Case presentation

Dr REESAUL R

Case 1

- Mr S. 25 years old

  Ref on 06/ April /2006 to Chest Clinic from a private GP of Port Louis for :

- Cough + haemoptysis and dyspnoea

Case 1(6/April/2006)

- Mr S Single 25 years old young man
- Work helper in `Pizza Hut ‘ since 5 years
- Smokes 5 cigarettes daily since 10 years
- IVDA since 3 years
- Occasional Alcohol
- Elder Brother had TB 6 years back

Case 1

- Since early childhood several visits AHC and private doctors for cough :

  ATB , cough mixture and discharge :

  Diagnosis of acute bronchitis/asthma

- Since last 4 months(December 2005) complaining cough and night fever

- Several attendance (4) AHC and twice casualty VH , each visits :

  ATB , Prednisone ,Cough mixture , Paracetamol

  No investigations done discharge with :

  Diagnosis of acute bronchitis

- Refer on 6/4/06 by private GP to chest clinic

Case 1

- Examination : 1m74 ,52 kg complaining of weight loss 10kg/4 months
- Temperature 38.5
- Productive cough, dyspnoea with orthopnea, mild haemoptysis and Left chest pain
- Crackles 2 lungs and reduced air entry left base

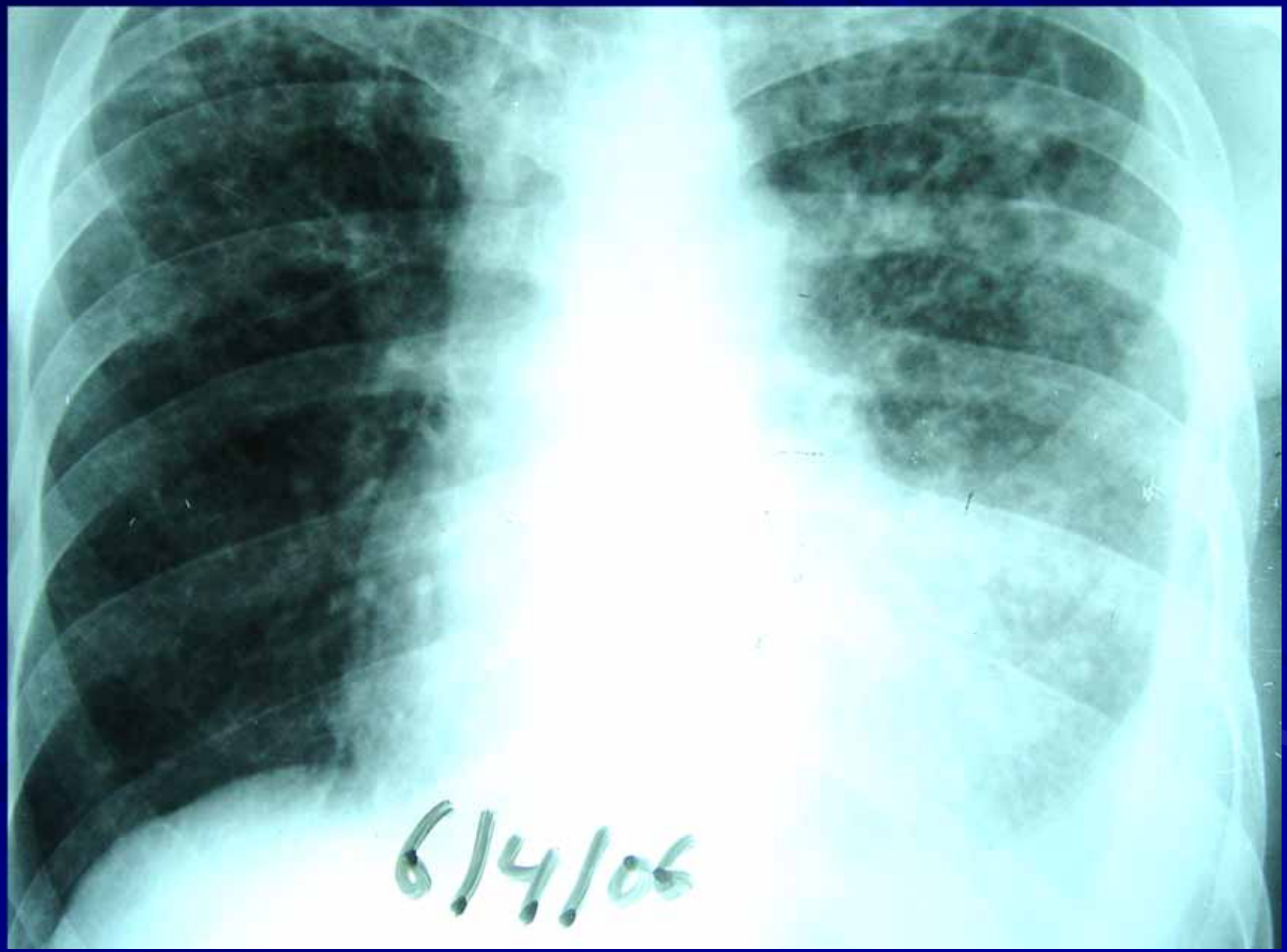
Case 1

- CXR (7/4/06): R + L opacities + infiltrates
  Left pleural effusion
- Spo2 : 87 % at rest

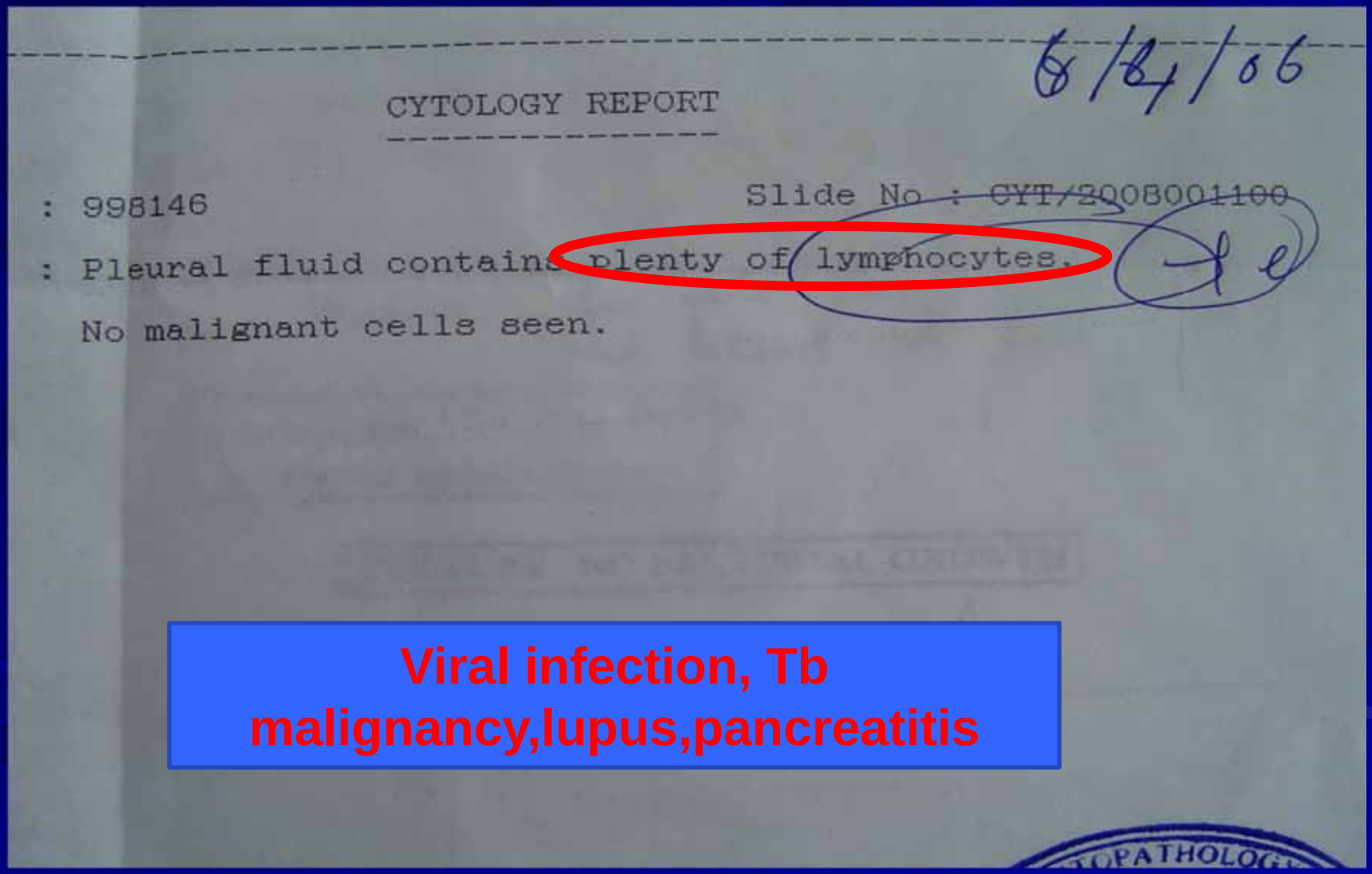
- ABG at rest :
  Po2: 59 mmHg, Pco2 : 32mmHg, Ph 7.45

- Tapping Left effusion : 100 ml blood stain fluid
  Biochemistry: protein: 3.5g/l ,
  glucose: 6.5mmol
  Cytology : lymphocytes +++
  No malignant cells
  AFB : direct negative

CXR on admission 6/4/06



Cytology report effusion



CYTOLOGY REPORT

8/4/06

: 998146 Slide No : CYT/2006001100

: Pleural fluid contains plenty of lymphocytes.

No malignant cells seen.

Viral infection, Tb malignancy,lupus,pancreatitis

Case 1

- Possible Diagnosis ?

  Young male IVDA with bilateral opacities and infiltrates U>L with Exsudative lymphocytic effusion and hypoxia-hypocapnia + Fever

  - Atypical pneumonia ?
  - viral pneumonia?
  - Pleuro-pneumonia in IVDA?
  - Pulmonary tuberculosis with pleural TB?
  - Cystic fibrosis with chest infection involvement?
  - Pneumocystose Jirovecy immuno-suppression?
  - Pulmonary oedema with endocarditis in IVDA?
  - Systemic disease with lung involvement?
  - Malignancy with lung involvement?
  - PE?

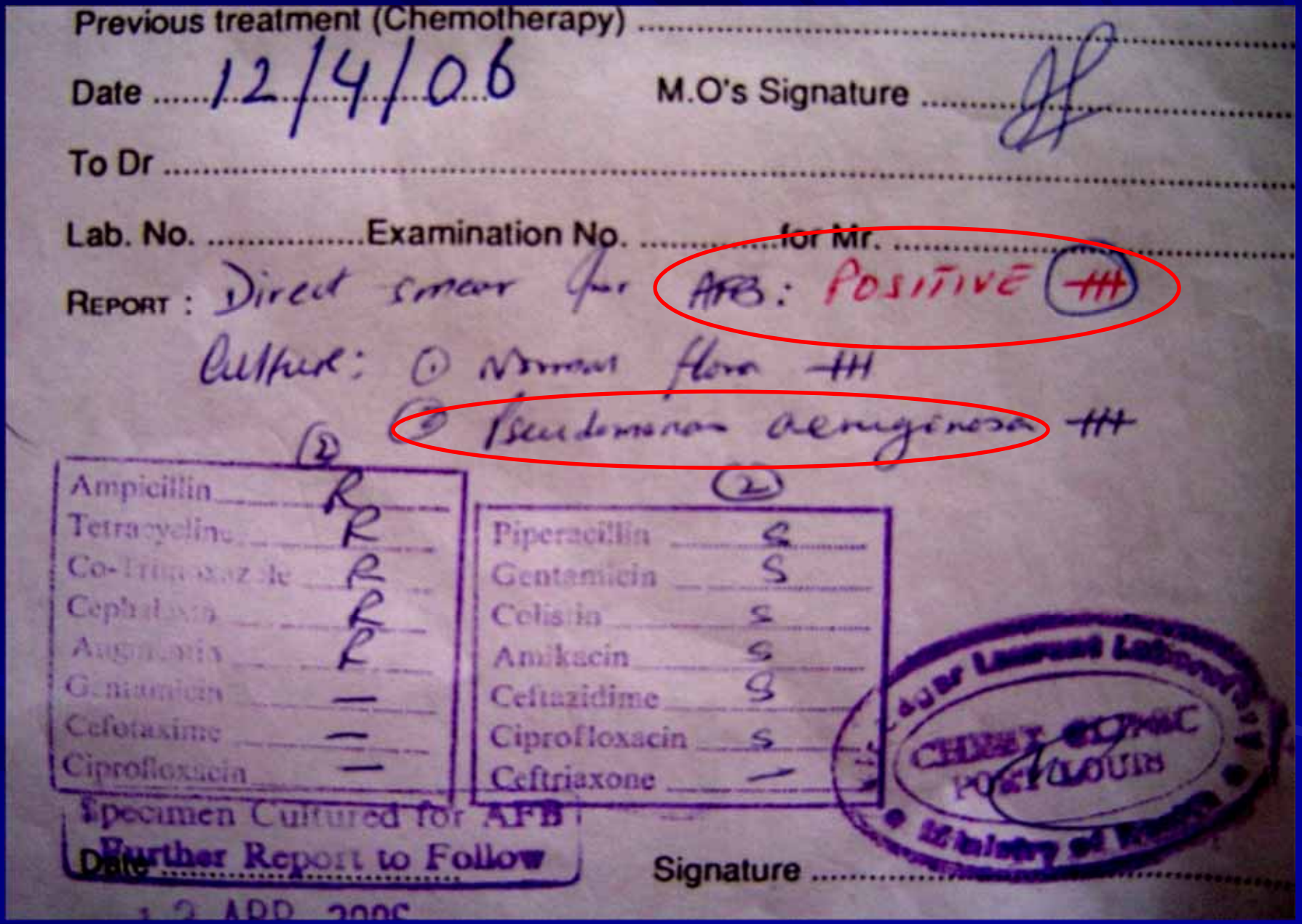
Case 1

- FBC: N with ESR 40 , SGOT/SGPT raise
- Mantoux test : 4mm
- Blood culture : negative
- Serology HIV : negative

- Sputum : pseudomonas aeruginosa +++
- Sputum AFB direct : +++

- Sweat test normal at VH central lab
- Serology chlamydia and mycoplasma negative
- ANF negative
- ECG normal , Cardiac Echo doppler normal
- D-dimer negative

Sputum result 12/4/06



Previous treatment (Chemotherapy) .....

