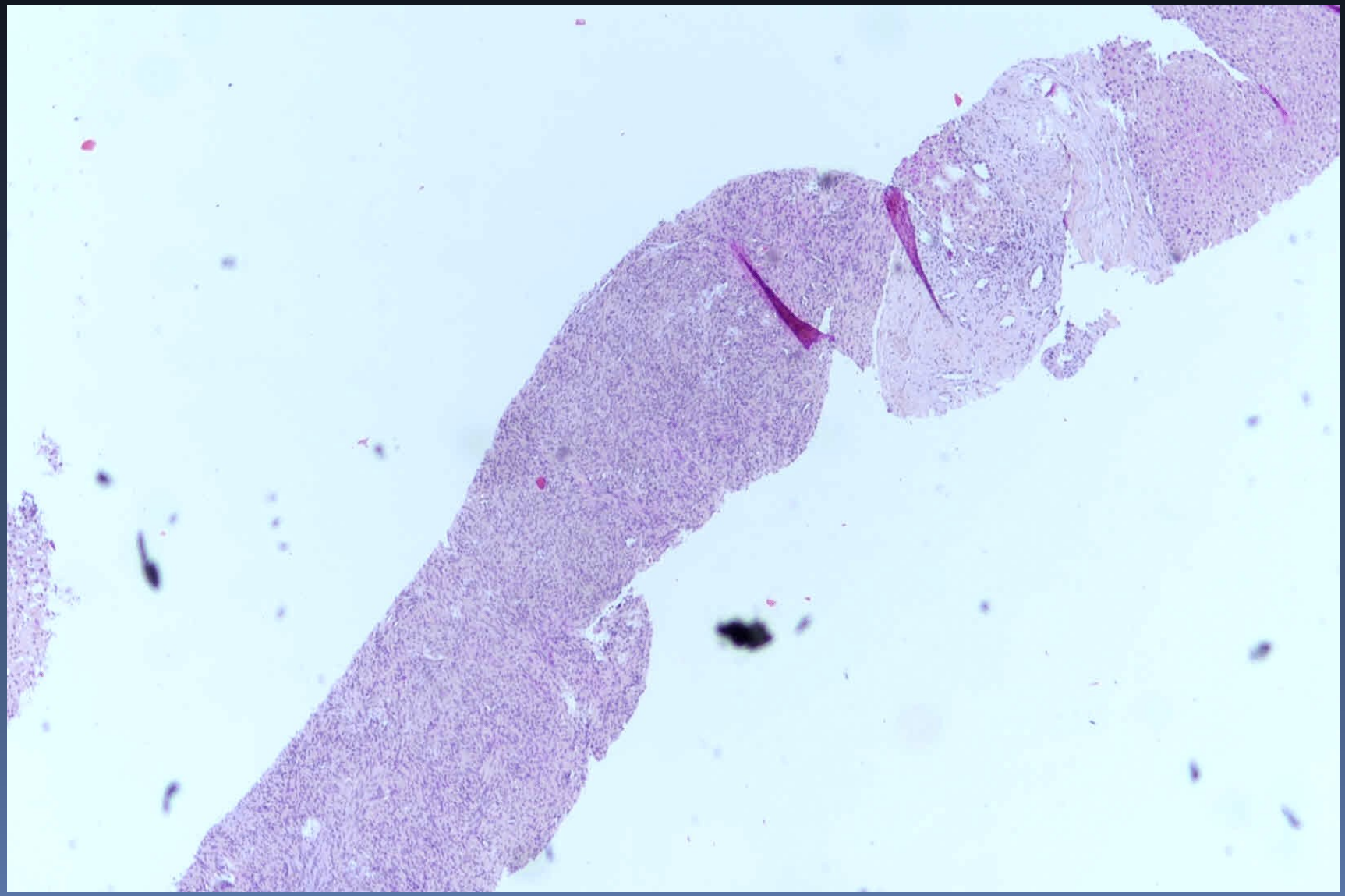
