

CREATING A GLOBAL LEADER PULMONARY CENTER



www.samitivejhospitals.com

- **Timing**

: In 3 years (2004-2007)

- **Objective**

: To create a modern, up to date, world leader pulmonary center in Samitivej hospital.

- **Strategic plan**

: Shift Diagnostic fiberoptic bronchoscopy to therapeutic fiberoptic bronchoscopy.



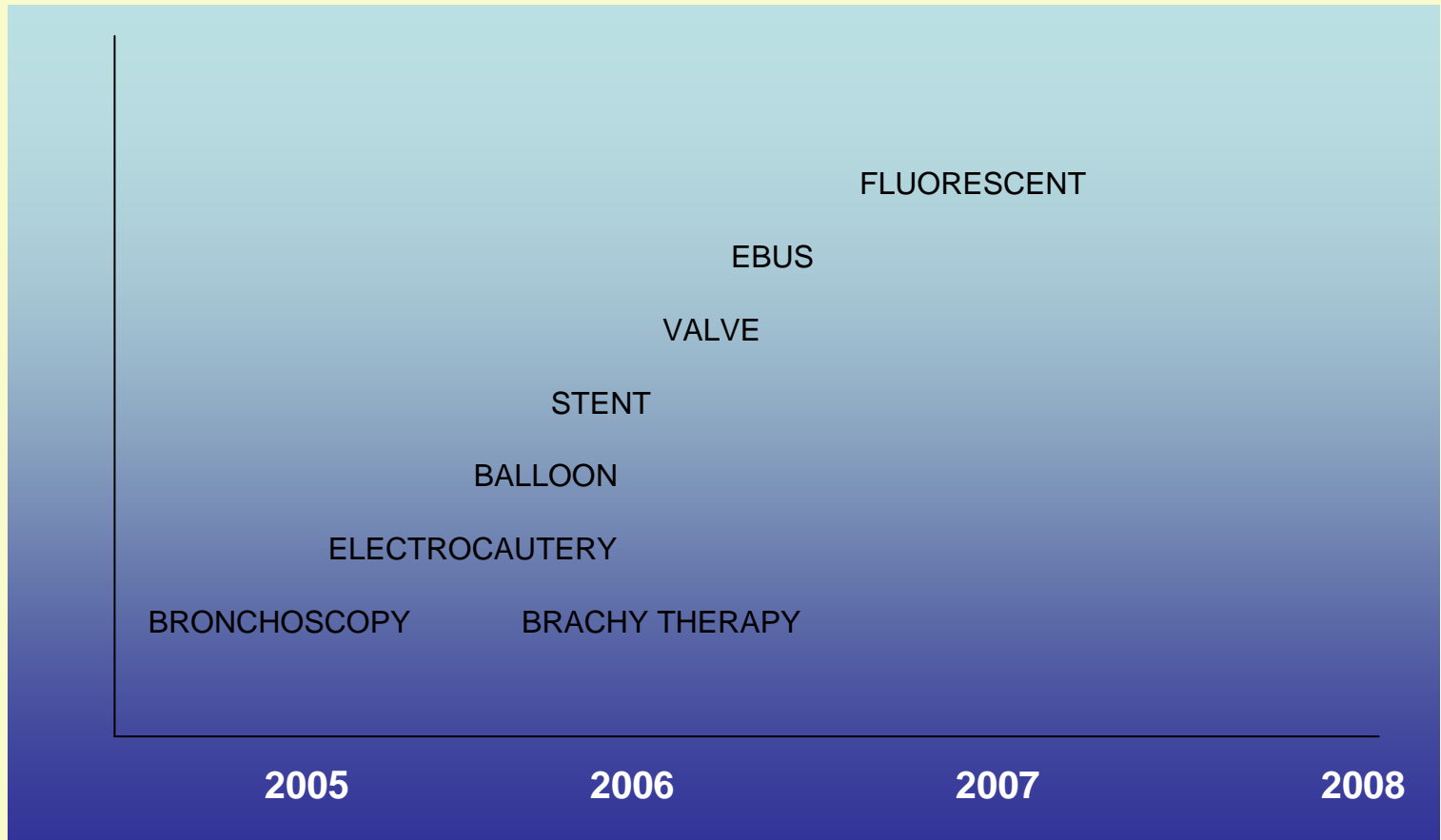
ERS 18-22 September 2005
Invited presentation
Copenhagen
Denmark

BRONZE AWARD



TECHNOLOGY ROADMAP

Technology



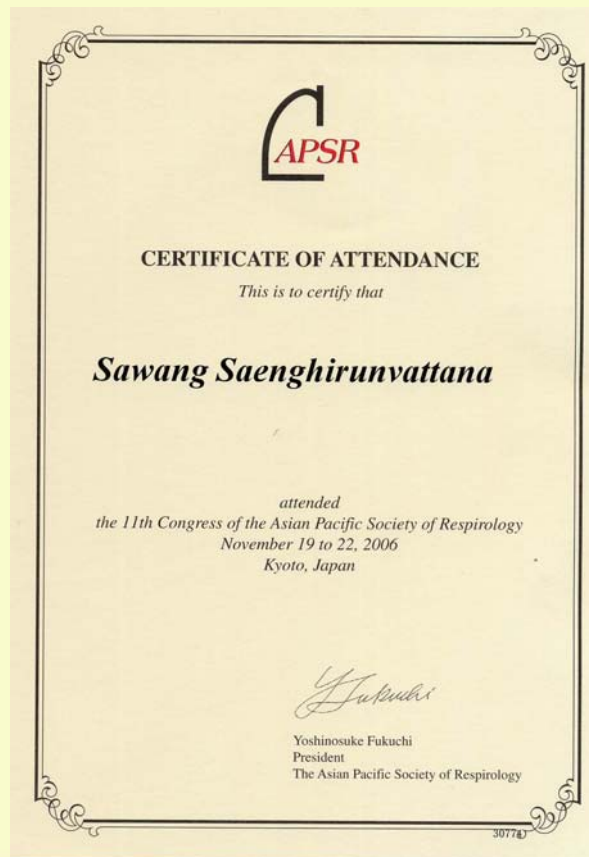
International training

- Intervention fiberoptic bronchoscopy, Hongkong 2005



International training

- Endobronchial ultrasonogram guided Transbronchial needle aspiration (EBUS – TBNA) CHIBA Hospital, Japan. 2006



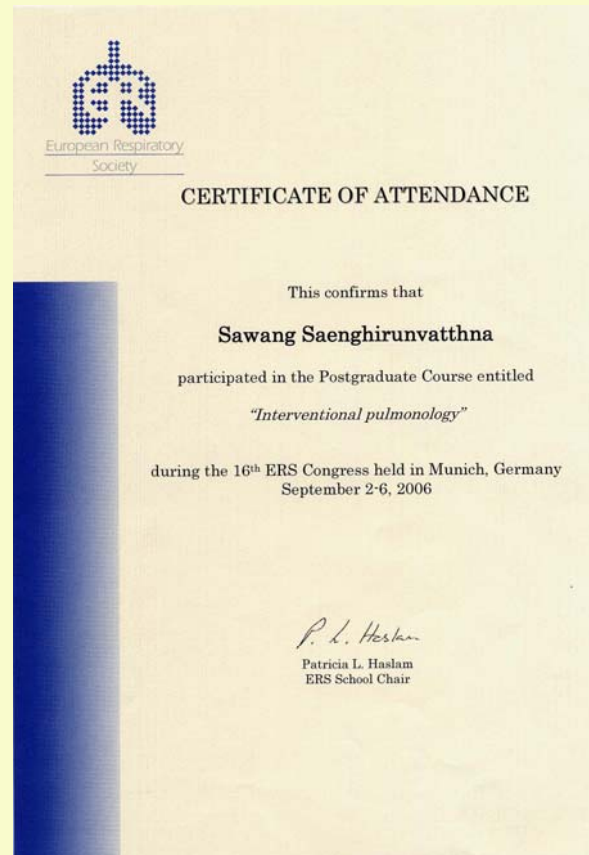
International training

- Training center. Amsterdam. Netherland 2006



International training

- Intervention Rigid bronchoscopy Germany 2006



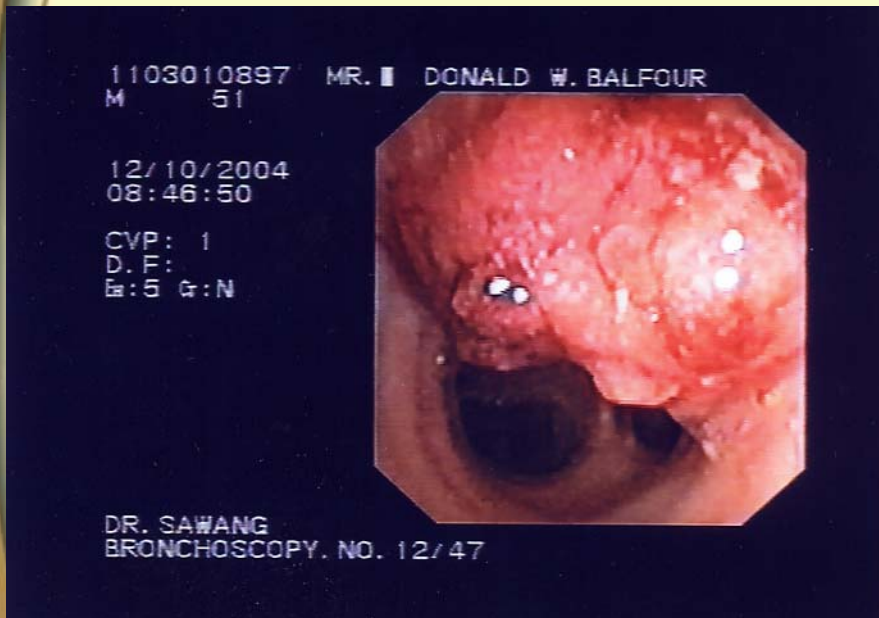
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International training

- Intervention bronchoscopy Singapore 2007



Innovation, Research and Development



Pre

ELECTROCAUTERY

Post

Timing = 30 sec. - 20 min.