Date 12/4/06 M.O's Signature .....

To Dr .....

Lab. No. .....Examination No. .....for Mr. .....

REPORT : Direct smear for AFB: POSITIVE (+++)

Culture: ① Normal flora +++

② Pseudomonas aeruginosa +++

②	
Ampicillin	R
Tetracycline	R
Co-Trimoxazole	R
Cephalexin	R
Augmentin	R
Gentamicin	—
Cefotaxime	—
Ciprofloxacin	—

②	
Piperacillin	S
Gentamicin	S
Colistin	S
Amikacin	S
Ceftazidime	S
Ciprofloxacin	S
Ceftriaxone	—

Specimen Cultured for AFB

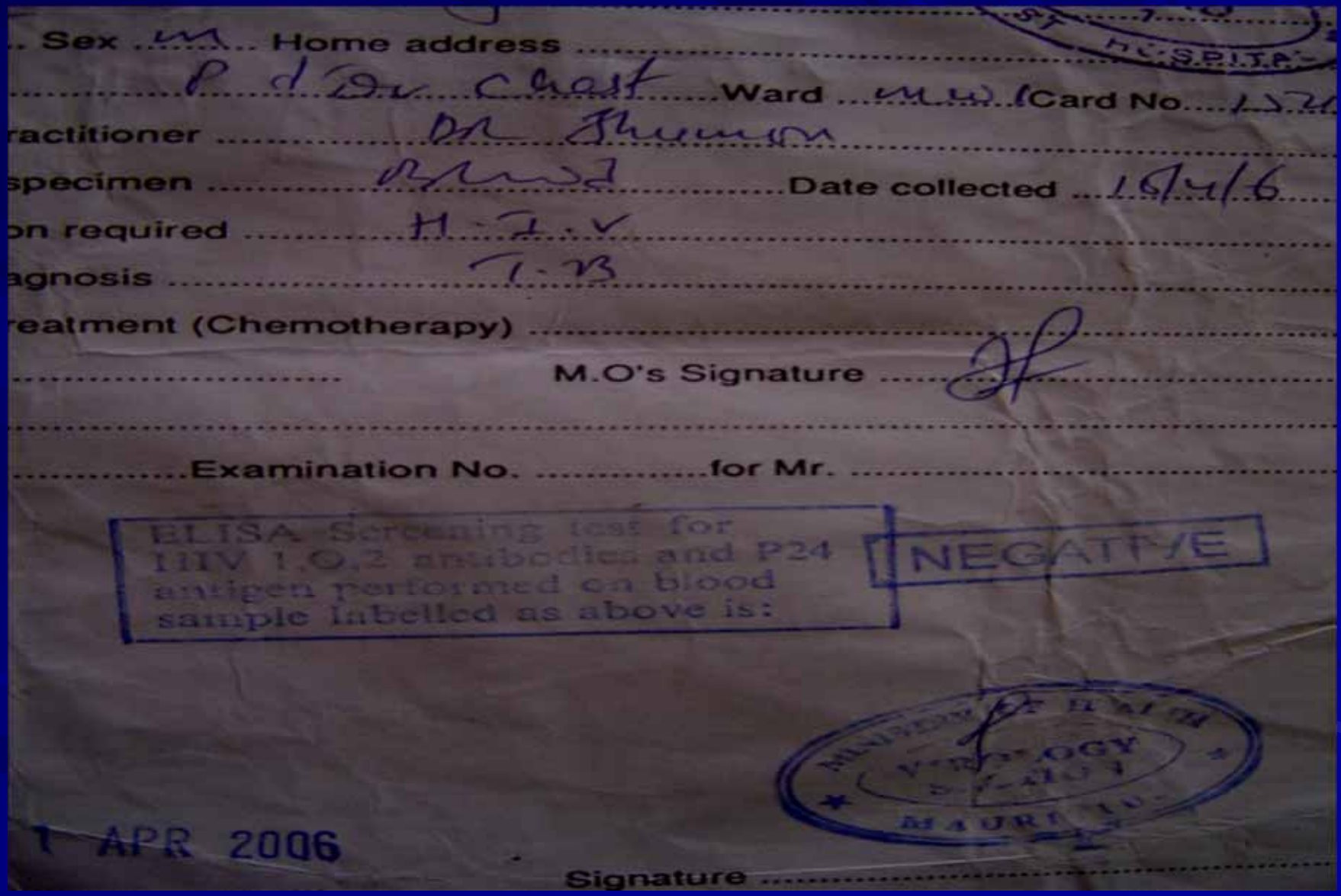
Further Report to Follow

Date .....

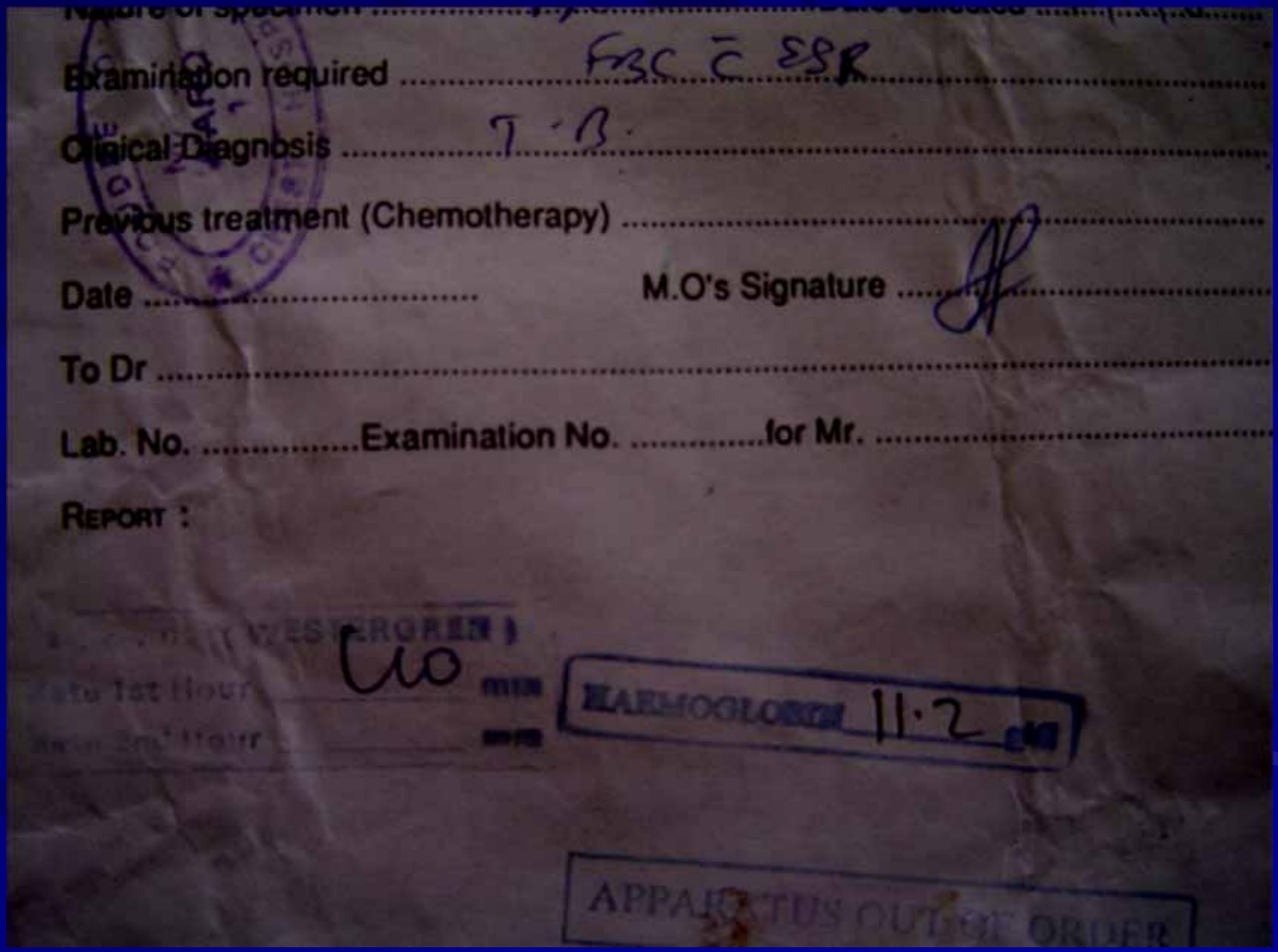
Signature .....

12 APR 2006

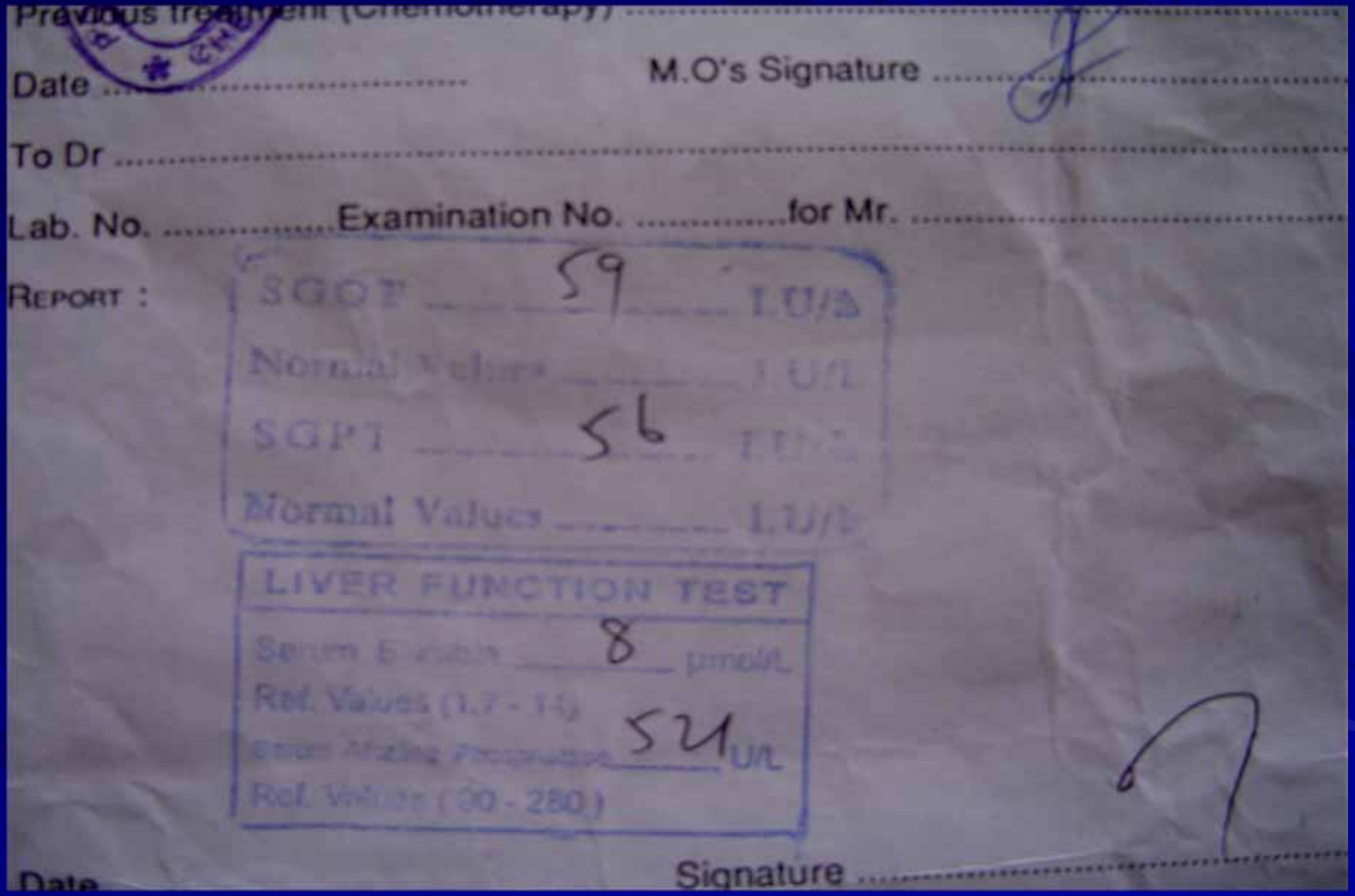
Blood test HIV



Blood test FBC ESR



Blood test LFT



Previous treatment (Chemotherapy) .....