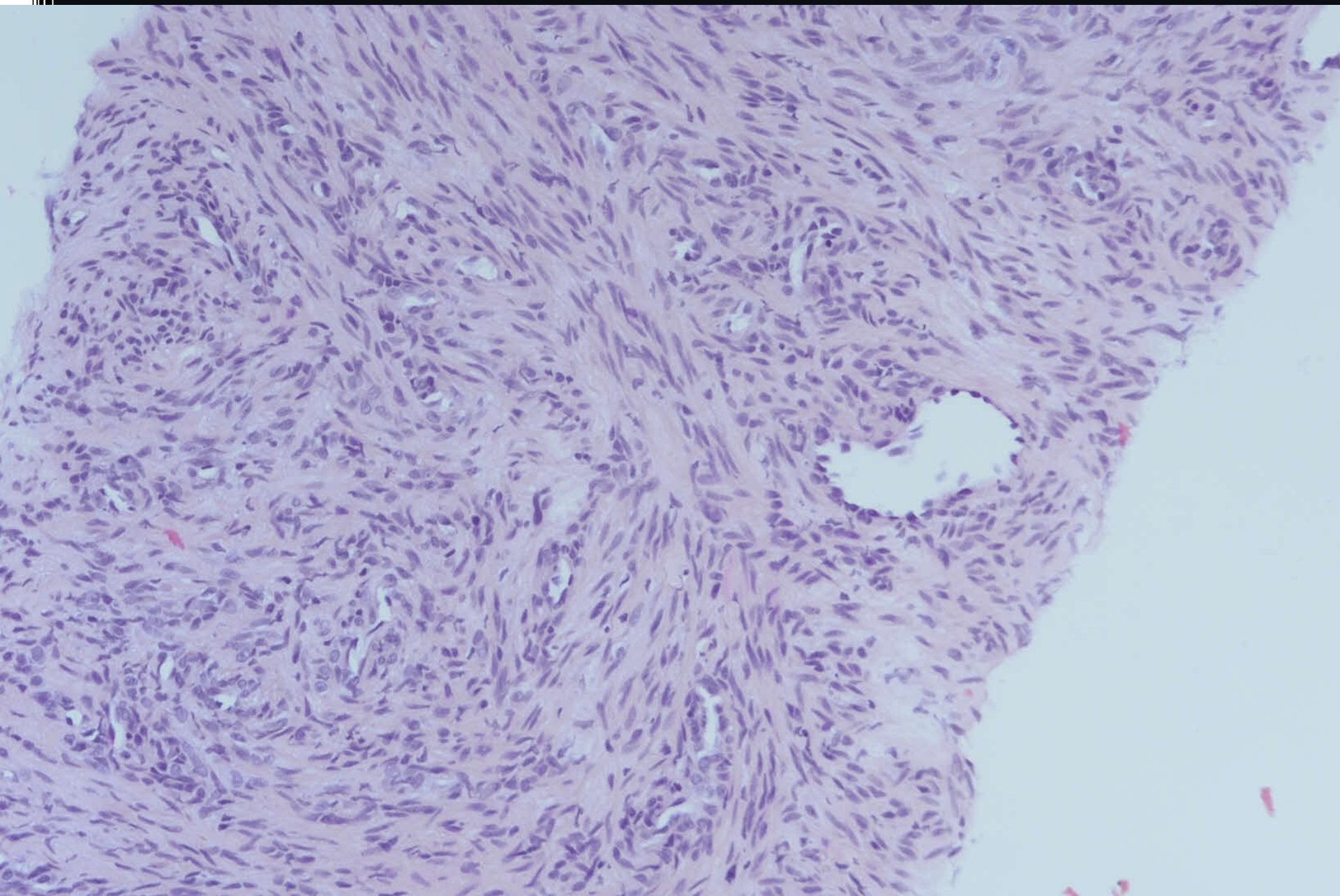
內科病理聯合討論會　CPC