MR= 0%



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Electrocautery Catheter



เทคนิคในการช่วยแพทย์

- เตรียมอุปกรณ์พร้อมใช้งาน
- เตรียม cold 0.9% NSS 1000 cc stand by
- ขณะที่ช่วยแพทย์ ใส่สาย electrocautery ต้องบอก circulating nurse ปิด oxygen ที่เข้าสู่ร่างกายผู้ป่วยเป็นระยะ



We Care

Spray Catheter



We Care

1107032664 MR. SUKIJ SUSAMAKULWONG
M 35

30/07/2007
09:34:13

CVP:
D. F:
Et: 8 Gr: N



DR. SAWANG
BRONCHOSCOPY. NO. 30/50



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Joint Commission
International



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*35th World Congress of the
International College of Surgeons*

25-29 October 2006

Venue: Pattaya Exhibition and Convention Hall (PEACH)

Royal Cliff Beach Resort, Pattaya, Thailand

Surgical Challenges



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ARGON PLASMA COAGULATION

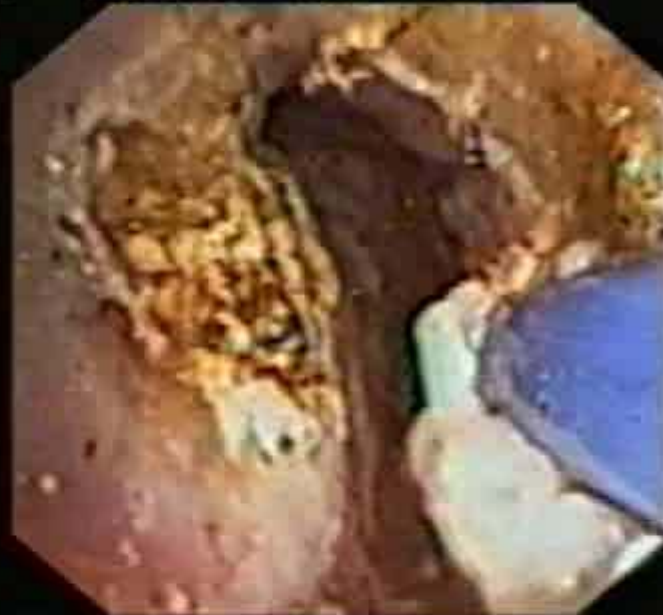
- TO DESTROY ENDOBRONCHIAL LUNG CANCER



1100161346 MR. PRADIS VICHAPANICH
M 71

03/10/2007
15:21:28

CVP: A1/4
D. F:
E:8 G:H



DR. SAWANG
BRONCHOSCOPY, NO. 15/50



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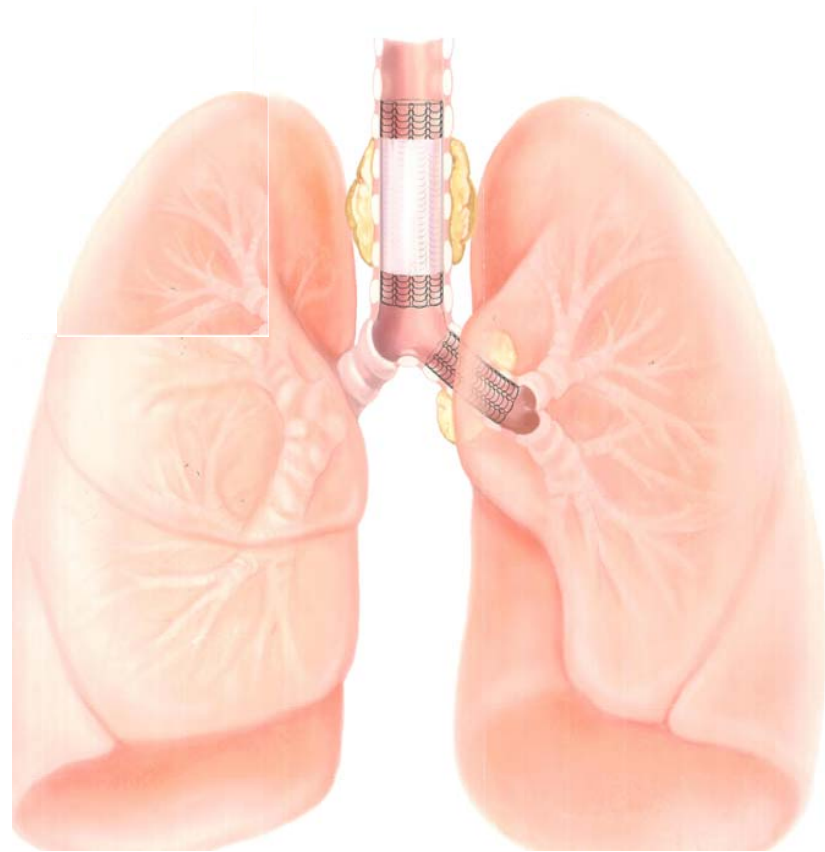
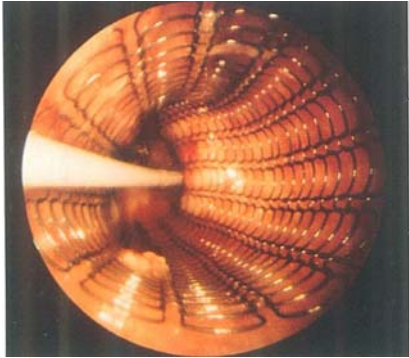
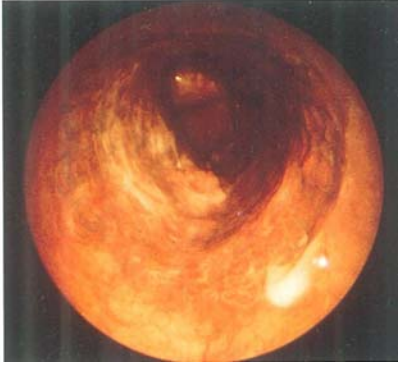


Innovation, Research and Development

- Stent placement in the bronchus



Airway Obstruction



Stent

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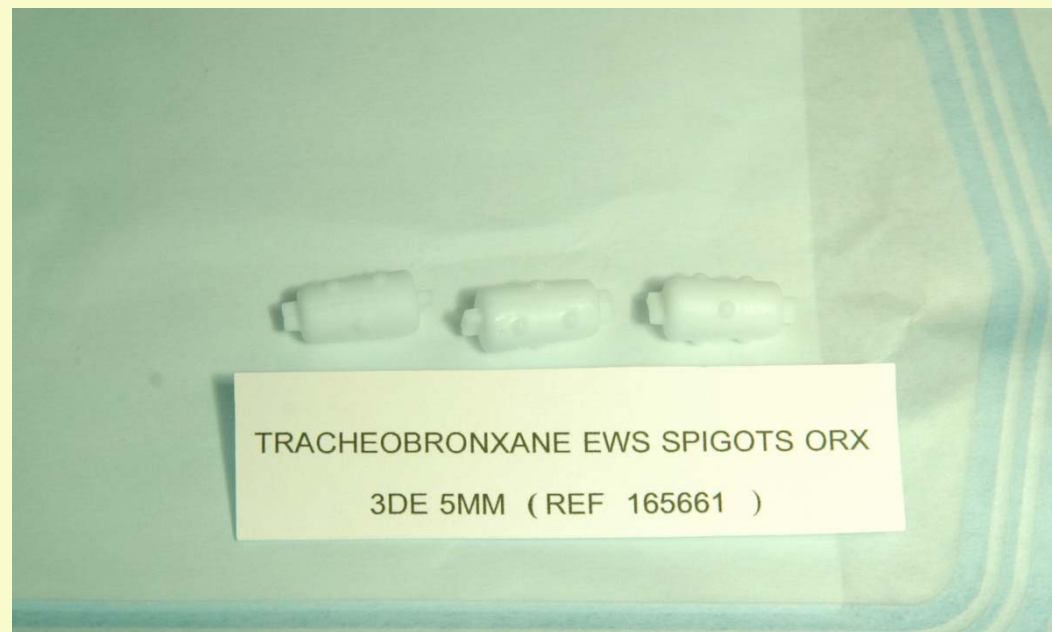
International Invited Presentation In 2007

- 1. Use of bronchial stent in lung cancer.
Asia Pacific Congress of Bronchology 15 July
2007. Singapore**



Innovation, Research and Development

- Balloon occlusion in managing hemoptysis.
- Watanabe valve in managing lung bleb and bronchopleural fistula.