Date ..... M.O's Signature .....

To Dr .....

Lab. No. ..... Examination No. ..... for Mr. .....

REPORT :

SGOT 59 I.U/L

Normal Values ..... I.U/L

SGPT 56 I.U/L

Normal Values ..... I.U/L

LIVER FUNCTION TEST

Serum Bilirubin 8 µmol/L

Ref. Values (1.7 - 14)

Serum Alkaline Phosphatase 521 U/L

Ref. Values (30 - 280)

Date Signature .....

case1

- Positive findings
  - ✓ AFB direct +++
  - ✓ Pseudomonas A +++
  - ✓ Exsudative lymphocytic effusion
- other findings
  - ✓ HIV negative
  - ✓ Blood culture negative
  - ✓ Serology mycoplasma chlamydia negative
  - ✓ Sweat test normal
  - ✓ ANF negative
  - ✓ Cytology effusion no malignancy
  - ✓ Echo Doppler cardiac normal
  - ✓ D-dimer negative

Case 1

- Diagnosis :

Pulmonary TB and with pseudomonas colonisation

- Initiated on anti TB drugs : IRP and Ethambutol
- IV Ceftazidime 1g tds + IV Amikacin 750mg od
- O2 : 3-4 l/m
- IV fluids

Case 1

- Clinical improvement on antibiotics and anti TB drugs
- Day 6th sputum pathogen negative for pseudomonas A and sputum AFB direct still ++
- Final Diagnosis pulmonary TB
- IV Antibiotics stop 15 days
- continuation of Anti TB drugs

Case 1

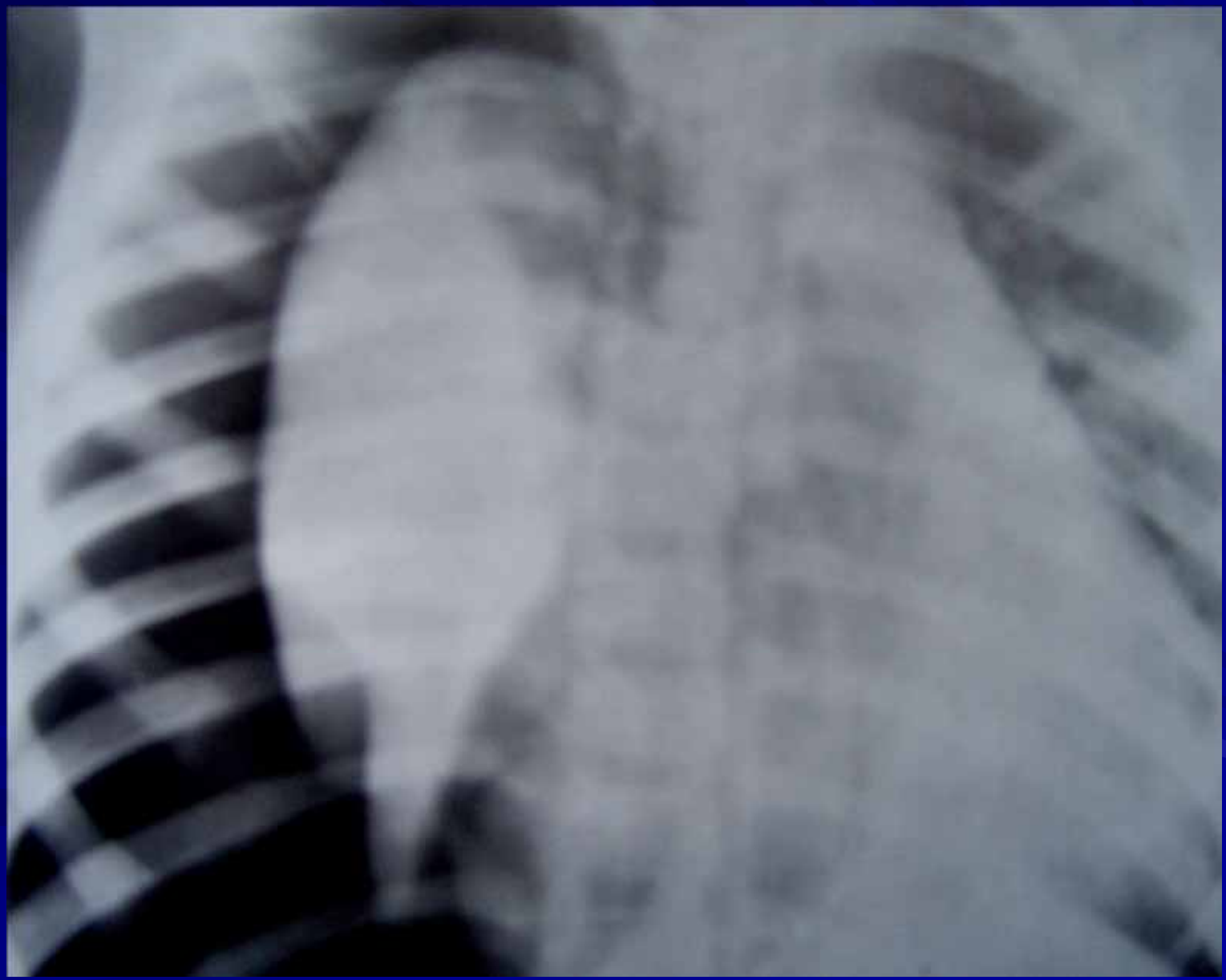
- Day 10th severe skin rash
- ATT stop and initiated on anti-H1 and prednisone 40mg
- Reintroduction Pyrazinamide then Ethambutol then Rifampicin then Isoniazid
- On 150mg Isoniazid pruritis and rash
- Desensitization to Isoniazid (25/50/75/100/125....300mg) good response

Case 1

- Day 30th : sudden onset dyspnoea and Right chest pain in ward

- Temp 36
- BP 130/60 pulse 130
- Spo2 : 87%
- No Air entry right lung
- Possible diagnosis ?

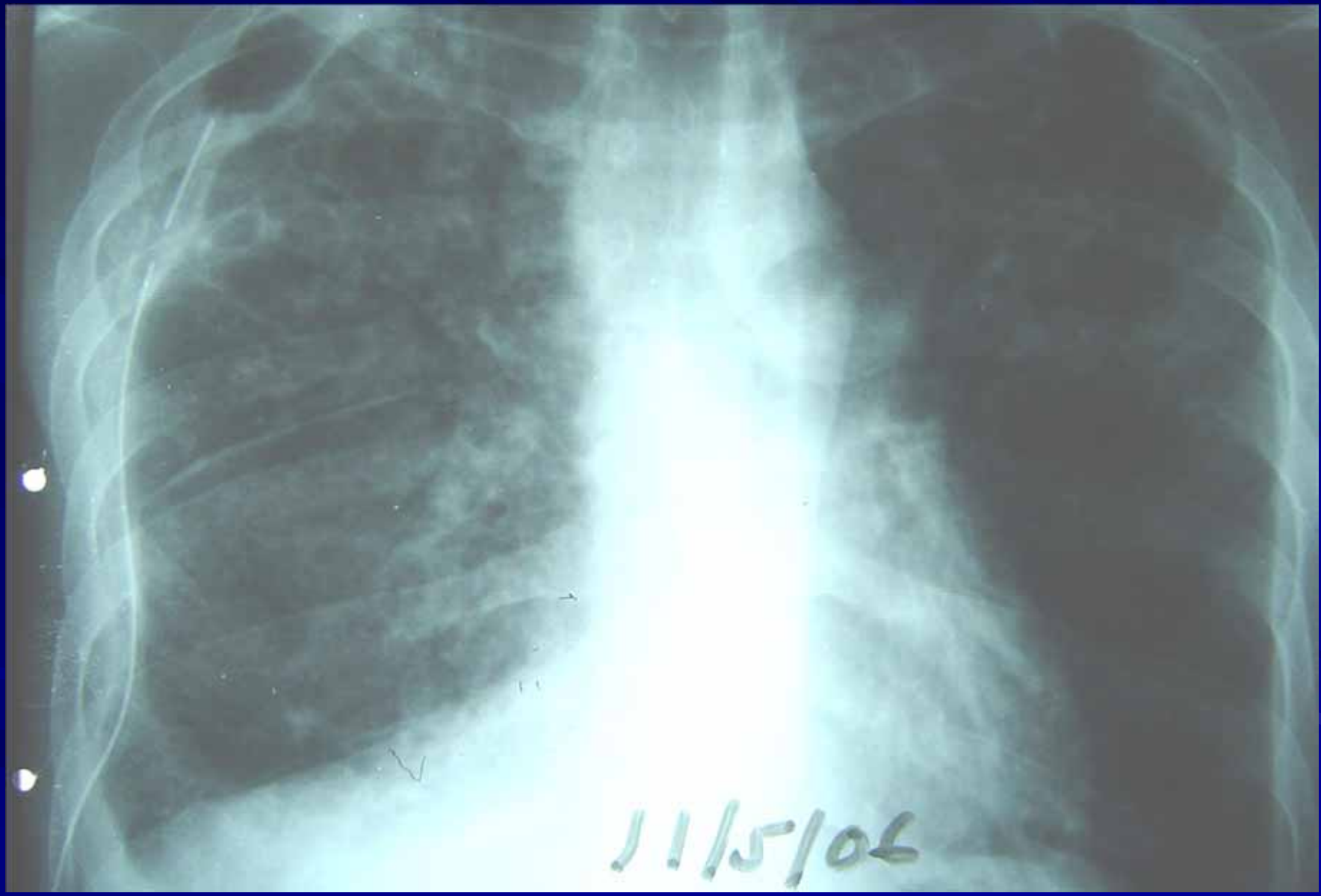
CXR Sudden dyspnea



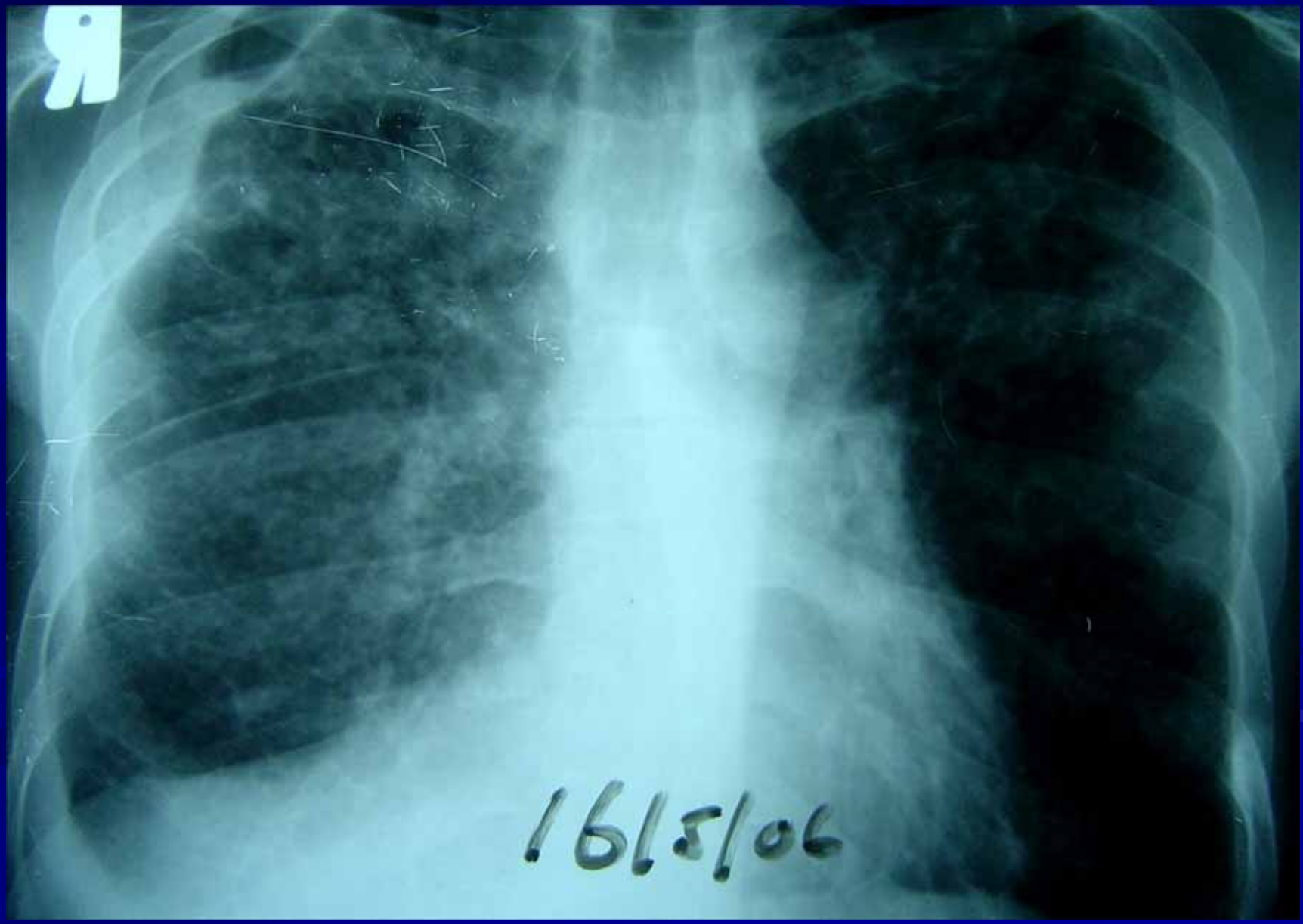
Case 1

- CXR : complete Right Pneumothorax
- Chest drain inserted R side at SSRN
- 5th day complete re-expansion R lung and drain removed transfer back to Poudre d`or hospital

