tail drainage

Resolution

Failure

Chest tube
Bronchoscopy

Pig-tail drainage

Resolution

Failure

- 40 cases
 - 33 success
 - 5 pneumothorax
- (Kalogrigoris, 2011)

*Chest tube
Bronchoscopy

Pig-tail drainage

Resolution

Failure

- 42 cases
 - 38 success
- (Hertz, 2005)

Chest tube
*Bronchoscopy

Pig-tail drainage

Resolution

Failure

Chest tube
*Bronchoscopy

Resolution

Failure

Surgery

Pig-tail drainage

- 67 cases operated (4 hemoptysis)
 - 52 lobectomy
 - 5 bilobectomy
 - 4 pneumonectomy
- Mortality 1 case (bronchial fistula)

Petrov et al, 2004



Broncho-pulmonary shunts



Tanaka et al, EJCTS, 2005

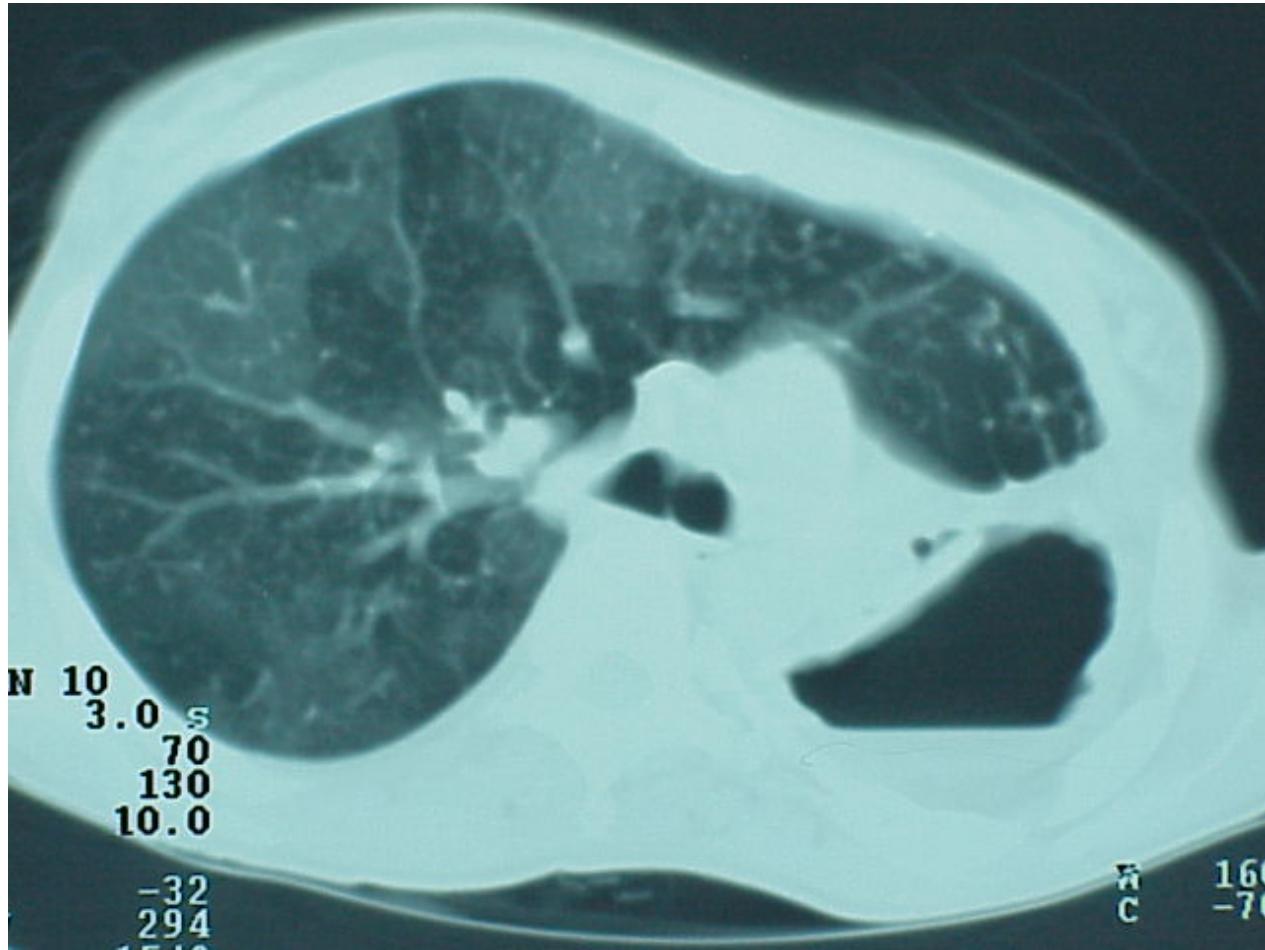
Pig-tail drainage

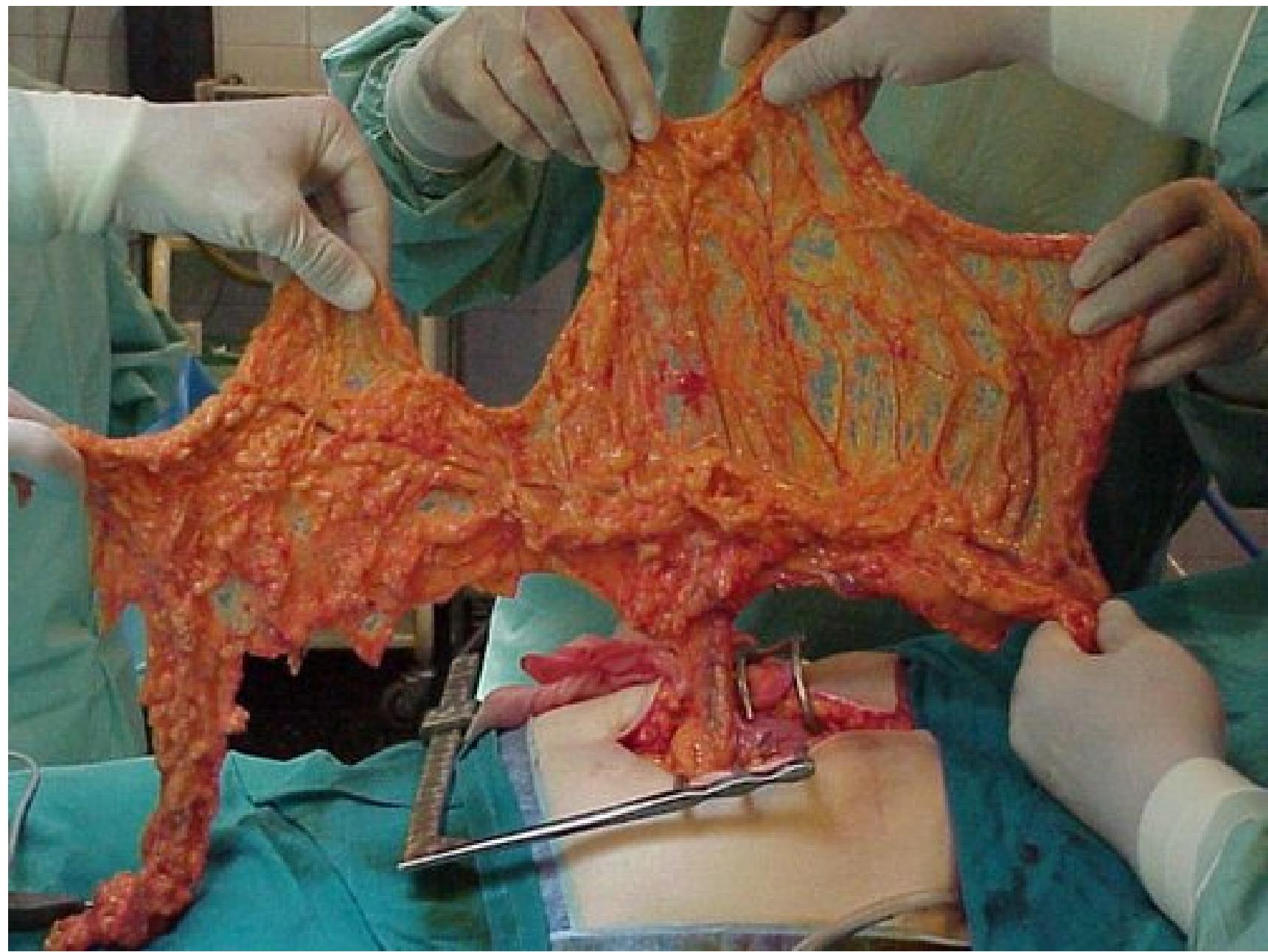
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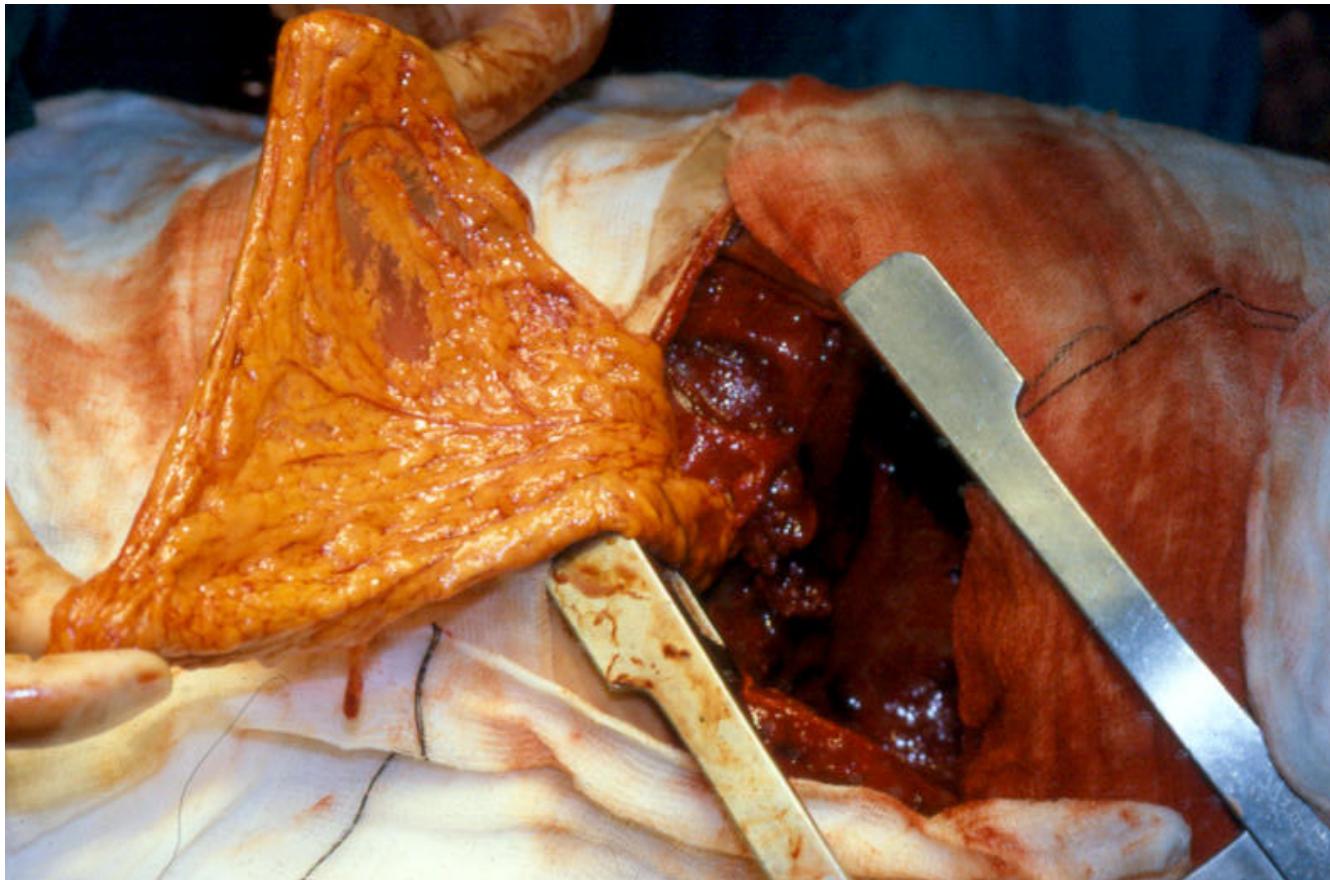