1107044823
M 40

MR. MONCHAI WANNA

30/10/2007
12:21:20

CVP:
D.F:
E:S G:N



DR. SAWANG
BRONCHOSCOPY, NO. 88/50

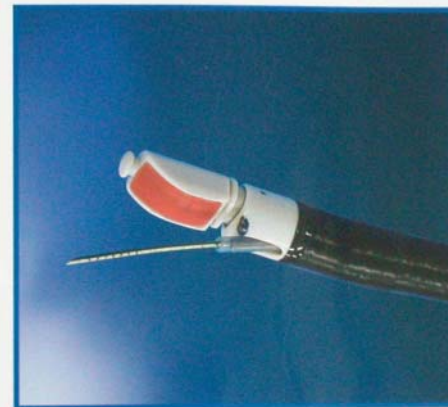
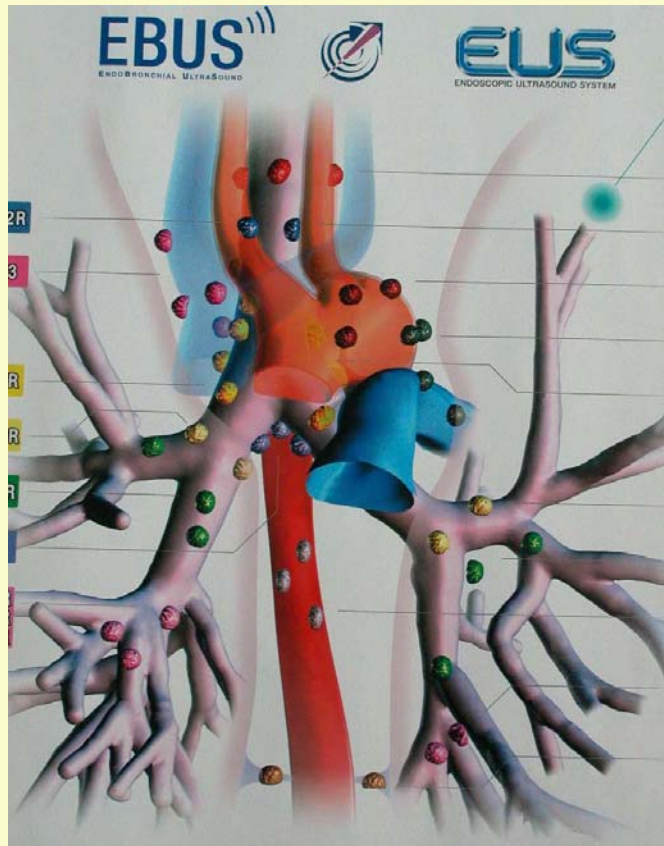
Innovation, Research and Development

- Brachy therapy
- Rigid bronchoscopy combination with fiberoptic bronchoscopy



Innovation, Research and Development

- **EBUS**



Ultrasonic Bronchoscope



Balloon Probe



Endobronchial Ultrasound-guided Transbronchial Needle Aspiration (EBUS – TBNA) in Thailand

Sawang Saenghirunvattana,M.D.*,

Naruemol Masakul,M.BA.*

Surapon Worapongpaiboon,M.D.,FCAP.*

Takahiro Nakajima M.D.,**

Kazuhiro Yasufuku, MD,PhD,FCCP. Takehiko Fujisawa,M.D.****

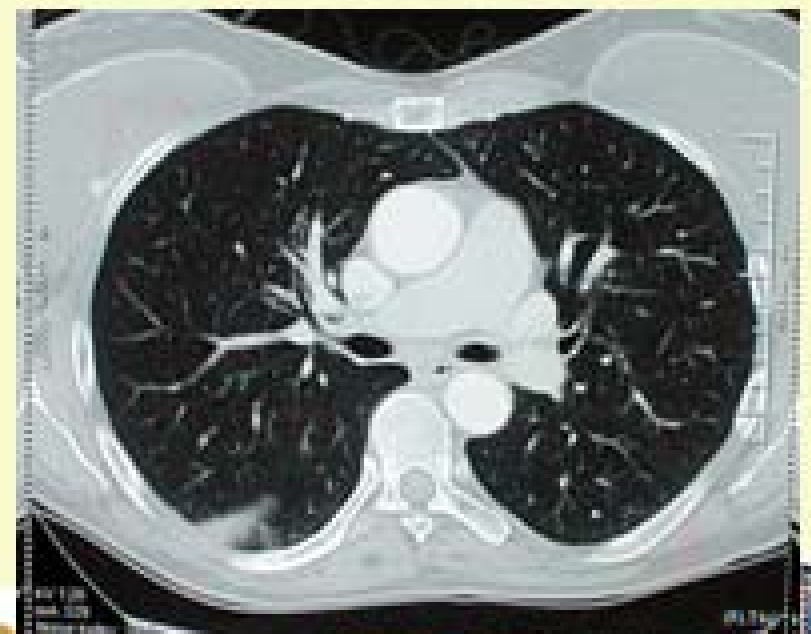
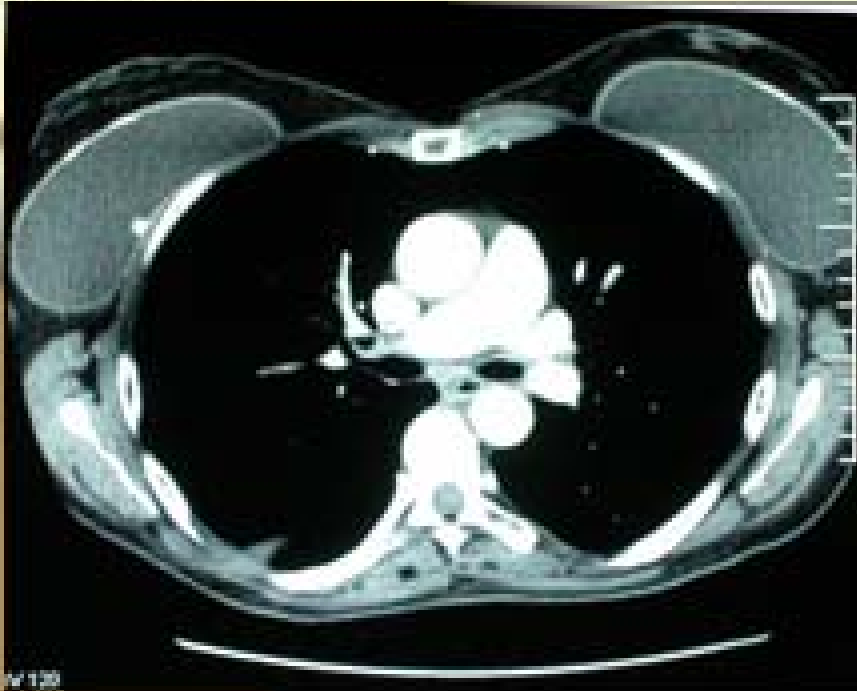
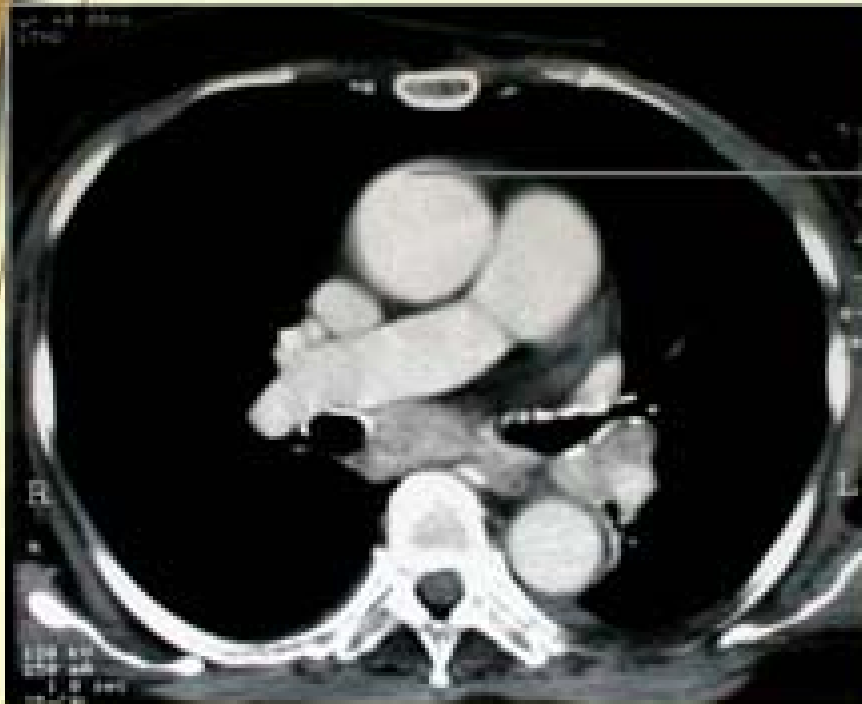
***Samitivej Hospital, Bangkok, Thailand,**