CXR insertion R chest drain



CXR chest drain remove day 5

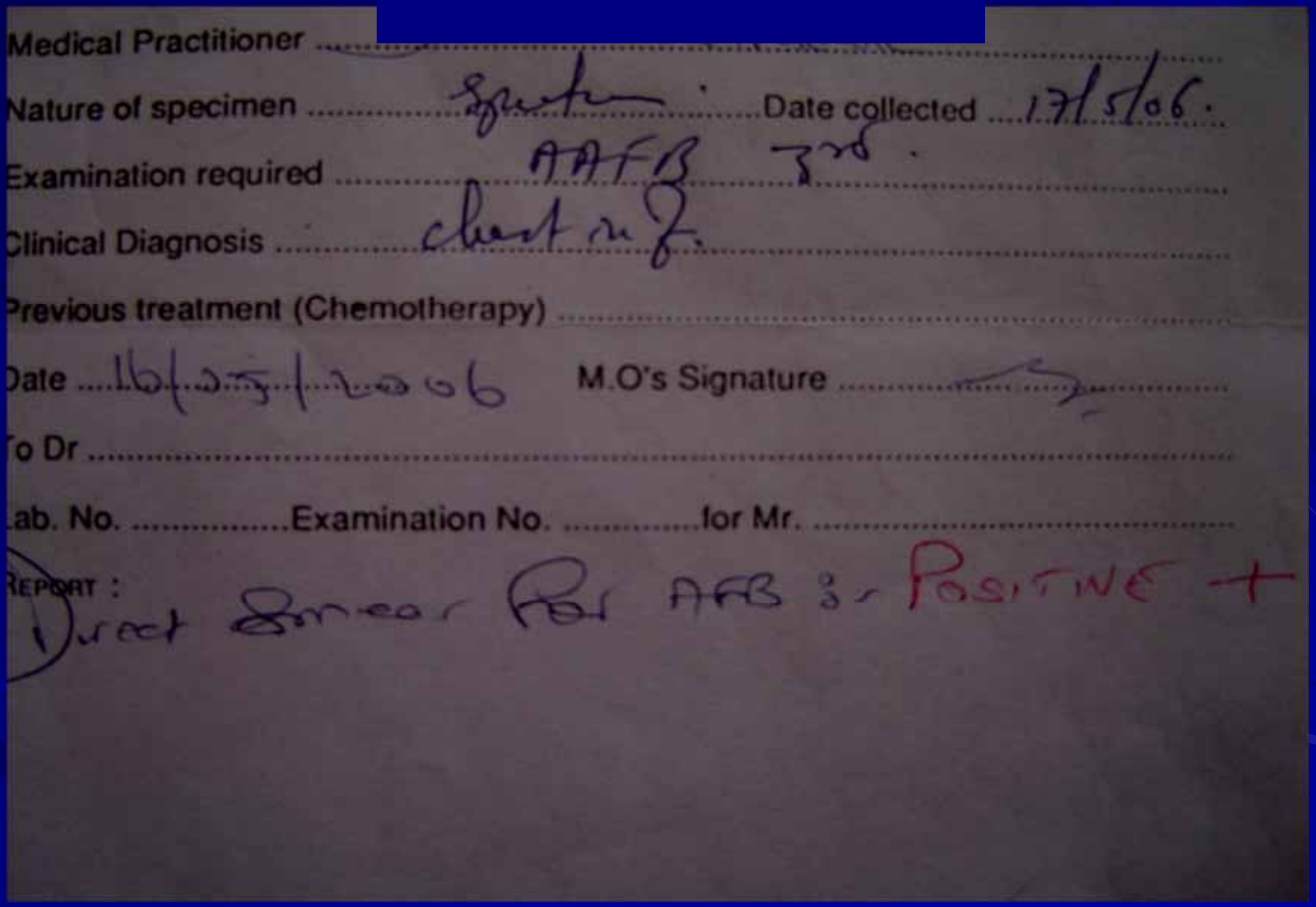


Case 1

- Sputum month 1 AFB +
- Sputum month 2 AFB +
- Sputum month 3 AFB negative
- CXR : improving

- Discharge on IR and B6 follow up OPD chest Clinic
- Culture sputum M tuberculosis sensitive to 1st line anti Tb drugs

Sputum result month 1



Medical Practitioner .....

Nature of specimen ..... Sputum ..... Date collected ....17/5/06.

Examination required ..... AAFB 3rd .....

Clinical Diagnosis ..... chest inf. .....

Previous treatment (Chemotherapy) .....

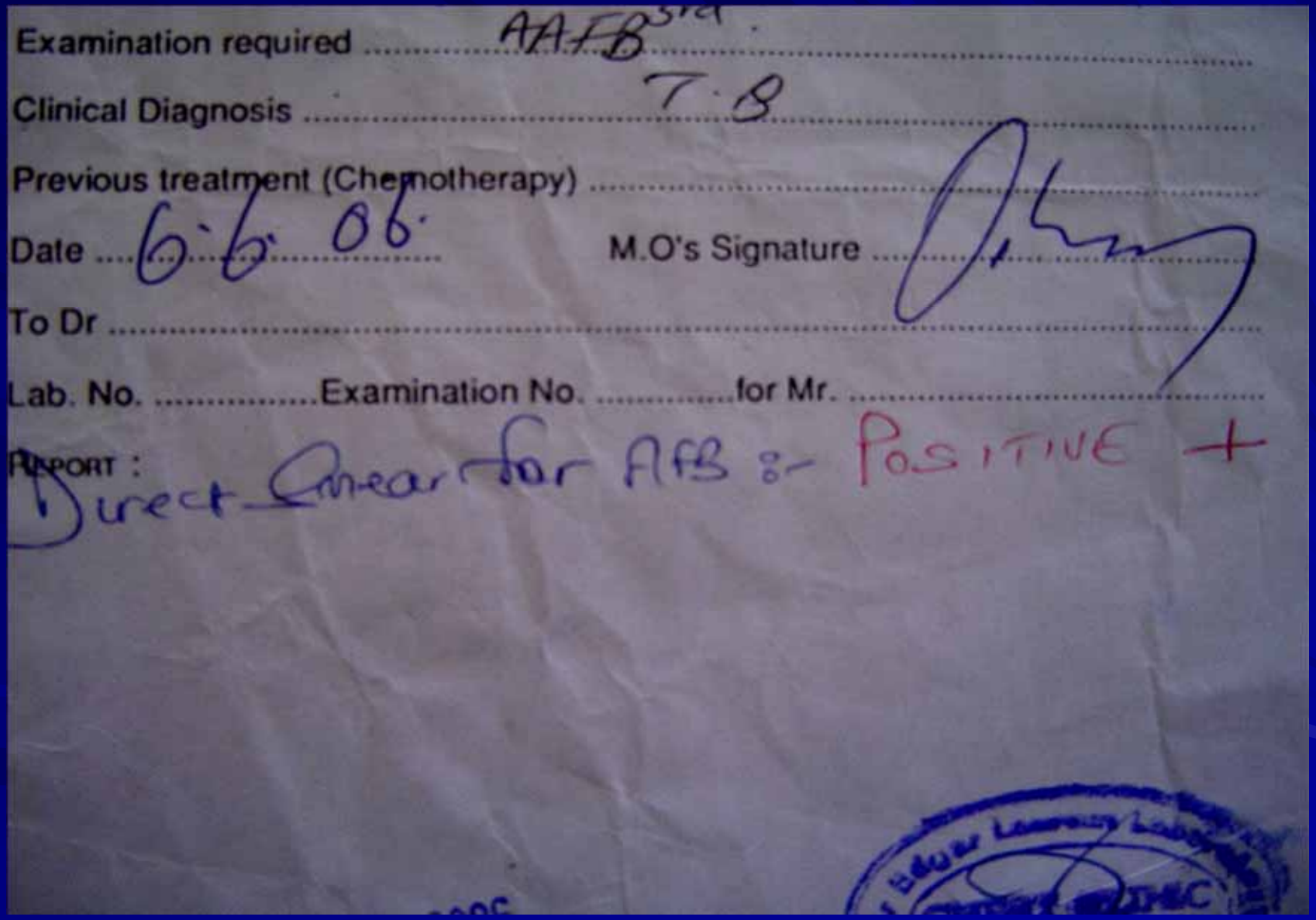
Date ....16/5/2006 M.O's Signature .....

To Dr .....

Lab. No. .....Examination No. .....for Mr. .....

REPORT : 1) Direct Smear for AFB :- POSITIVE +

Sputum result month 2



Examination required ..... AAFB 3rd .....

Clinical Diagnosis ..... T.B .....

Previous treatment (Chemotherapy) .....

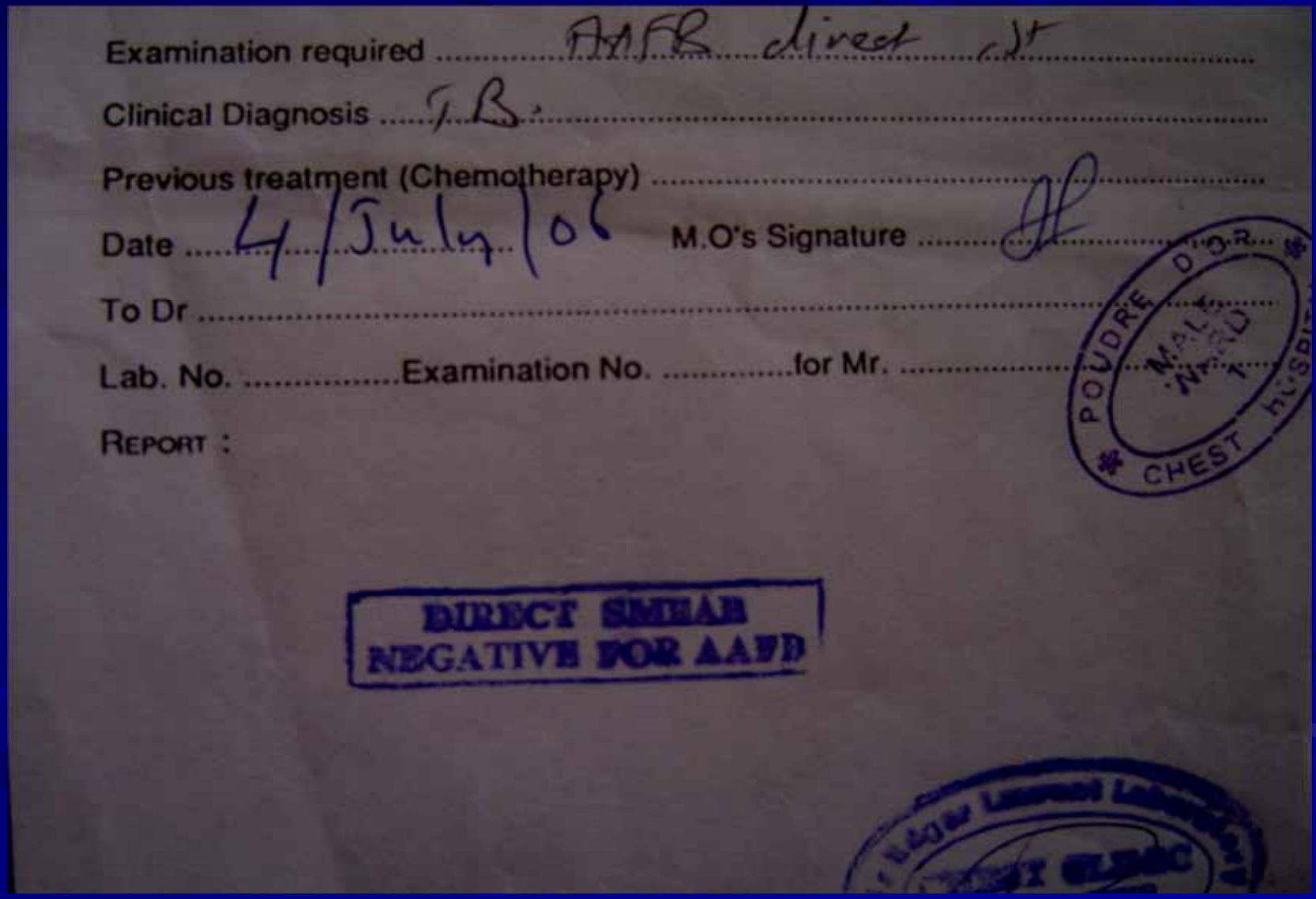
Date ..... 6.6.06 ..... M.O's Signature .....