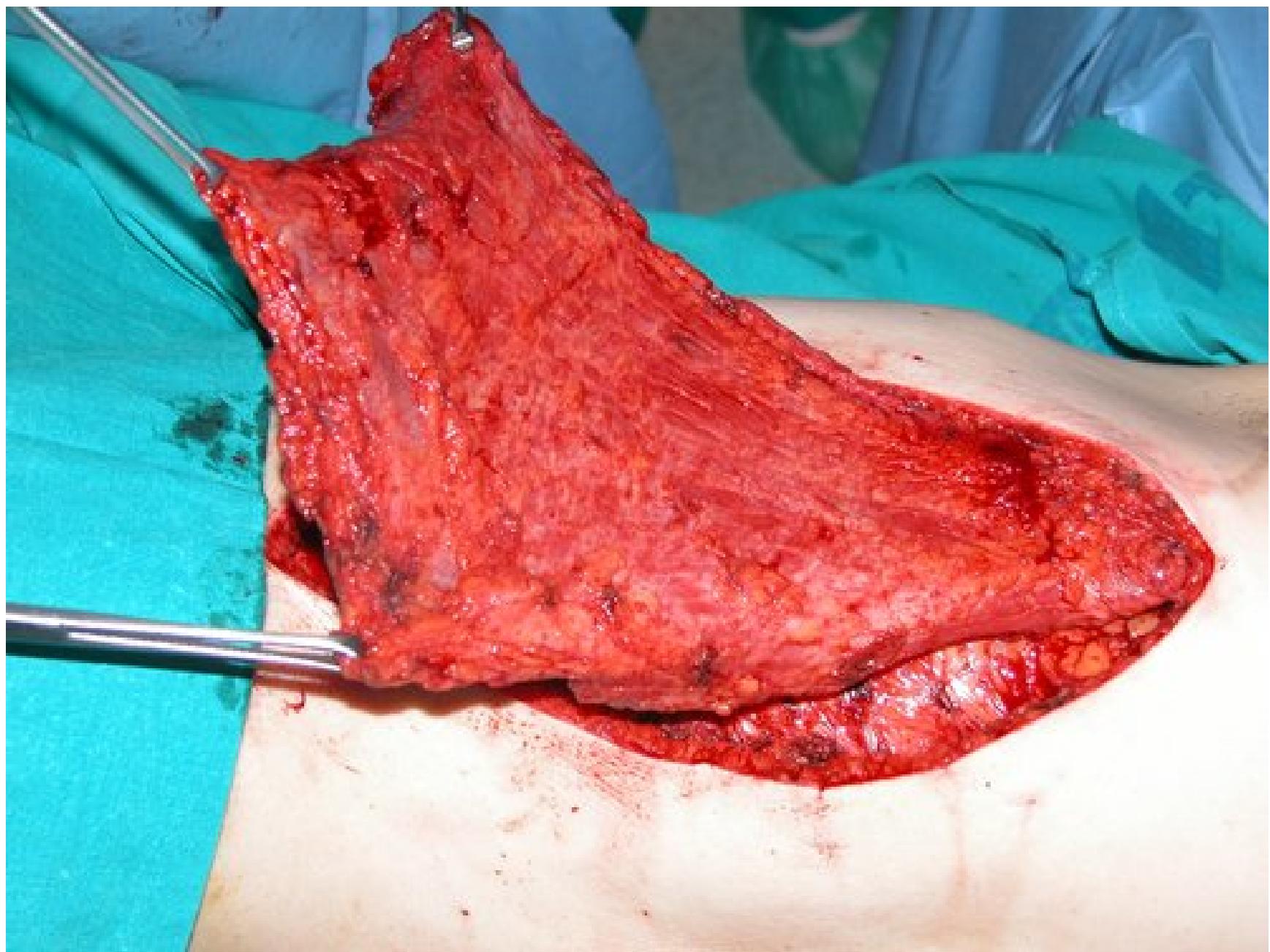
Bronchial fistula prevention