****Department of Thoracic Surgery,Graduate School of Medicine, Chiba University.**



- **Mediastinal lymph node biopsies are essential to accurately stage lung cancer and to plan treatment. Locoregional cancer spread involves mediastinal lymph nodes and is a major determinant of surgical resectability. Scanning imaging technologies, such as CT and PET, although useful, are not sufficiently sensitive or specific to determine mediastinal nodal involvement. Therefore, lymph node biopsy results remain the most accurate determinant of nodal status**



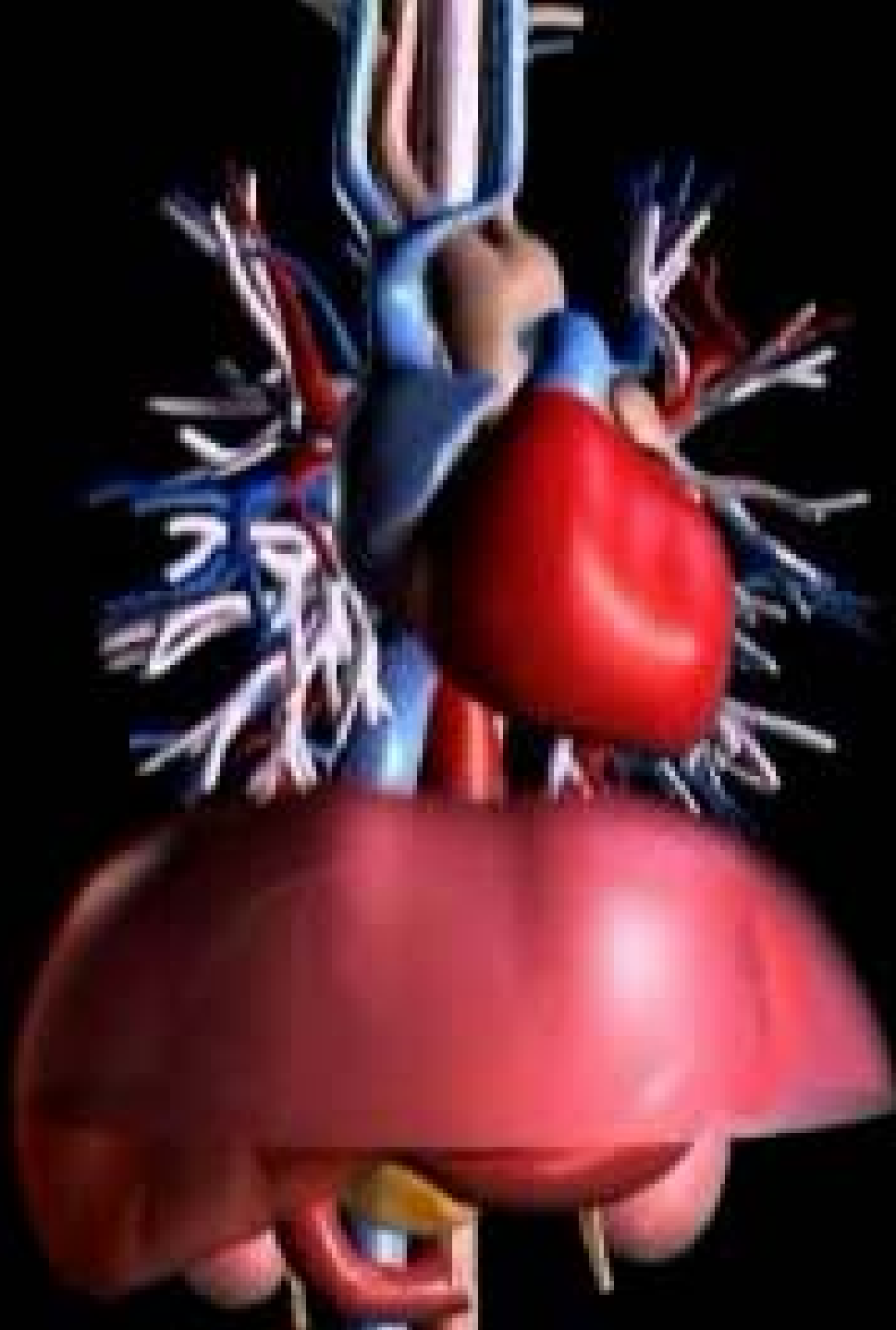


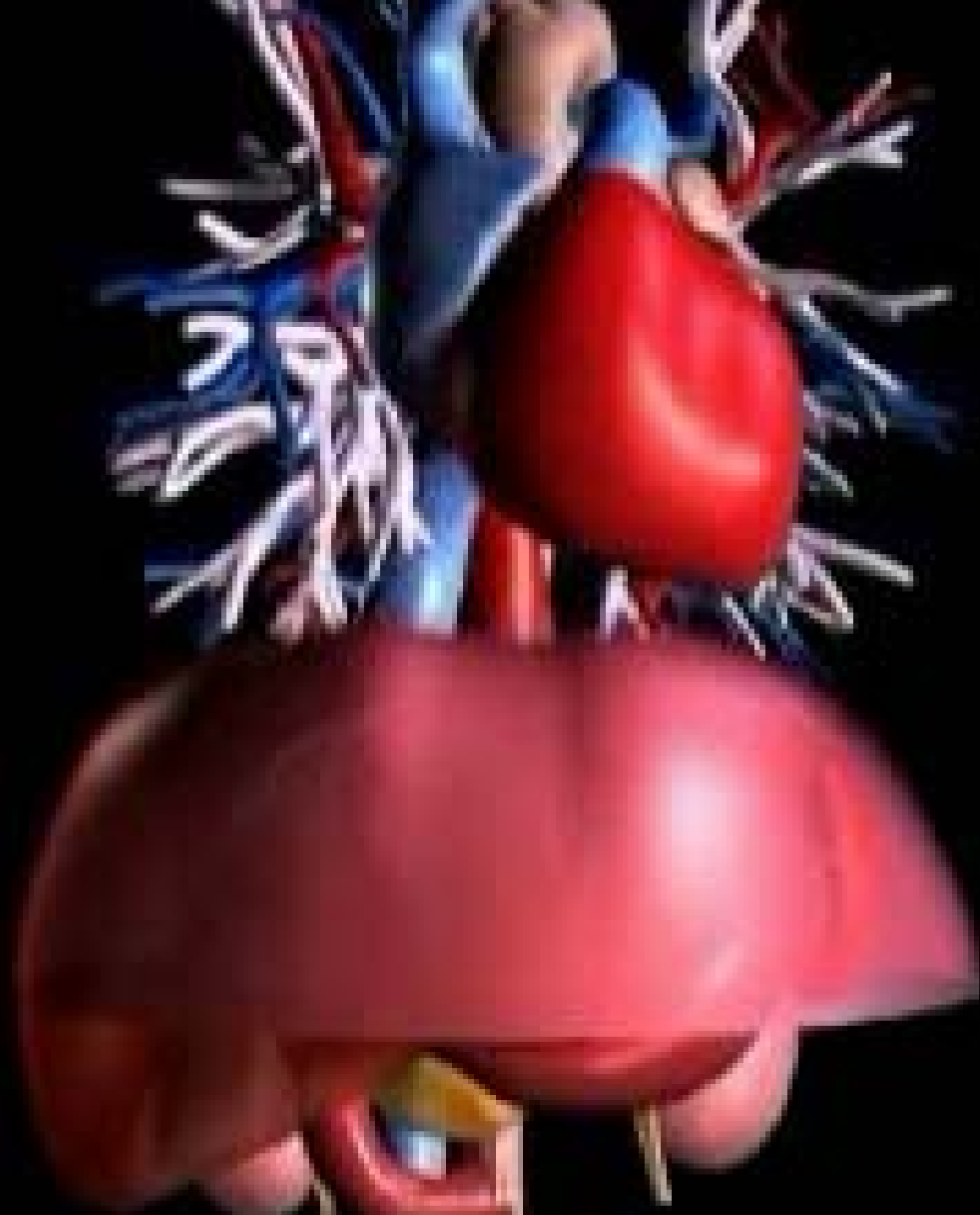
- For many years, mediastinoscopy has been the reference standard for staging the mediastinum, but it is invasive, expensive, and requires general anesthesia. Although it allows good access to the anterior mediastinum, access to the posterior and inferior mediastinum is limited. As a result, its sensitivity for detecting cancer in mediastinal lymph nodes varies between 80% and 90%.