To Dr .....

Lab. No. .....Examination No. .....for Mr. .....

REPORT : Direct Smear for AFB :- POSITIVE +

Sputum result month 3



Examination required ..... AAFB direct x1 .....

Clinical Diagnosis ..... T.B. .....

Previous treatment (Chemotherapy) .....

Date ..... 4/July/06 ..... M.O's Signature .....

To Dr .....

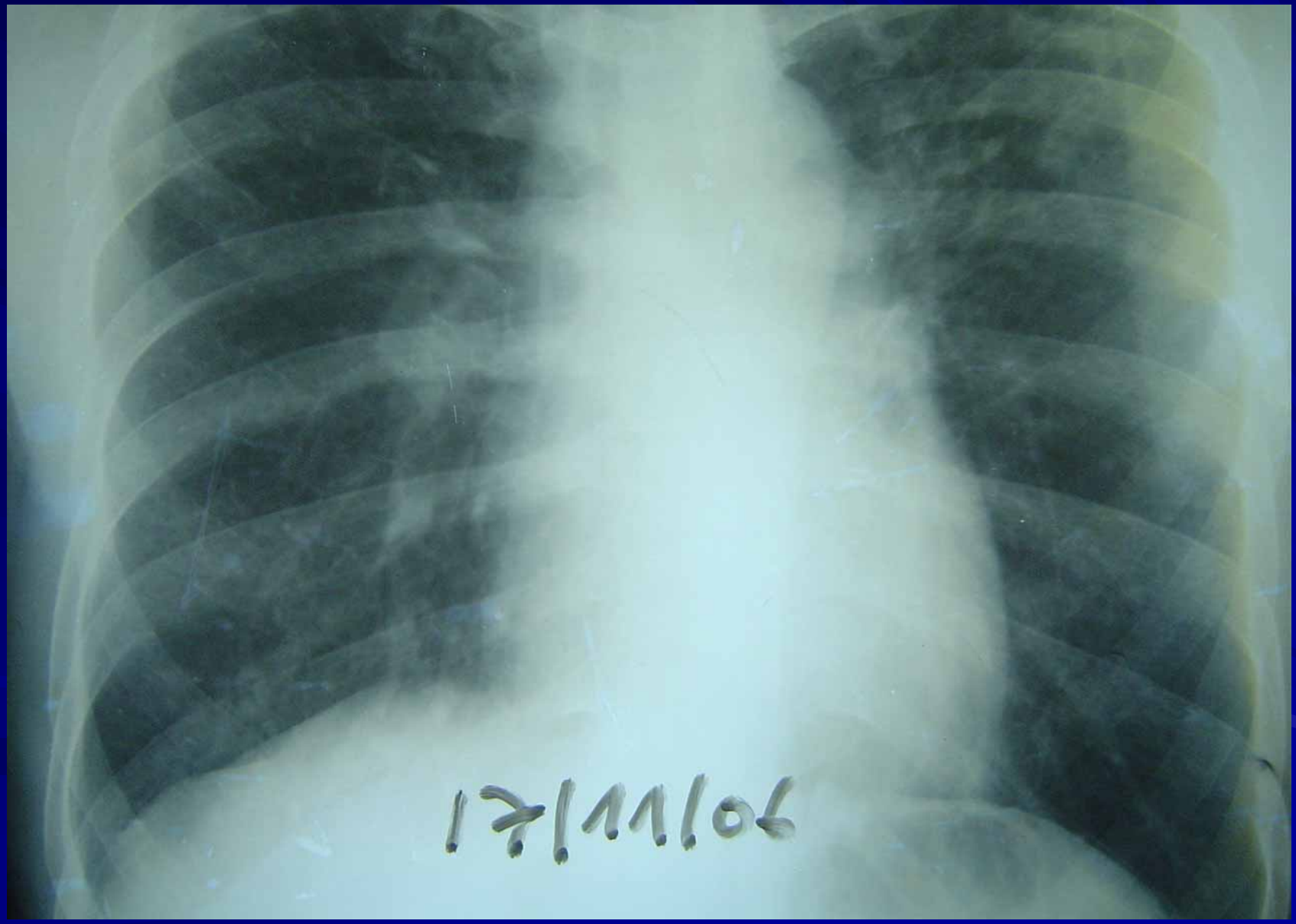
Lab. No. ..... Examination No. ..... for Mr. .....

REPORT :

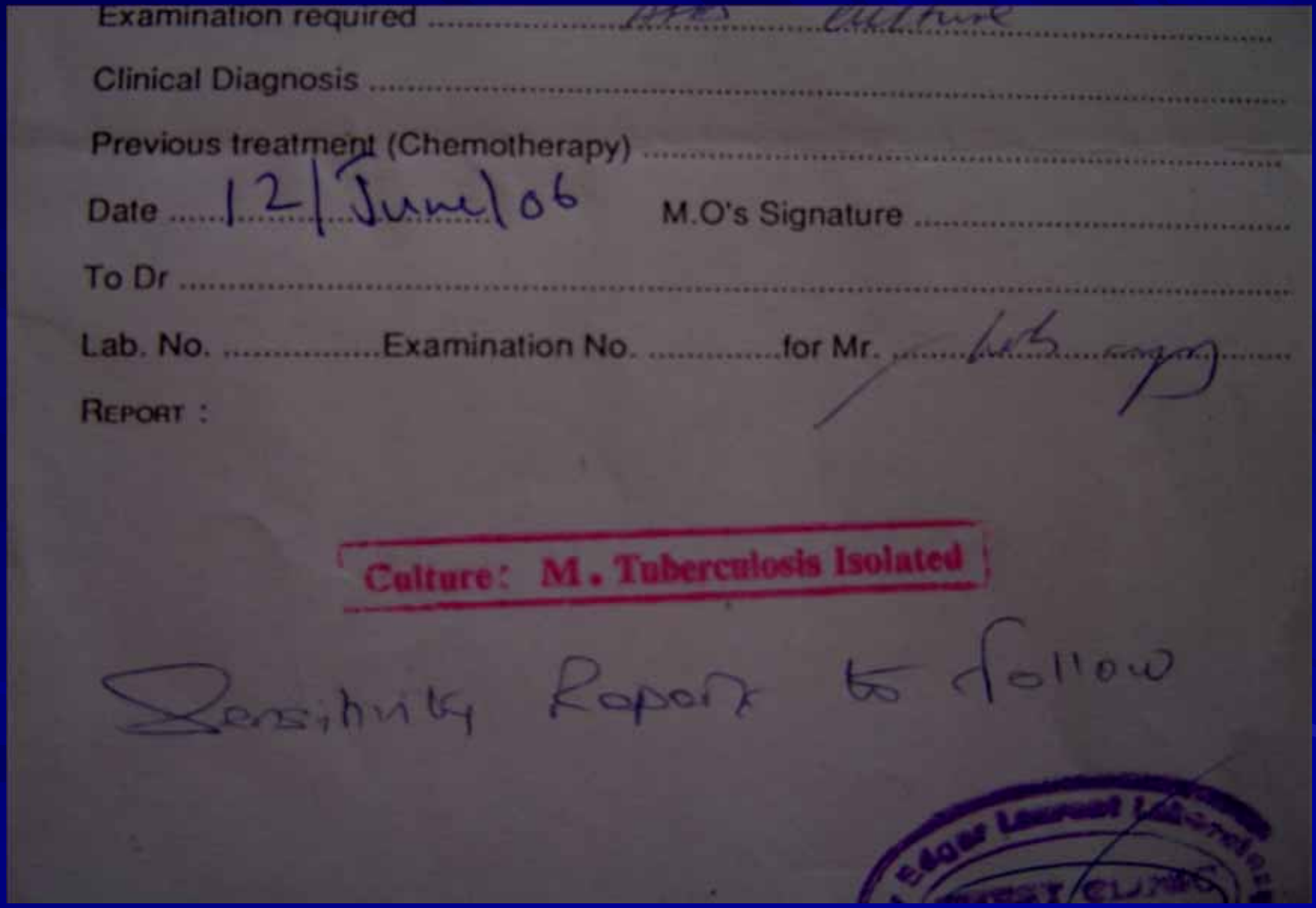
POUDRE D.O.R. * CHEST HOSPITAL

DIRECT SMEAR
NEGATIVE FOR AAFB

CXR after 6 month treatment



Culture sputum



Examination required ..... AFB ..... Culture .....

Clinical Diagnosis .....

Previous treatment (Chemotherapy) .....

Date ..... 12/June/06 ..... M.O's Signature .....

To Dr .....

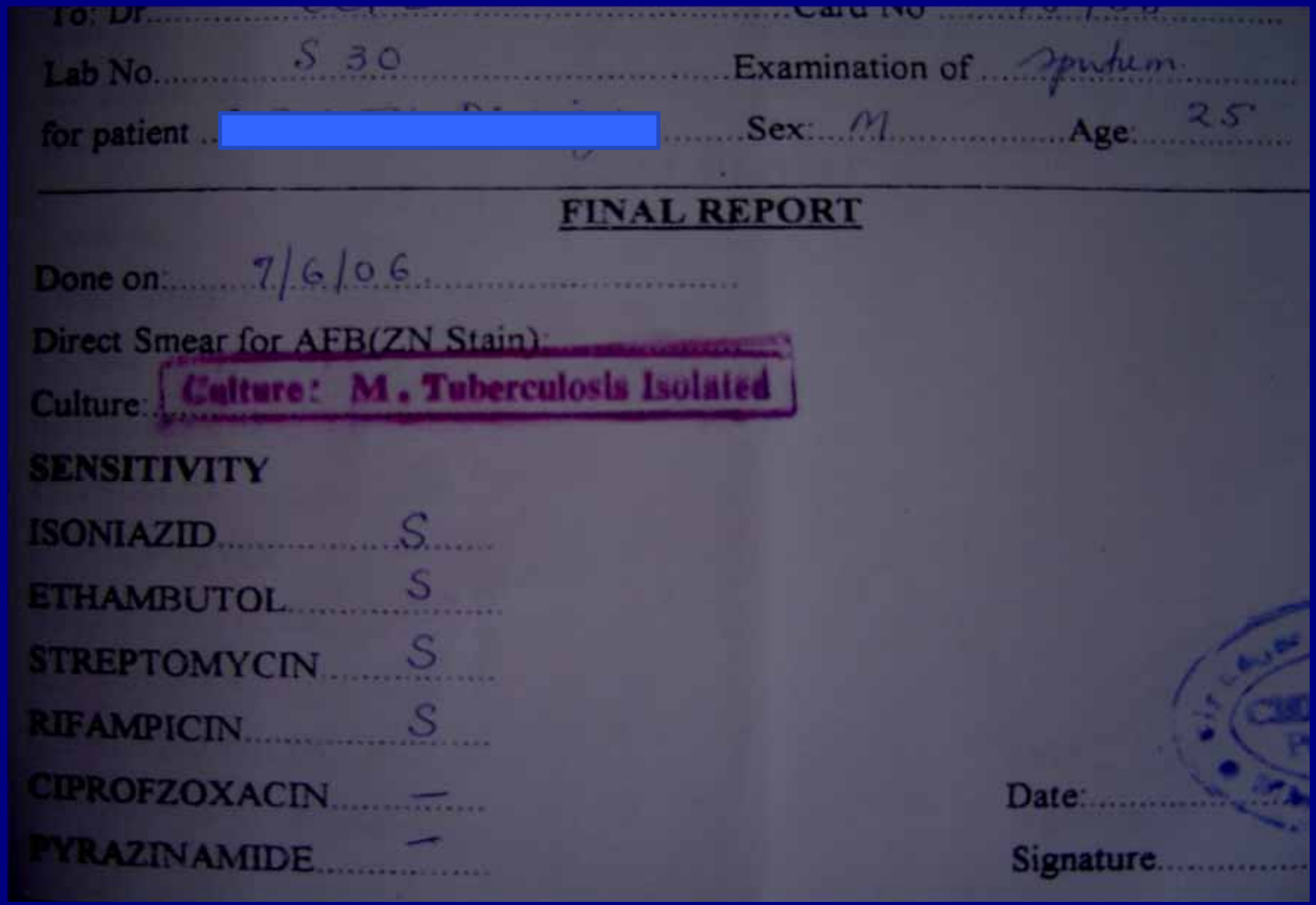
Lab. No. ..... Examination No. ..... for Mr. .....