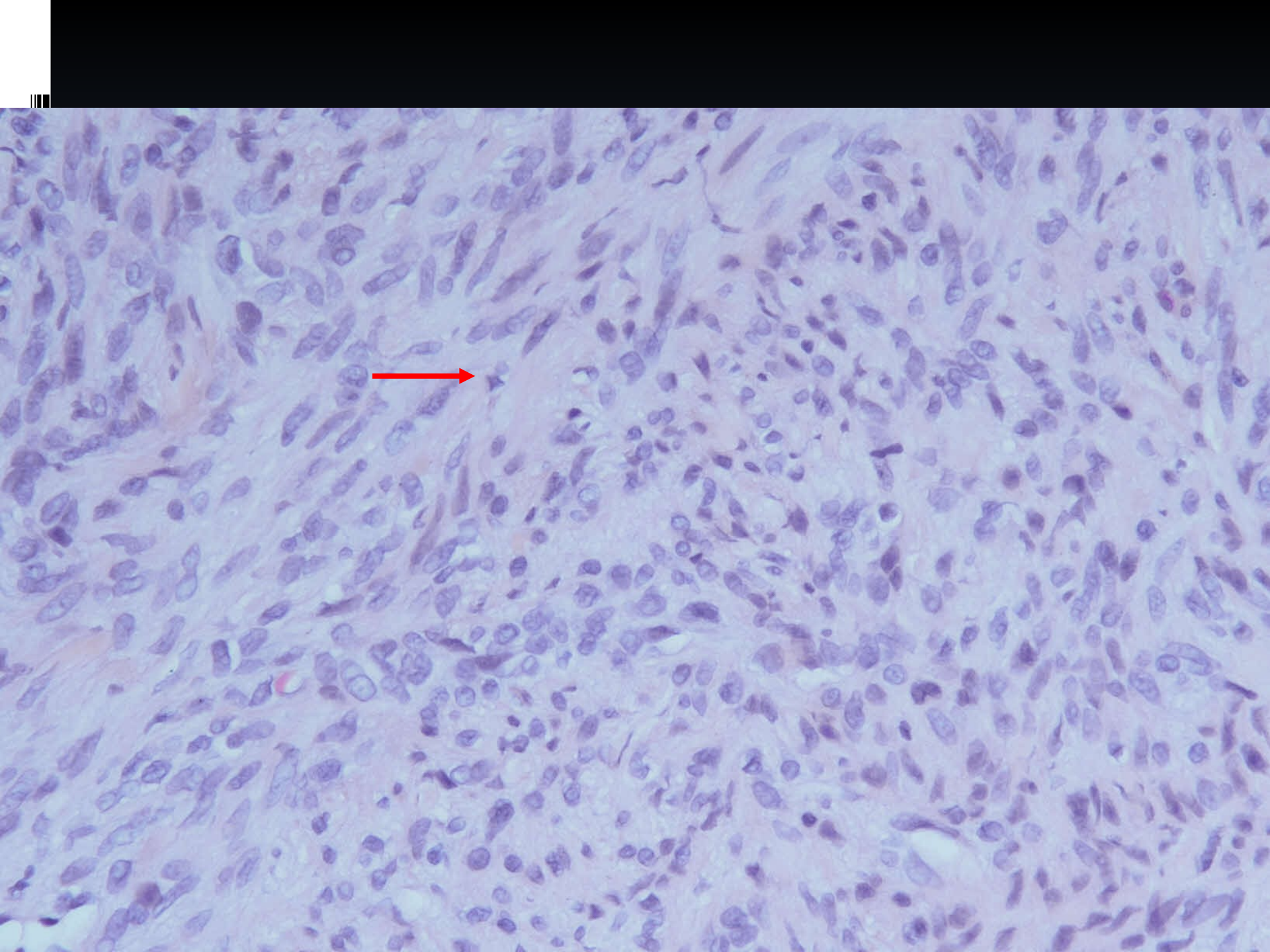
2016.03.24

病理檢驗部　傅婷瑛

sono guide liver biopsy on 2015.11.12







Summary of Microscopic Findings

- Proliferative spindle neoplastic cells in interlacing fascicles
- Mild cellualr atypia
- Few mitotic figures(about 1/10high power fields)

	SMA	Desmin	CD117	CD34	HHV8
Our case	**+**	**+**	**-**	**-**	**-**
Smooth muscle tumor	**+**	**+**	**-**	**-**	**-**
Gastrointestinal stromal tumor	-/+	-	+	+	-
Kaposi sarcoma	-	-	-	+	+

Pathologic Diagnosis

Smooth muscle tumor

HIV????