- **Endobronchial ultrasound guided TBNA (EBUS-TBNA) is a minimally invasive real-time procedure which has been shown to have a high yield for the evaluation of the mediastinum. Here we report our experience of EBUS-TBNA for mediastinal lymphadenopathy.**







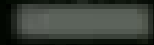
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R8



0



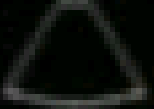
4.0

cm

2007May21 14:02



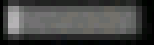
G12



R8



10



4.0

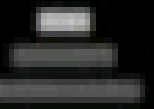
cm

2007Nov07 11:59

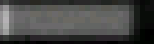
GI2



R8



10



4.0

cm

2007Nov20 11:57

Patients selection

- **Patients whose computer scan of the chest revealed mediastinal lymphadenopathy were considered to undergo endobronchial ultrasound – guided transbronchial needle aspiration (EBUS-TBNA). Patients with bleeding tendency, active pulmonary tuberculosis, or on respiratory support with positive end expiratory pressure were excluded. Informed consent was obtained in all patients.**



Results

- **Three patients were excluded, one had active tuberculosis, the other two had bleeding tendency. Fifty patients underwent EBUS-TBNA. The average of the short axis diameter of the mediastinal lymph nodes was 1.2 cm. (range 0.5 cm – 5 cm).**



- **There were 22 female and 28 males. Their ages ranged from 25 to 70 years old. Thirty were Thai, one was Cambodian, Sixteen were Japanese, one was Kenya,one was Dubai and the other one was Canadian.**



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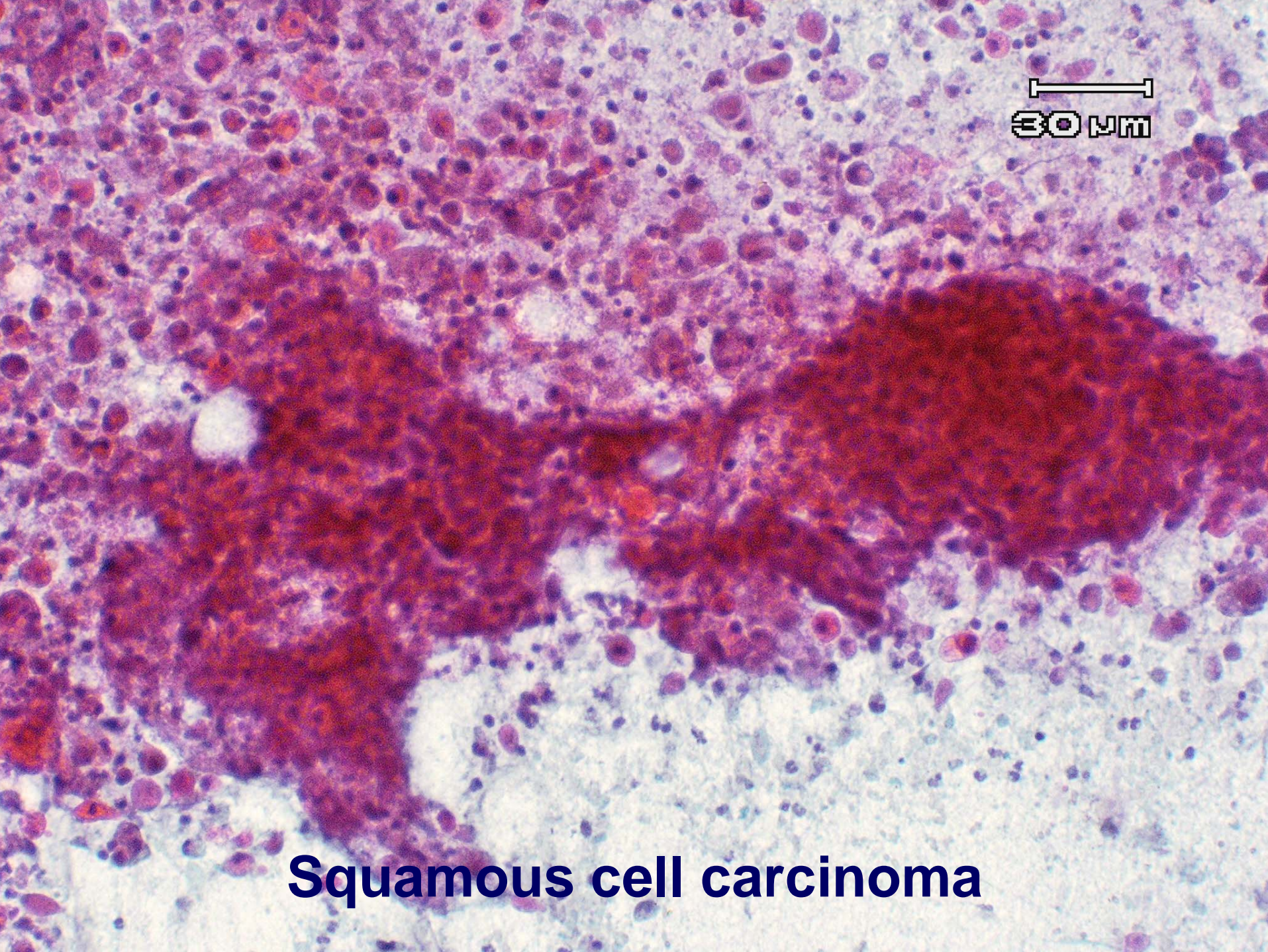
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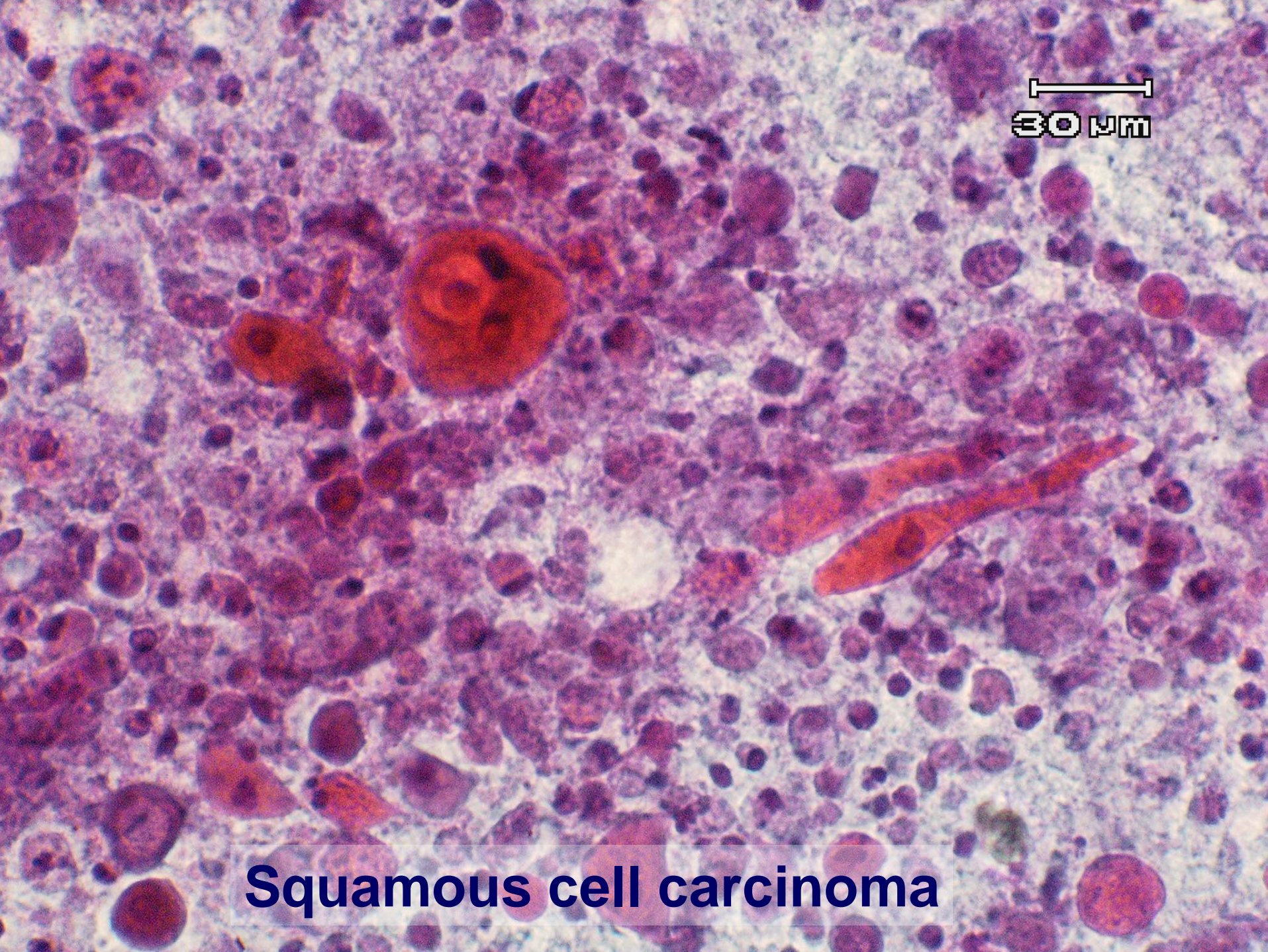
- **EBUS-TBNA successfully sampled lymph node tissue from 48 out of 50 patients (96%).**