REPORT :

Culture: M. Tuberculosis Isolated

Sensitivity Report to follow

Culture/Sensitivity results



To: Dr. ..... Card No .....

Lab No. S 30 Examination of Sputum

for patient [redacted] Sex: M Age: 25

FINAL REPORT

Done on: 7/6/06

Direct Smear for AFB(ZN Stain): .....

Culture: Culture: M. Tuberculosis Isolated

SENSITIVITY

ISONIAZID ..... S .....

ETHAMBUTOL ..... S .....

STREPTOMYCIN ..... S .....

RIFAMPICIN ..... S .....

CIPROFZOXACIN ..... – .....

PYRAZINAMIDE ..... – .....

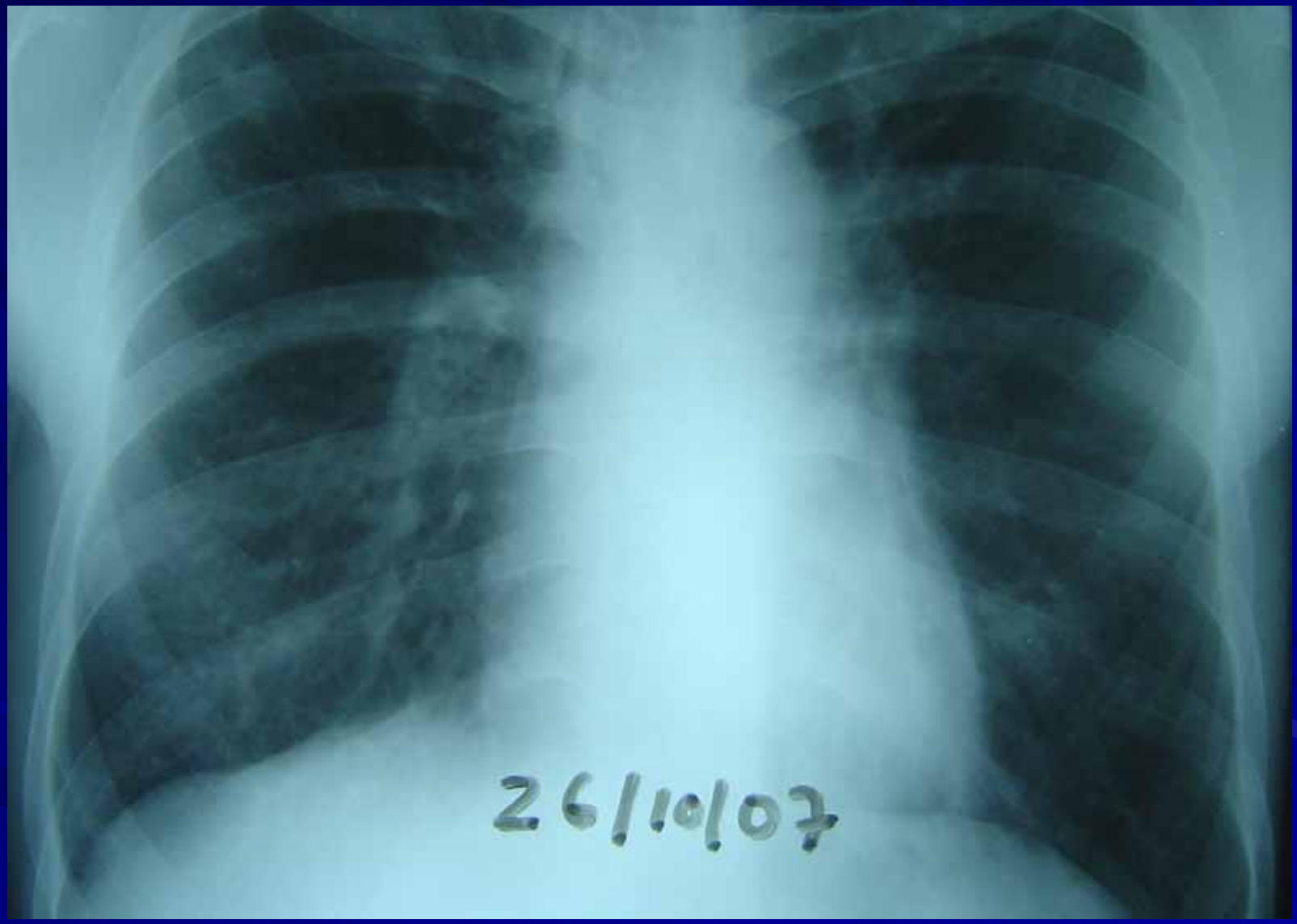
Date: .....

Signature .....

Case 1

- Regular follow up at chest clinic out patient
- Off all respiratory symptoms
- CXR improving
- Sputum AFB negative
- Completed 6 months regiment anti Tb
- Regular follow up at chest clinic

CRX after 1 year



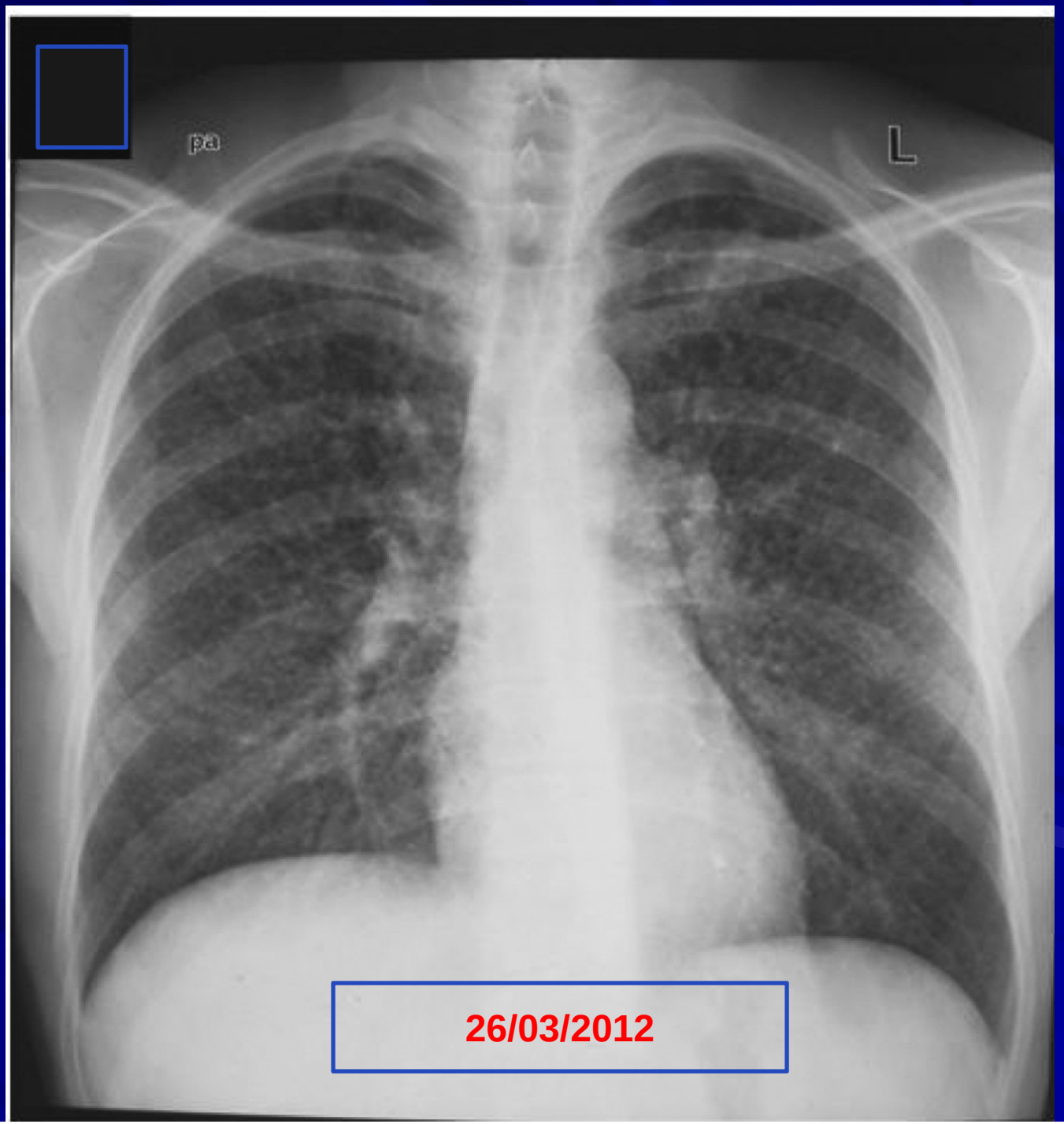
After 6 years 2012

- Mr. S admitted 26/03/2012 with :

- Fever 38-38.5
- Chronic Cough with dyspnea at rest and effort
- Headache without stiffness of neck
- SPO2 85% at rest
- ABG at rest (Po2 55,Pco2 34, ph 7.39)

Examination

- Fever 38 with Myalgia and night sweats
- 5kg weight loss since 4 weeks.
- Bilateral Lung crepitations
- Jaundice
- Moderate Hepato-splenomegaly
- Moderate Ascitis
- No peripheral lymph nodes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26/03/2012

Investigations

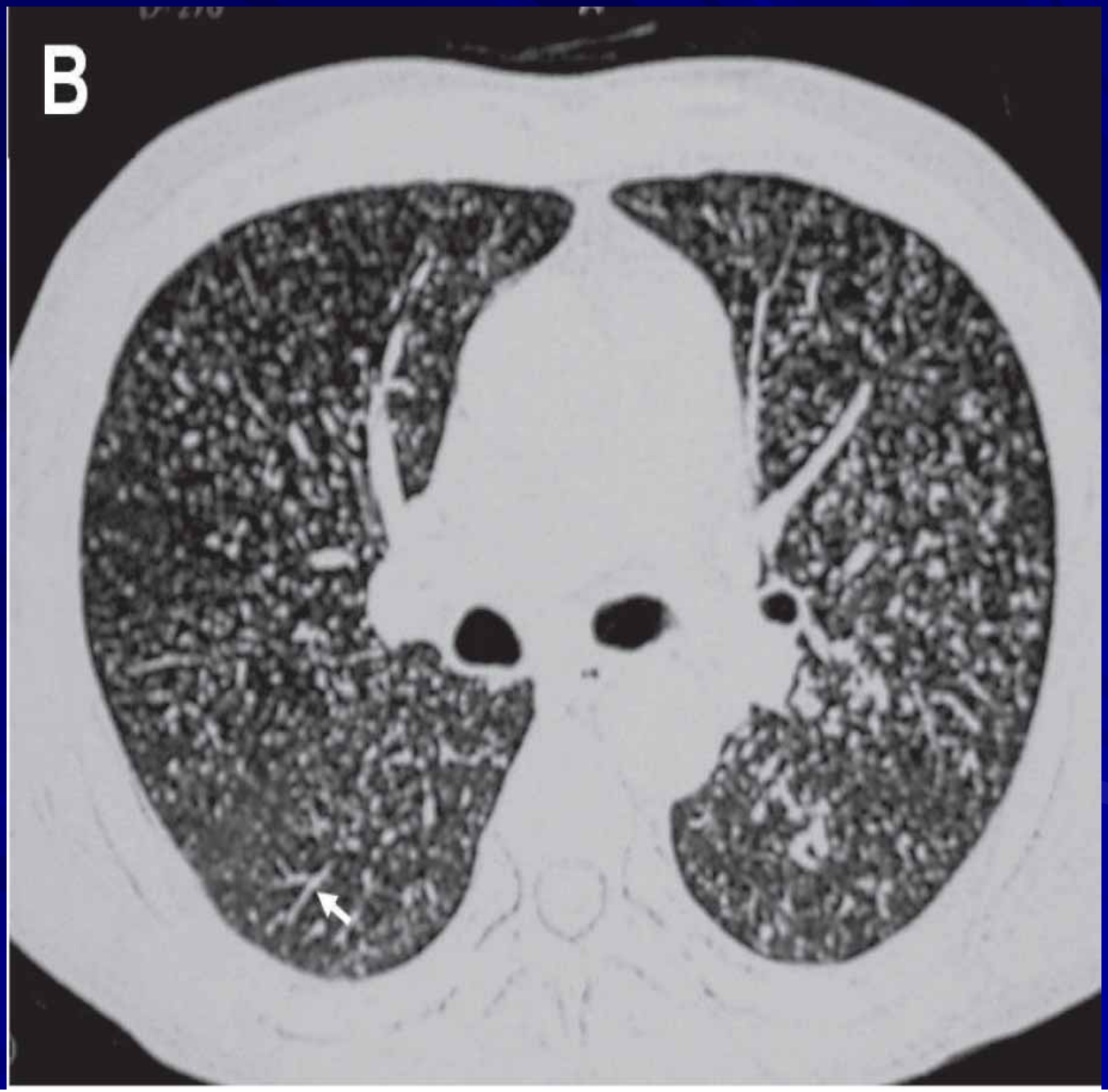
- Blood culture, FBC,ESR,CRP
- H1N1 throat swab
- Malarial Parasarites
- Serology HIV
- Serology Hepatitis B&C
- Urine (M/C/S and AFB)
- Serology Mycoplasma
- Urine Legionella
- Serology Leptospirosis