Discussion-1

- Adults with the acquired immunodeficiency syndrome (AIDS) have an increased susceptibility to Kaposi's sarcoma and B-cell lymphomas. The frequent occurrence of leiomyosarcomas in childrens with AIDS has been unexpected and intriguing. (1/5000 : normal 1/5000000)
- Kenneth et al.. had hypothesis that EBV or HIV may be a cofactor for the soft-tissue tumors of patients with AIDS.

Table 1. Clinical Data on the Patients with Smooth-Muscle Tumors.

Patient No.	Race or Ethnic Group	Age (yr) at Tumor Diagnosis/Sex	Tumor Site	Tumor Type	Age (yr) at Diagnosis of AIDS	Route of HIV Transmission
HIV-positive						
1	Hispanic	8/F	Lung	Leiomyosarcoma	4	Perinatal transfusion
			Colon	Leiomyoma		
2	Hispanic	4/F	Stomach	Leiomyosarcoma	2	Perinatal
3	Black	7/F	Intestine	Leiomyosarcoma	2	Perinatal
4	Hispanic	24/M	Liver	Leiomyosarcoma	18	Transfusion
5	White	5/F	Colon	Leiomyosarcoma	1	Perinatal
6	Black	4/M	Lung	Leiomyoma	4	Perinatal transfusion
HIV-negative						
7	Black	7/M	Rectum	Leiomyosarcoma	—	—
8	White	14/F	Stomach	Leiomyosarcoma	—	—
9	White	8/F	Labia majora	Leiomyosarcoma	—	—
10	White	12/F	Stomach	Leiomyoma	—	—
11	Hispanic	5/M	Ear	Leiomyoma	—	—
12	White	3/F	Ileocecum	Leiomyoma	—	—
13	White	3/M	Finger	Leiomyoma	—	—

- They found evidence of EBV infection in five leiomyosarcomas and two leiomyomas from six HIV-infected patients, but not in smooth-muscle tumors from HIV negative patients.

  (N Engl J Med 1995;332:12-8)

Discussion-2

- Bone marrow and solid organ transplanted patients are at a higher risk to acquire Epstein-Barr virus (EBV)–associated diseases, most commonly posttransplant lymphoproliferative disorders (PTLD). Although PTLD may occur in up to 10% of solid organ transplanted patients, posttransplant smooth muscle tumors (PTSMT) are very rare complications (e.g. 0.7% of renal transplant patients)

- The majority of PTSMT developed after kidney transplantation (n = 38/68, 60%) and the site of tumor manifestation was mainly the liver/transplant liver (n = 38/68, 56%)