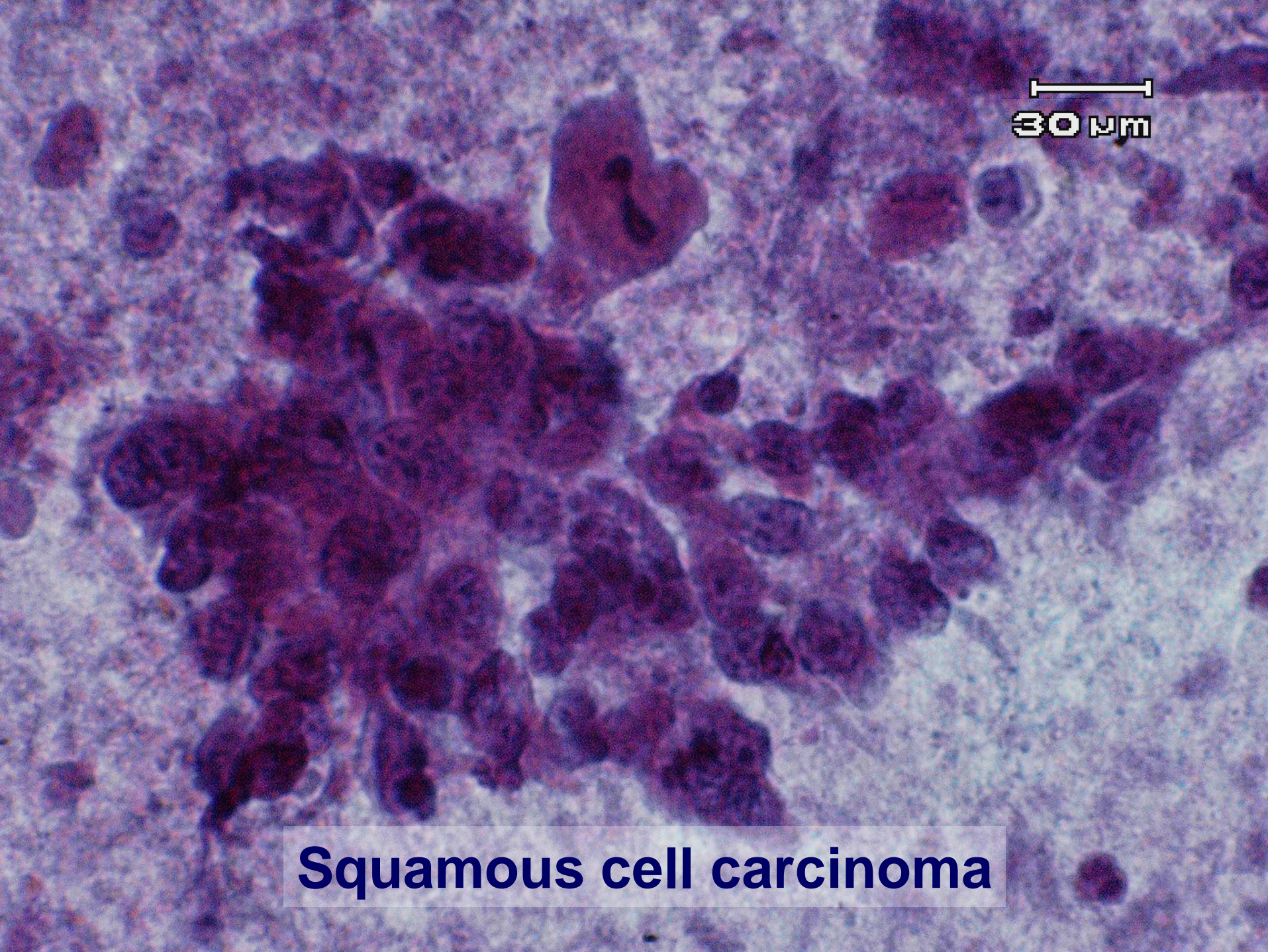
30 μm

Squamous cell carcinoma



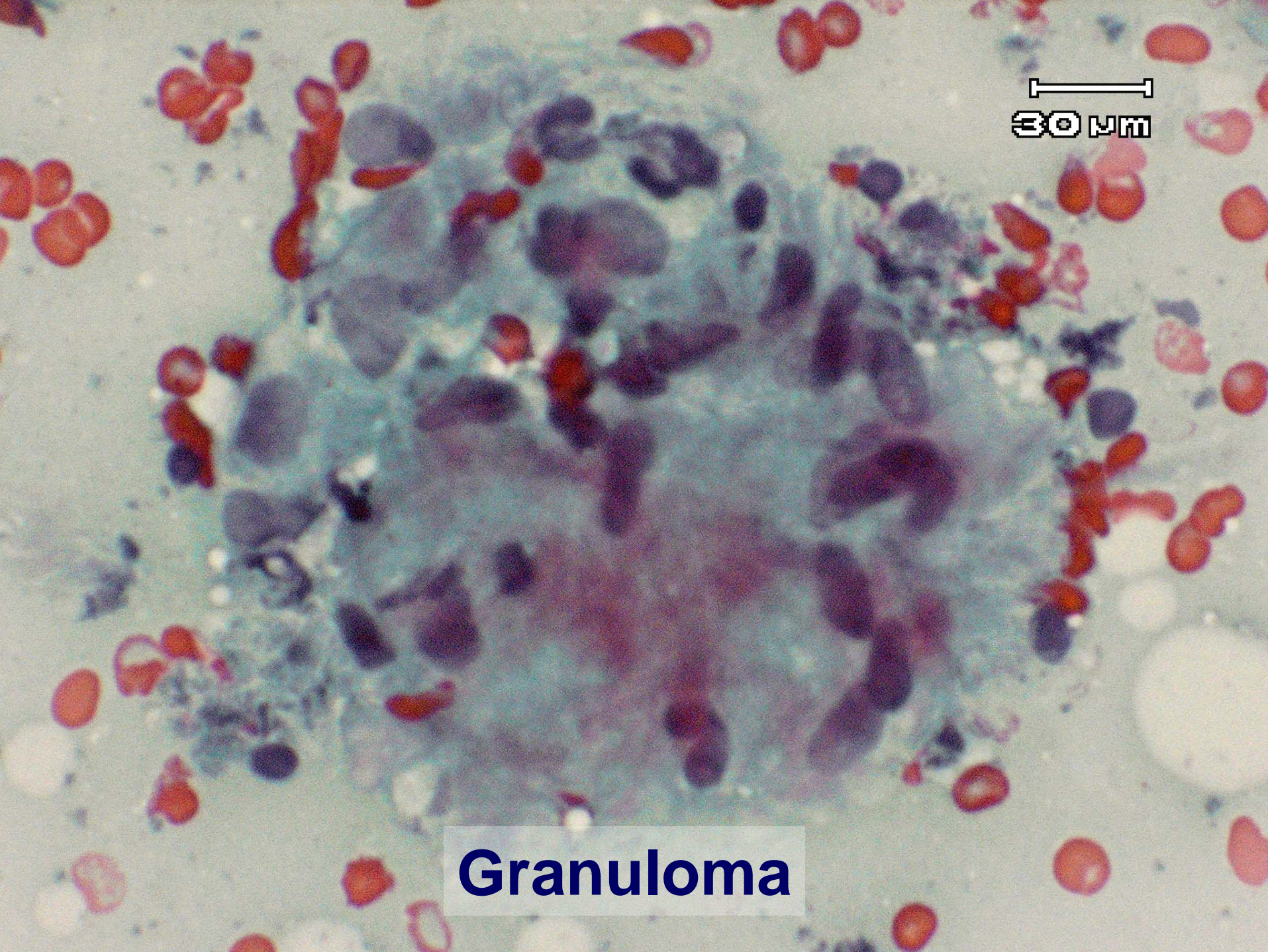
30 μm

Squamous cell carcinoma



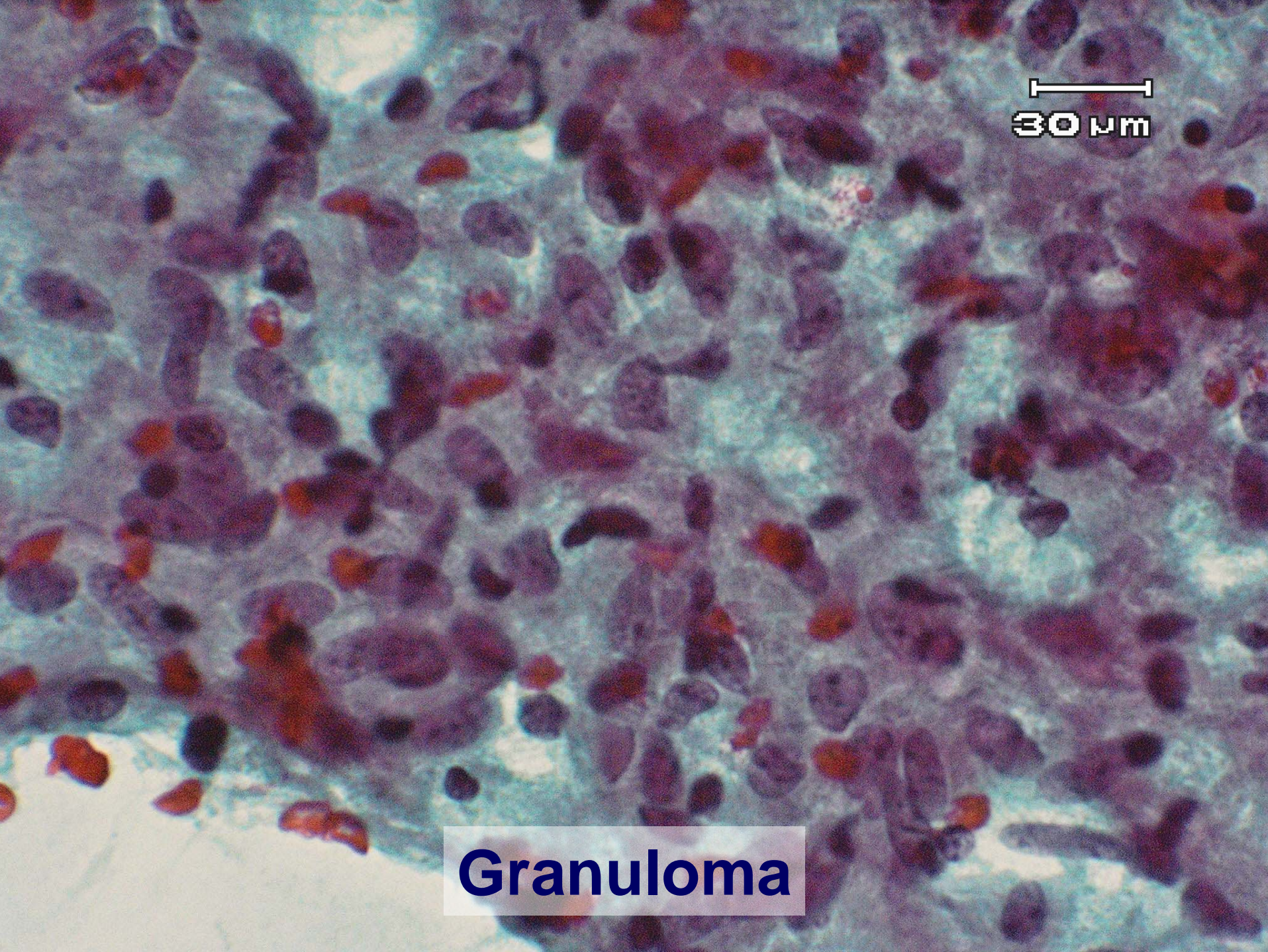
30 μ m

Squamous cell carcinoma



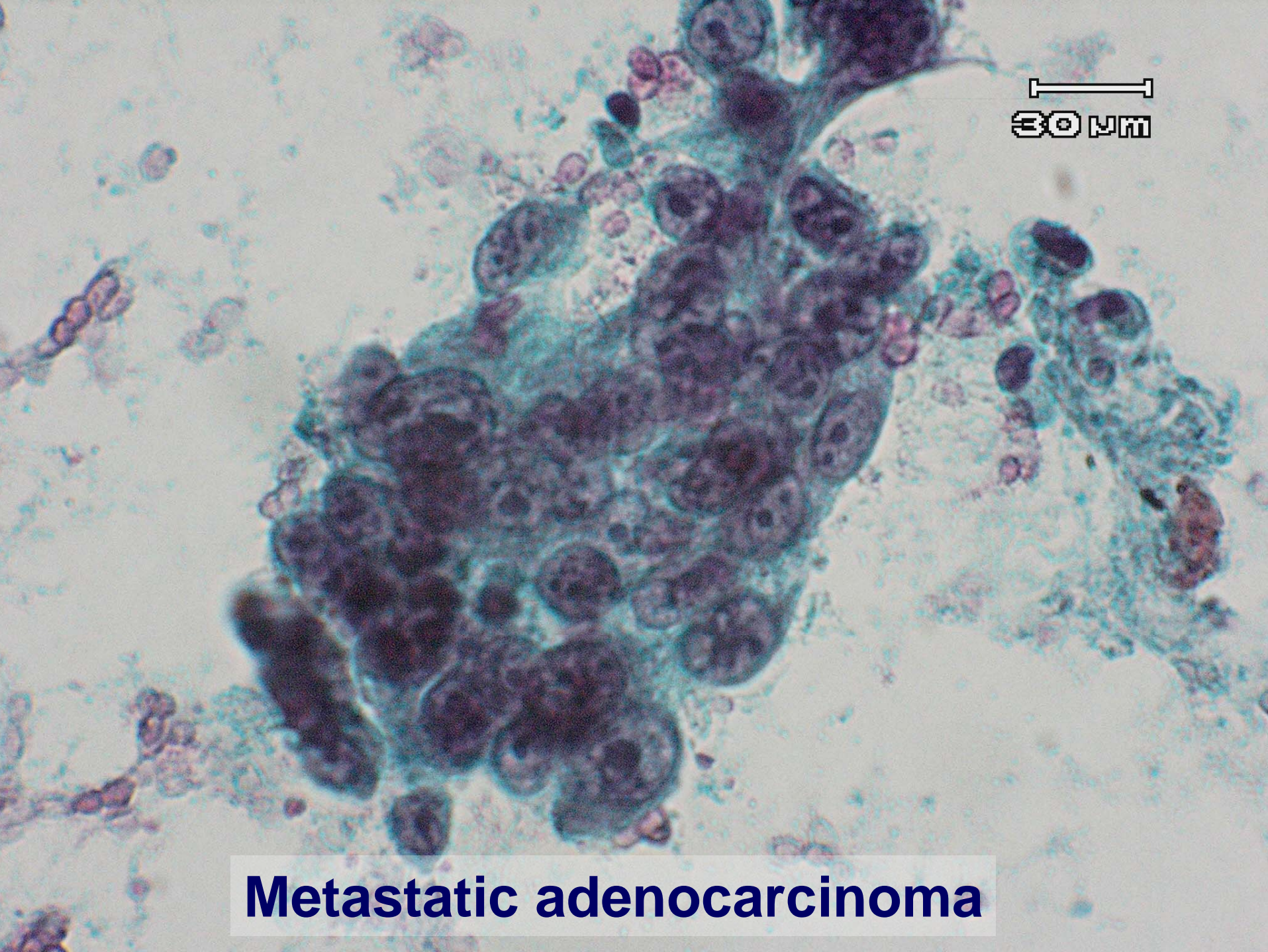
30 μm

Granuloma



30 μm

Granuloma



30 μm

Metastatic adenocarcinoma

- **There were twenty-one cases of tuberculosis. There were ten adenocarcinoma, two squamous cell carcinoma, two metastatic carcinoma and one was malignant lymphoma.**
- **Normal lymphoid tissues were obtained from ten patients.**
- **Two patients were diagnosed as sarcoidosis.**



- **EBUS-TBNA was very helpful in a patient who developed carcinoma in situ at the carina with a 2-cm short axis diameter subcarinal node. The subcarina lymph node was disclosed to be tuberculosis via EBUS-TBNA. Electrocautery technique was employed to destroy the carcinoma in situ completely. The patient's diagnosis of inoperable lung cancer due to carinal involvement and likely to be stage 4 turned out to be a curable lung cancer and tuberculosis of mediastinal lymph node. Without this definite diagnosis, she may have undergone a chemotherapy program treatment and may have suffered from spreading of tuberculosis. Three months later, following the antituberculous drugs, the mediastinal node completely disappeared.**



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**Diagnosis and Management of Lung Cancer
Executive Summary: ACCP Evidence-Based
Clinical Practice Guidelines (2 nd Edition)**

W.Michael Alberts

Chest 2007;132;1-19

DOI 10.1378/chest.07-1860



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Initial Diagnosis of Lung Cancer