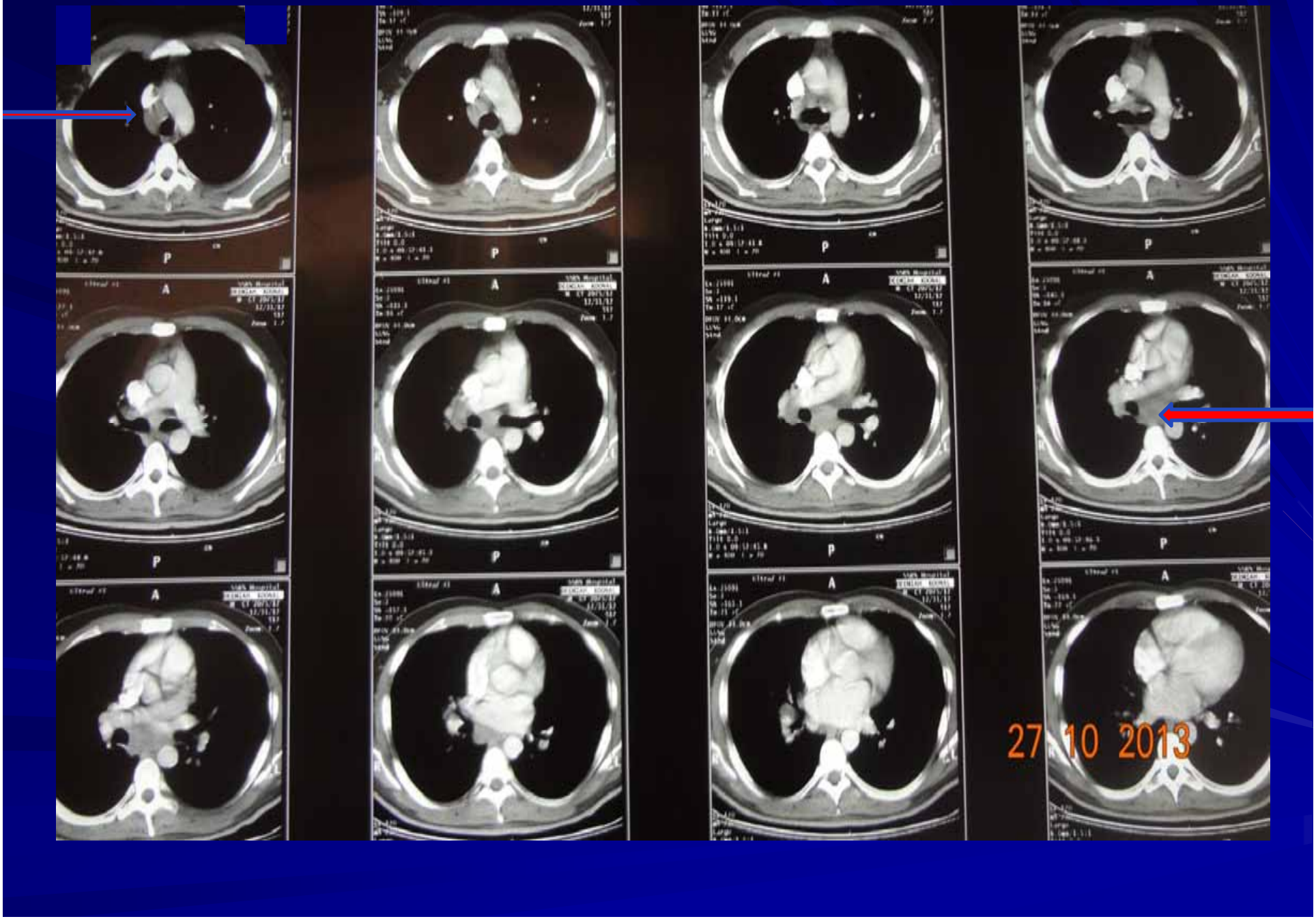
- Positive findings
  - Pancytopenia
  - ESR: 95 CRP : 65
  - Raised SGOT SGPT
  - HypoNatraemia :128

Investigations

- Serology HIV : Positive with CD4 count at 233
- Bronchoscopy + lavage : AFB direct Negative and Pneumocystose Negative
- HR CT scan thorax : miliary opacities + few mediastinal nodes
- Lumbar Puncture and CT Brain : Normal findings
- Echo abdomen : ascitis + hepato-splenomegaly
- Urine Legionella : Negative
- Serology Leptospirosis : Negative
- Serology Mycoplasma : Negative
- Urine for AFB: Direct & culture and PCR GeneXpert MTB/RIF

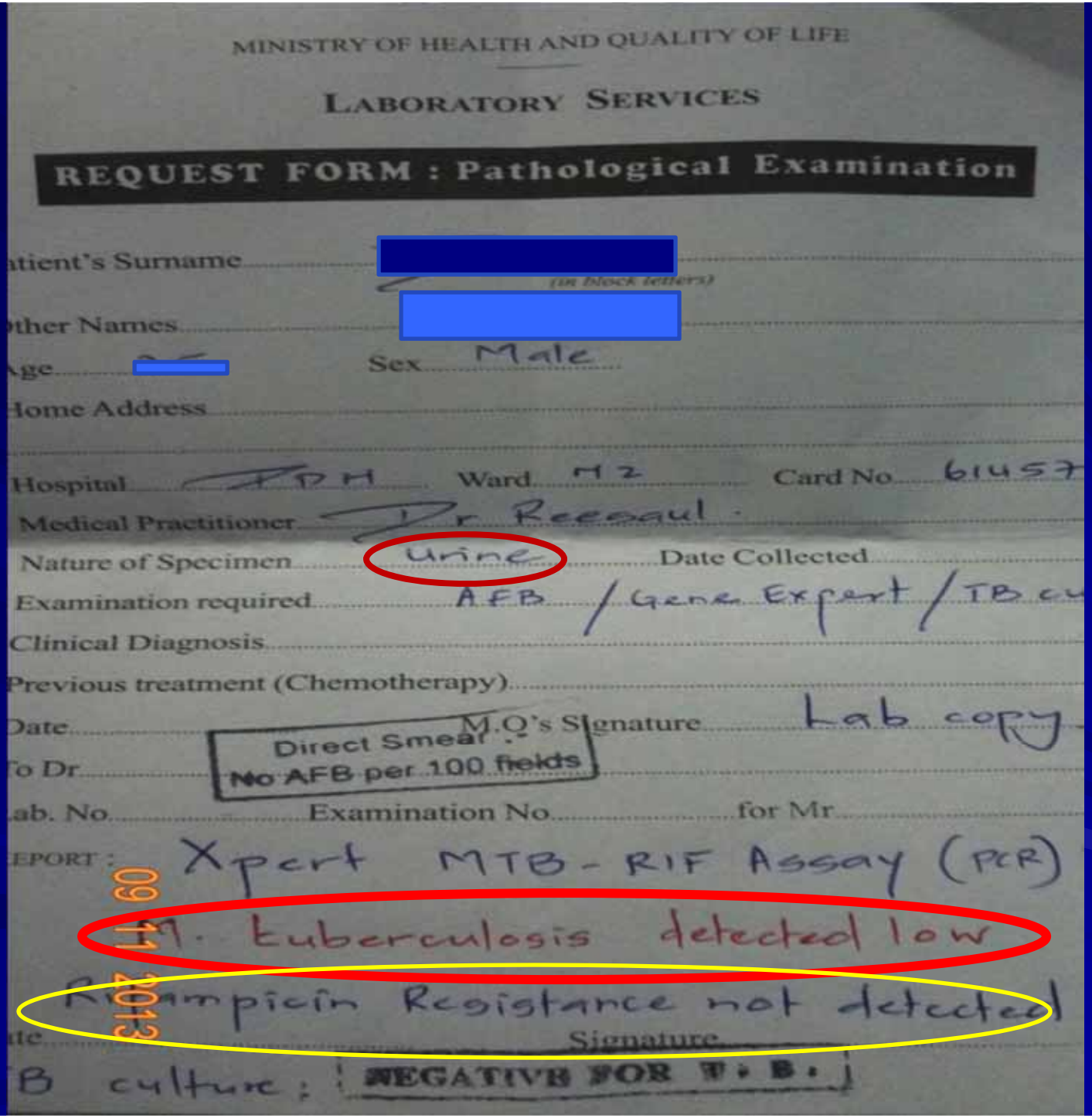
HR CT Thorax




27 10 2013

HIV/AIDS CD4 counts and Respiratory infections

CD4 count	>400	200-400	100-200	50-100	<50		
Viral infection	+	+	+	+	+		
Bacterial infection	+	++	+	+	+		
M Tuberculosis	+_	+	+	+_	+ _		
Kaposi disease		+_	+	+	+		
Pneumocytose juroveci			++	+	+		
Toxoplasmose Pulmonary cryptococcosis			+_	+	+		
CMV/ Atypical Tb(MAC				+_	+		



MINISTRY OF HEALTH AND QUALITY OF LIFE

LABORATORY SERVICES

REQUEST FORM : Pathological Examination

atient's Surname [redacted]
(in block letters)

ther Names [redacted]

Age [redacted] Sex Male

Home Address

Hospital FDH Ward M2 Card No 61457

Medical Practitioner Dr Reesaul

Nature of Specimen Urine Date Collected

Examination required AFB / Gene Expert / TB cu

Clinical Diagnosis

Previous treatment (Chemotherapy)

Date M.O's Signature Lab copy

To Dr

Direct Smear :
No AFB per 100 fields

Lab. No Examination No for Mr

EPORT : Xpert MTB - RIF Assay (PCR)

09/11/2013 M. tuberculosis detected low

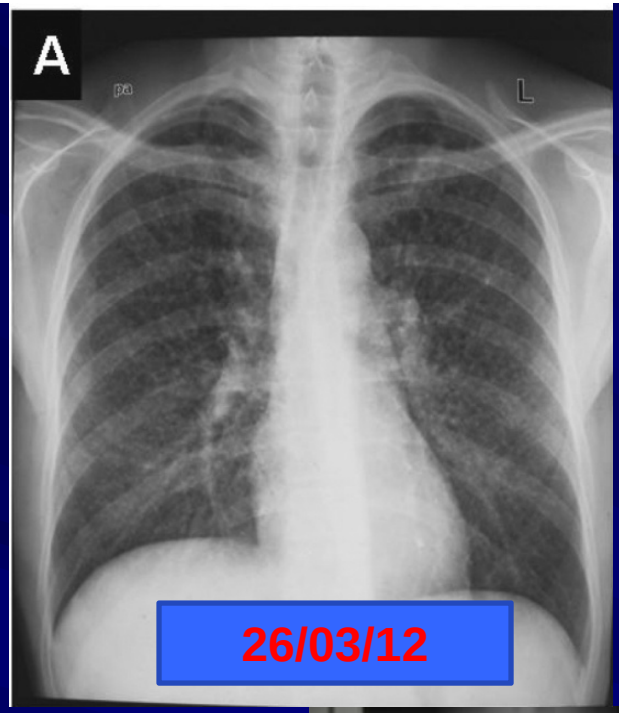
Rifampicin Resistance not detected

te Signature

B culture : NEGATIVE FOR T. B.