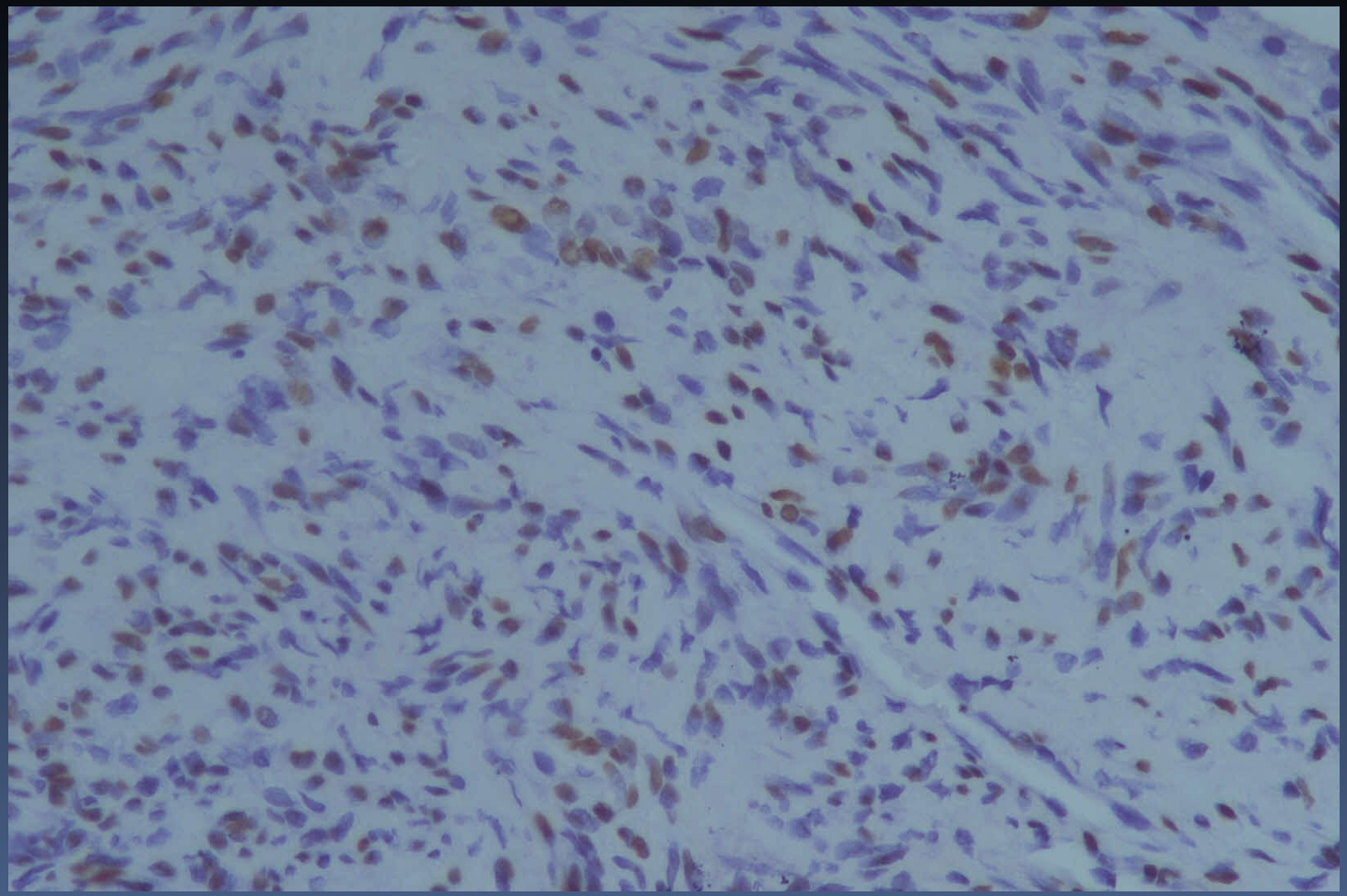
Discussion

Specific EBV-related neoplasms are post-transplant lymphoproliferative disorder (PTLD) and post-transplant smooth mucscle neoplaia (PTSN), both infected by the latency type III pathogen and its unique expression of EBNA-2

PTSN is predominantly a disease of children and young adults with an onset 1 to 5 years post-transplant. Primary sites for PTSN are liver, lung, and spleen, with a triad of lesions occasionally identified in the same individual