- In patients suspected of having SCLC based on radiographic and clinical finding, it is recommended that the diagnosis be confirmed by the easiest method (sputum cytology, thoracentesis, fine-needle aspirate, bronchoscopy including (TBNA) ,(EBUS - NA) , (EUS-NA).Grade of recommendation, 1C



- In patients suspected of having lung cancer who have lesions in multiple distant sites suspected of metastases but in whom biopsy of a metastatic site would be technically difficult, it is recommended that diagnosis of the primary lung lesion be obtained by the easiest method (sputum cytology, bronchoscopy with TBNA or EBUS-NA, EUS-NA, or TTNA). Grade of recommendation, 1C



Invasive Mediastinal Staging of Lung Cancer

- **For patients with discrete mediastinal lymph node enlargement (and no distant metastases),invasive confirmation of the radiographic stage is recommended (regardless of whether a PET finding is positive or negative in the mediastinal nodes). Grade of recommendation, 1B**



- For patients with discrete mediastinal lymph node enlargement (and no distant metastases), many invasive techniques for confirmation of the N2,3 node status are suggested as reasonable approaches (mediastinoscopy, EUS-NA, TBNA, EBUS-NA, TTNA), given the appropriate experience and skill. Grade of recommendation, 1B



- **For patients with a central tumor or N1 lymph node enlargement (and no distant metastases), invasive staging is recommended. In general, mediastinoscopy is suggested, but EUS-NA or EBUS-NA may be a reasonable alternative if nondiagnostic results are followed by mediastinoscopy. Grade of recommendation, 2C**



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Thanks

Prof. Takehiko Fujisawa, M.D.