Miliary tuberculosis (Extra Tb)

- Initiated on anti Tb drugs
- Isoniazid + Rifabutin +Ethambutol + Pyrazinamide and IM streptomycin
- Prednisolone 40mg /daily
- Oxygen
- ARV drugs after 3 weeks
- Clinical and Radiological improvement
- Regular follow up at chest clinic and AIDS unit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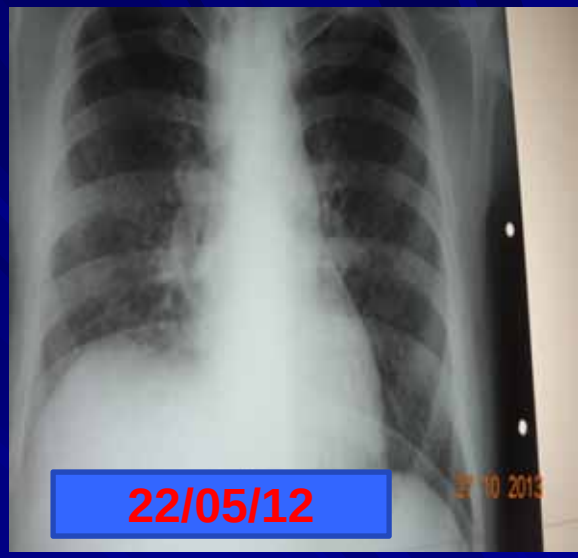
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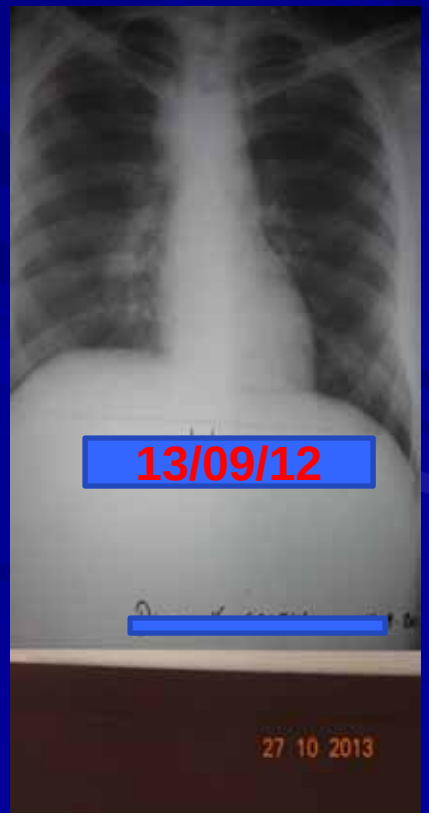
21/06/12
27 10 2013


13/09/12
27 10 2013

- Mr. S age of 31, died on March 30th 2013 in the flash flood at Port Louis

Miliary Tuberculosis in Mauritius

- Of all patients with TB in Mauritius, 1.5% are estimated to have miliary tuberculosis
- Only 2 pediatric cases : 7 and 9 year old boys with miliary TB (1997 - 2013)
- Age group in adults: 18-45 years
- Sex Ratio Male/female : 4/1

2012 -2013 GeneXpert MTB/RIF Performed on Patients with ***Miliary Tb***

Patient	Sputum	CSF	Gastric aspirate	Urine 100% yield	stool	Culture
1/	Neg	+	Neg	+	Neg	+
2/(HIV)	+	Neg	Neg	+	Neg	+
3/	Neg	Neg	Neg	+	Neg	+
4/Pregnant	Neg	Neg	Neg	+	Neg	+
5/child	+	Neg	+	+	Neg	+

HIV/AIDS CD4 counts and Respiratory infections

CD4 count	>400	200-400	100-200	50-100	<50		
Viral infection	+	+	+	+	+		
Bacterial infection	+	++	+	+	+		
Tuberculosis	+_	+	+	+_	+ _		
Kaposi disease		+_	+	+	+		
Pneumocytose juroveci			++	+	+		
Toxoplasmose Pulmonary cryptococcosis			+_	+	+		
CMV/ Atypical Tb(MAC				+_	+		

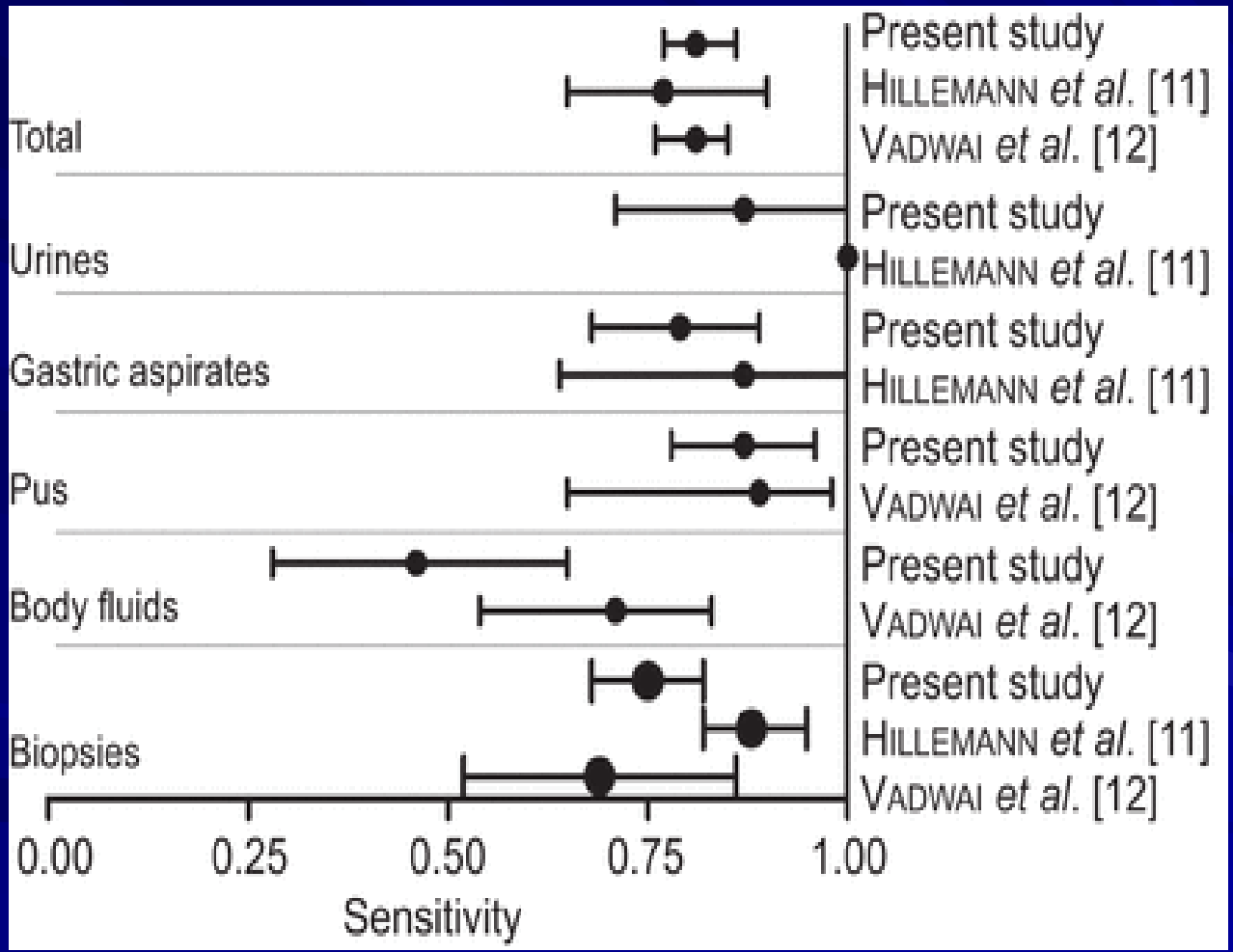
Conclusion
Prevention and Reduction of Tb in areas of low incidence Mauritius

- Tb prevention measures are no longer designed to cover the entire population
- Rather to enable early detection of index cases in high risk groups(DM,Alcohol,HIV …..
- Reduce prevalence of latent TB infection in persons with risk of progression to active disease(contacts,HIV…)
  - **Targeted testing(CXR, Mantoux, IGRA`s)**
  - **Treatment of Latent TB infection(Isoniazid…)**

Thank you

Merci

Sensitivity Gene Xpert MTB/RIF for the diagnosis of extra-pulmonary tuberculosis



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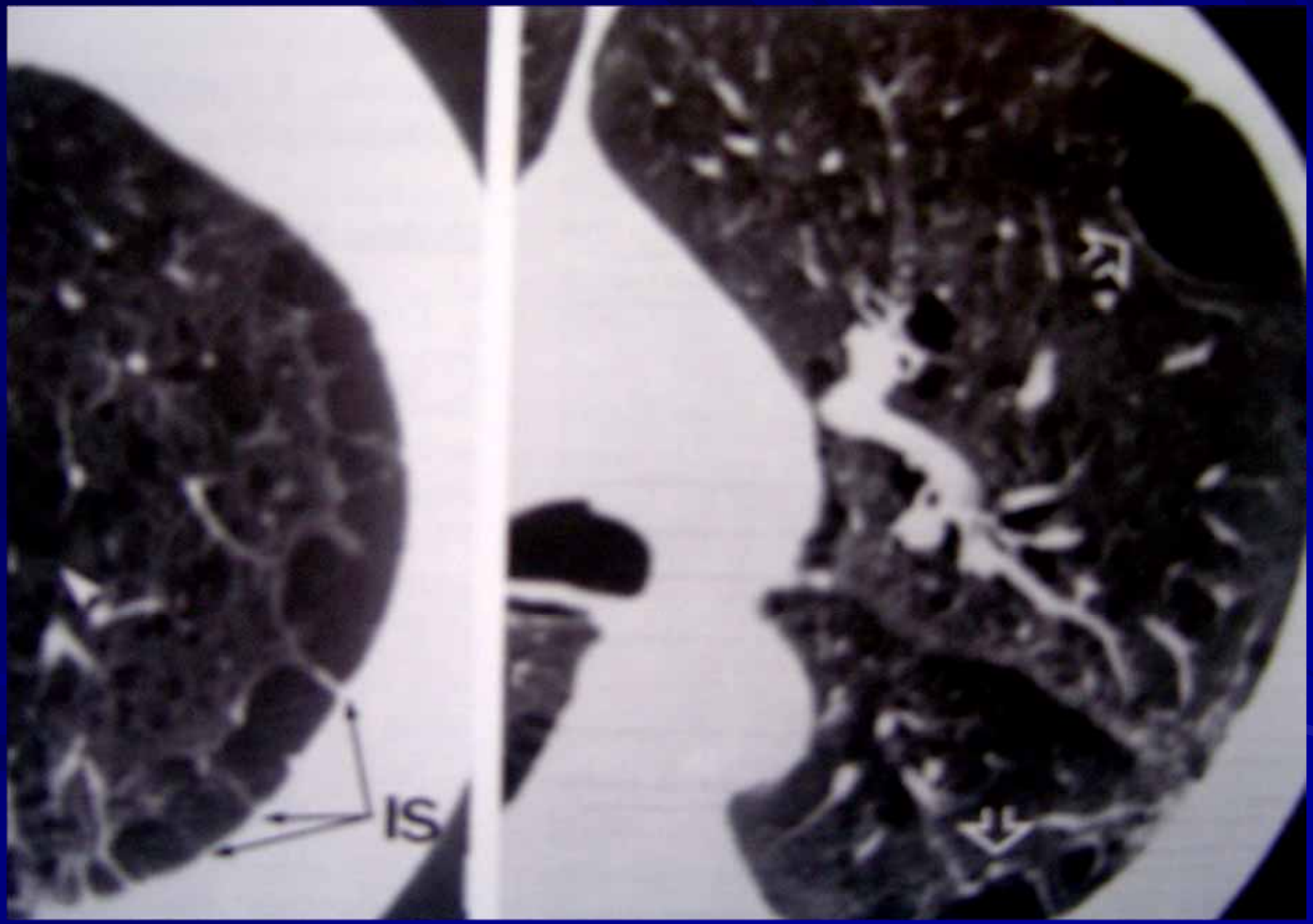
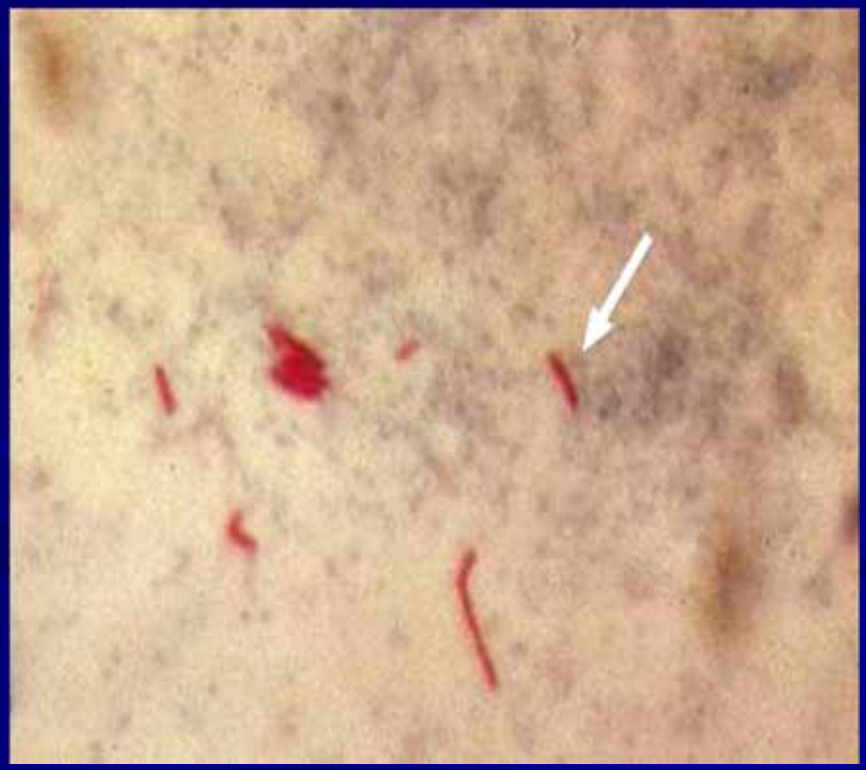
HR CT scan thorax



we have several thousands years of TB behind us……..still

24th march 1905




THIS IS A
NO SMOKING
ZONE
POUDRE D'OR
CHEST HOSPITAL
POUDRE DOR
CHEST HOSPITAL
CHILDREN NOT
ALLOWED
VISIT 9 00 AM TO 4 00 PM

HR CT scan thorax