PTSN most commonly present *de novo* in the immunocompromised host

Our case EBER -positive



AIDS-related EBV-associated smooth muscle tumor

American Journal of Transplantation 2012; 12: 1908–1917

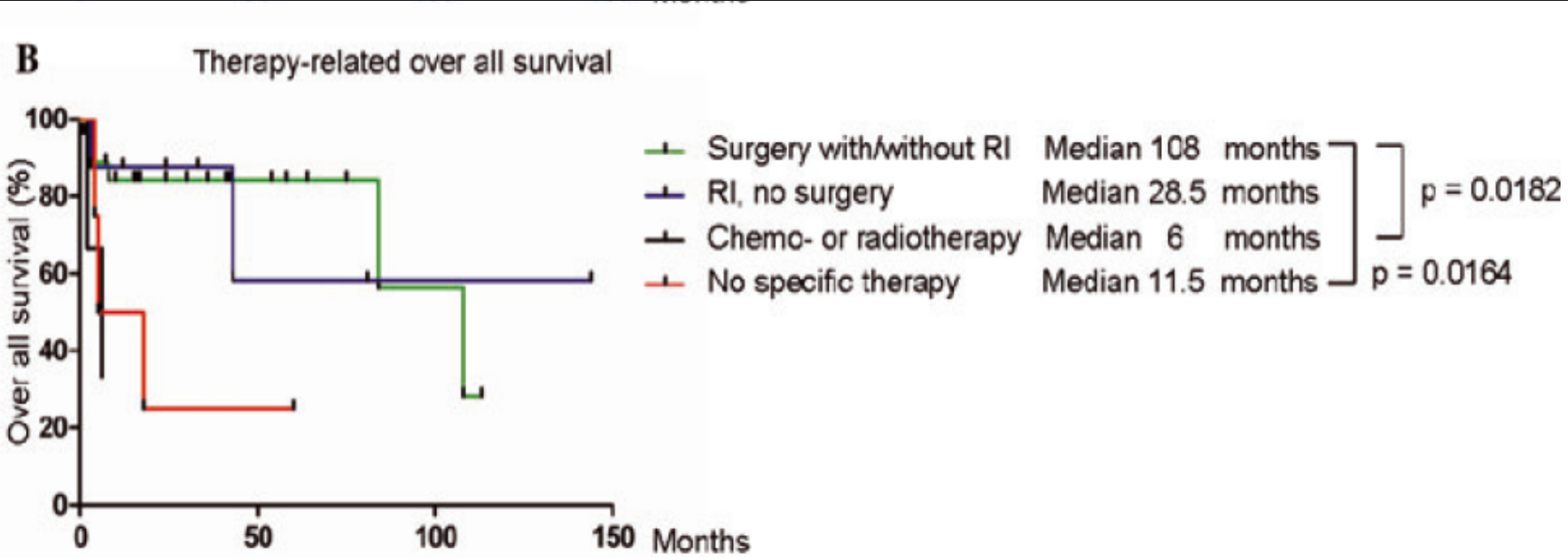
Prognosis and treatment

Jonigk et al.

Table 2: Summary of clinical characteristics and therapy of PTSMT

PTSMT (n = 68) Gender, age	Transplanted organs	EBV+ PTSMT manifestation Median 46.5 (5-348) months after transplantation	EBV+ polymorphic/monomorphic PTLD manifestation before PTSMT (n = 12/68, 18%)	Therapy	Survival after EBV+ PTSMT manifestation
All ages (median 27, 1–61 years) 37 ♀ (54.5%) 31 ♂ (45.5%) Children (median 7.5, 1–16 years) 15 ♀ (58%), 11 ♂ (42%) Adults (median 42, 20–61 years) 22 ♀ (52%), 20 ♂ (48%)	Kidney (n = 41/68, 60%) Liver (n = 10/68, 15%) Heart (n = 9/68, 13%) Lung (n = 4/68, 6%) Heart + lung (n = 1/68, 2%) Bone marrow (n = 3/68, 4%)	Early onset (n = 2/68, 3%) In one organ (n = 35/68, 51.5%) In several organs (n = 33/68, 48.5%) In the graft (n = 11/68, 16%) Kidney (n = 6; graft 4/6, 67%) Liver (n = 38; graft 6/38, 16%) Heart (n = 0) Lung (n = 21; graft 1/21, 5%) Bone marrow (n = 4; graft 0/4) Gut (n = 12) Spleen (n = 10) Larynx/pharynx (n = 4) Intracranial (n = 7) Skin (n = 1) Uterus (n = 1)	11 children (median 7, 1–16 years), transplant organs: heart (n = 5), liver (n = 2), bone marrow (n = 2), kidney (n = 1) 1 adult (44 years), transplant organ: lung	Surgery with/without RI (n = 39) RI without surgery (n = 8) Chemotherapy (n = 2) Radiotherapy (n = 1) No specific therapy (n = 4) Not known (n = 14)	Alive (n = 45/68, 66%; median 24, 1-144 months) Dead (n = 21/68, 31%; median 5.5, 0–108 months) Not known (n = 2)