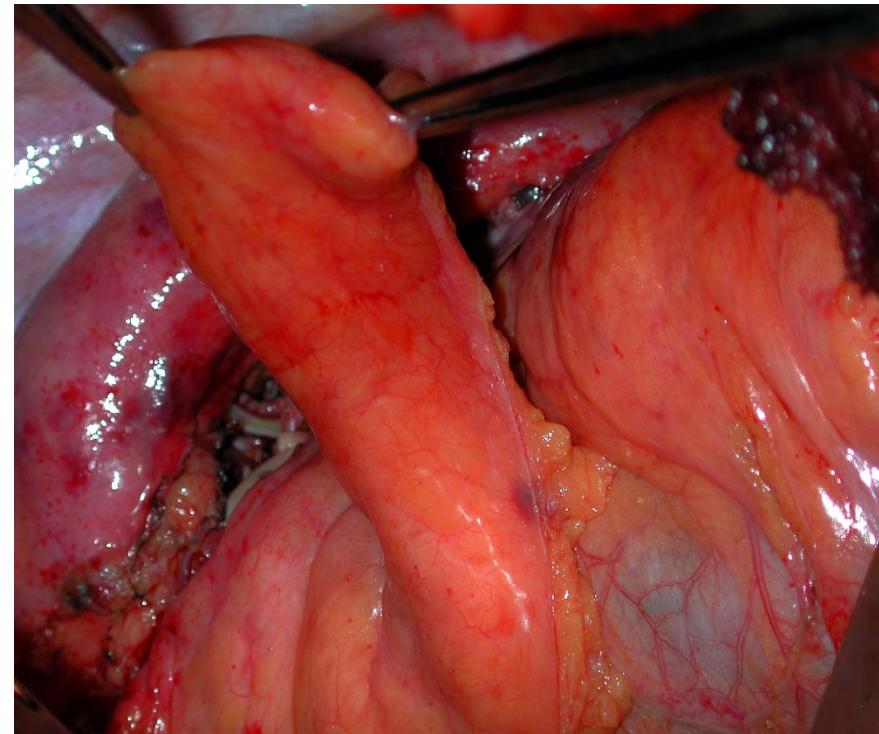
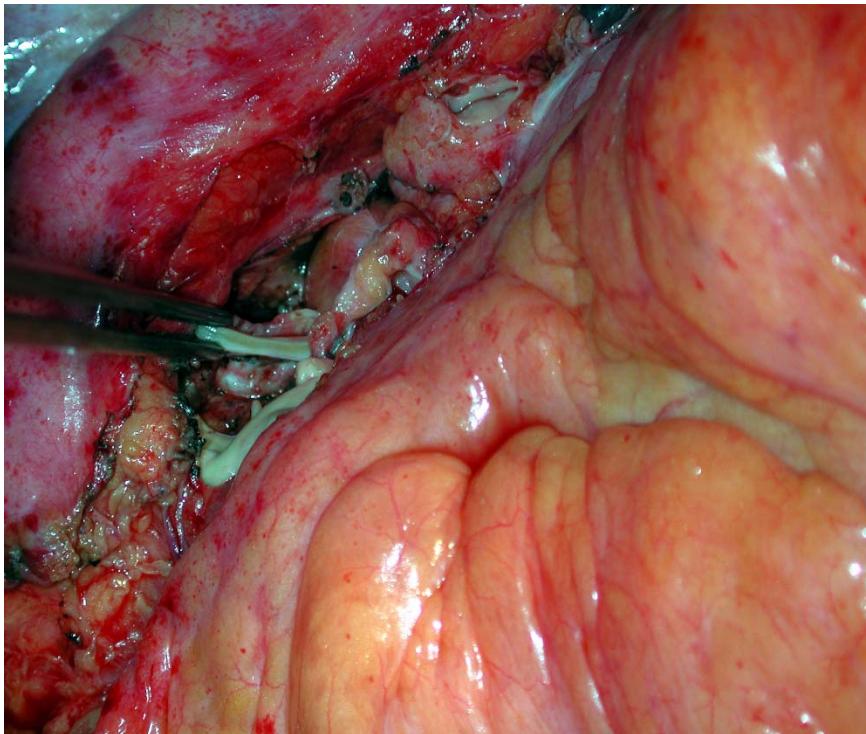