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- **The technique offers correct tissue diagnosis and staging of lung cancer.**



- Prof. Noriaki Kurimoto



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Takahiro Nakajima M.D.
CHIBA, Tokyo.



E-BUS

Effectiveness in Samitivej Hospital 2007

94 % in detecting and staging of lung cancer, TB, Sarcoidosis.

MR=0%

European resp society, 2007 = 91 %

**2nd Asia-Pacific Congress of Bronchology
Singapore**
12th - 16th July 2007
www.apcb2007.com

Important Deadlines:
Abstract/Best Video Submission
15th April 2007
Early Bird Registration
11th May 2007

Singapore General Hospital Singapore Thoracic Society World Association for Bronchology



International Invited Presentation In 2007

4. Managing lung cancer. Asia Pacific Pulmonary Conference, 2 Dec 2007, Australia



Endobronchial Ultrasound-guided Transbronchial Needle Aspiration

- 2007 Sawang Saenghirunvattana , M.D.

N = 50

21 = TB

14 = CA LUNG

1 = Malignant Lymphoma

Sensitivity = 96 %

15 th WCB 2008 TOKYO , JAPAN



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International publication

1. Saenghirunvattana S., Buakham C, Masakul N, Saenghirunvattana R. Management of Endobronchial Cancer Using Bronchoscopic Electrocautery. Eur Resp J 2006;515s
2. Saenghirunvattana S., Bronchoscopic Electrocautery. 35th World Congress of the International College Surgeons 2006;48
3. Saenghirunvattana S., Buakham C, Masakul N, Saenghirunvattana R. Management of Endobronchial Cancer Using Bronchoscopic Electrocautery. J Med Assoc Thai 2006;89(4)459-61.



- Diagnosis and Management of Lung Cancer

Clinical Practice Guidelines (2nd Edition)

Chest 2007;132;1-19



- For patients with discrete mediastinal lymph node enlargement (and no distant metastases), many invasive techniques for confirmation of the N2,3 node status are suggested as reasonable approaches (mediastinoscopy, EUS-NA, TBNA, EBUS-NA, TTNA), given the appropriate experience and skill.

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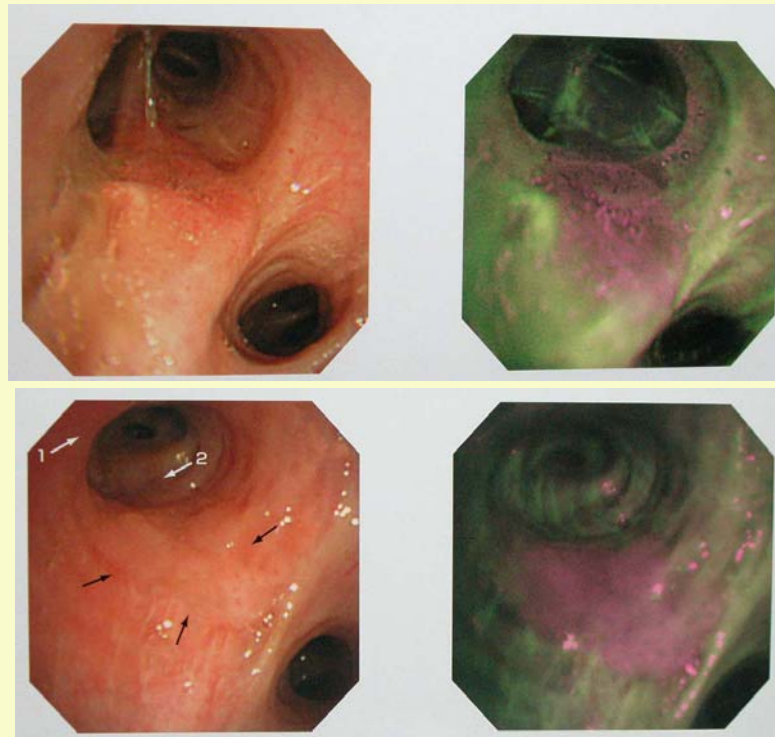


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Next future planning

- **Fiberoptic fluorescence in early detection of lung cancer**



International Invited Presentation In 2007

3. Virtual Bronchoscopy. European Respiratory Society 17 Sep 2007.Sweden



EUROPEAN RESPIRATORY SOCIETY
ANNUAL CONGRESS 2007
SEPTEMBER 15-19
STOCKHOLM - SWEDEN

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General Organization

Dr. Sawang Saenghirunvattana
Medicine
Samitivej
133 Sukhumvit 49 Klongannua Vadhana Bangkok
Thailand

May, 2007

Abstract no. "127"

Dear Dr. Saenghirunvattana,

We are pleased to inform you that your abstract entitled:
"Virtual bronchoscopy aids in detection of endobronchial and extraluminal lesion"
has been accepted for the ERS Stockholm 2007 Congress.

Instructions regarding the type of presentation, time, day, and venue will follow. This information will also be available as part of the online programme at www.ersnet.org as of Mid-June.

EUROPEAN RESPIRATORY SOCIETY

SEPTEMBER 15-19



STOCKHOLM - SWEDEN

ANNUAL CONGRESS 2007

Silver Award

Advance Programme
with Registration Form



European Respiratory Society



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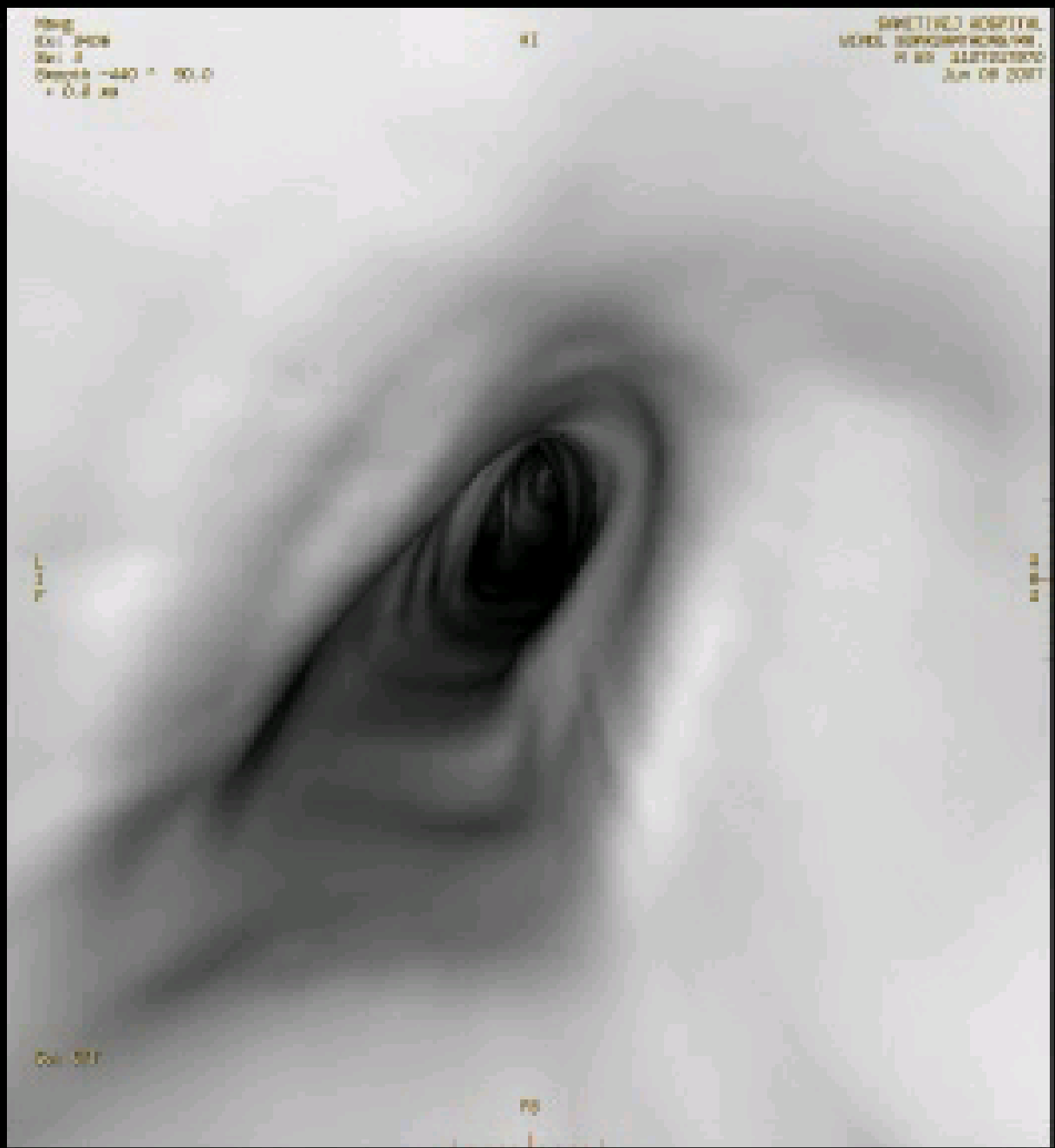
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Endoscopic Ultrasound Guided
Diagnosis and Staging in the Thorax

JCI
PULMONARY
CENTER





Quality Care, Speedy,
Safety, Quality Improvement



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