Surgical resection and/or immunosuppression is the therapy of choice



There is no significant difference in the overall survival between patients treated by surgery and reduced immunosuppression without surgery

Table 1. Summary of SMTs in HIV-infected children

Reference	Patient	Age/gender/ ethnicity	Mode of HIV transmission	Location of primary SMT(s)	Type of SMT	Metastases	EBV status	Cause of death and relationship to SMT
[4]	1	5/M	Transfusion	Lung	LM	—	ND	Staphylococcal pneumonia
[4]	2	9/F	Transfusion	Right bronchus	LM	Lung, mediastinal and peribronchial nodes	ND	Not indicated
				Rectum	LMS			
[43]*	3	4/F	Vertical	Small intestine, colon and rectum	LMS	Lung, mesenteric nodes and brain	ND	Respiratory arrest
[35]*	3	4/F	Vertical	Luminal GI tract	LMS	Lung, mesenteric nodes and brain	ND	Respiratory arrest
[36]*	4	3/F	Vertical	Trachea	LM	—	ND	Cardiorespiratory arrest with interstitial pneumonia
				Left main stem bronchus	LMS			
[37]*	4	7/CB	Vertical	Trachea	LM	—	ND	Cardiorespiratory arrest possibly related to disease
				Left upper lobe bronchus	LMS			
[38]	5	7/F/B	Vertical	Liver	LM-UMP	—	ND	Infectious Pneumonia
[38]	6	5/F/W	Vertical	Colon and ileum	LM	—	ND	Sepsis
[38]	7	9/M/B	Vertical	Liver	LM	—	ND	Congestive heart failure
[15]	8	17/M/W	Transfusion	Right forearm, subcutaneous	LMS	Spinal cord, adrenals and liver	ND	Paralysis related to lesions spinal cord; cause of death not reported
				Left anterior thigh	LMS			
				Foreskin	LMS			
				Right anterior axillary line	LMS			
[32]	9	8/F/B	Vertical	Liver	LMS	—	Neg	Pneumocystis Pneumonia
[39]	10	6	Not indicated	Intra-abdominal	LMS	Lungs	ND	Not reported
[40]	11	5/M/B	Vertical	Liver	STUMP	—	ND	HIV encephalopathy
[41]	12	8/F	Vertical	Liver	LM	—	ND	Immunological deterioration
[27]	13	2/M	Vertical	Right adrenal	LM	—	Tissue PCR	Sepsis and non-Hodgkin lymphoma in brain
[5]	14	8/F/H	Transfusion	Lung	LMS	—	EBER+	Not indicated
				Colon	LM		EBER+	
[5]	15	4/F/H	Vertical	Stomach	LMS	—	EBER+	Not indicated
[5]	16	7/F/B	Vertical	Intestine	LMS	—	EBER+	Not indicated
[5]	17	5/F/W	Vertical	Colon	LMS	—	EBER+	Not indicated
[5]	18	4/M/B	Transfusion	Lung	LM	—	EBER+	Not indicated
[17]	19	10/M	Transfusion	Right palm	LM	—	ND	Not indicated
[25]	20	32 months/M/H	Vertical	Lung bronchus	LM	—	EBER+	Necrotizing bronchopneumonia

- Histology can be unreliable in predicting biological behavior, and it is argued that PTSN with benign features should be considered to have uncertain malignant potential, especially when diagnostic material is limited to small biopsy fragments

Reference

- KENNETH L. *ASSOCIATION OF EPSTEIN–BARR VIRUS WITH LEIOMYOSARCOMAS IN YOUNG PEOPLE WITH AIDS*. N Engl J Med 1995;332:12-8.
- D. Jonigk et al. Molecular and Clinicopathological Analysis of Epstein-Barr Virus–Associated Posttransplant Smooth Muscle Tumors. *American Journal of Transplantation 2012; 12: 1908–1917*
- S. A. C. Medlicott, MD, *Early Post-transplant Smooth Muscle Neoplasia of the Colon Presenting as Diminutive Polyps: A Case Complicating Post-transplant Lymphoproliferative Disorder*. International Journal of Surgical Pathology 14(2):155–161, 2006

Thank you for your attention!