Bronchial fistula prevention

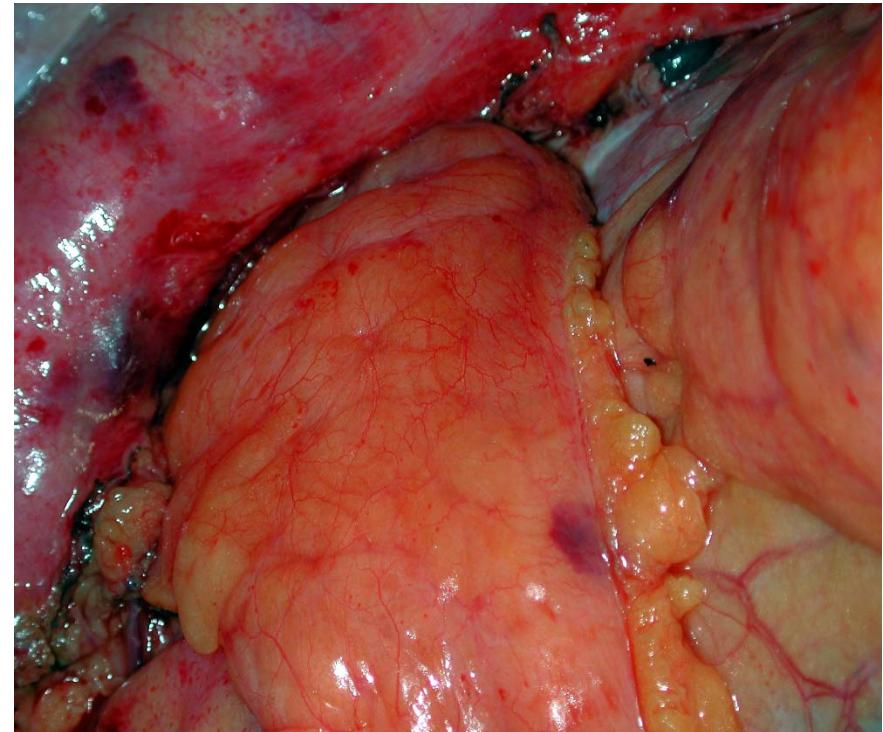
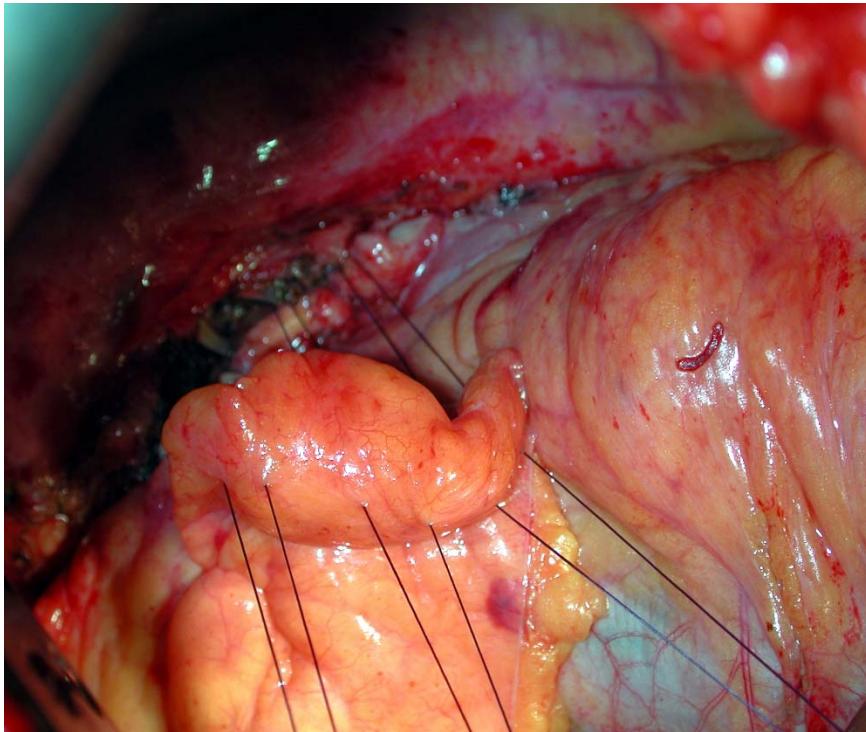




Pericardial fat pad



Pericardial fat pad



Necrotizing pneumonia: surgical series

Author, year	Cases	Ventila- tor	Pneumo /lobe	Death %
Reimel, 2006	35	24	4 / 18	8.5
Tsai, 2011	20	--	0 / 25	15.4
Schweigert, 2012	26	6	4 / 13	15

Necrotizing pneumonia



- Try first medical therapy

Take-home messages

- Rule-out other causes
- First, medical therapy
- Percutaneous drainage in abscess
- Bronchial fistula prevention
- Expected high mortality in necrotizing pneumonia

