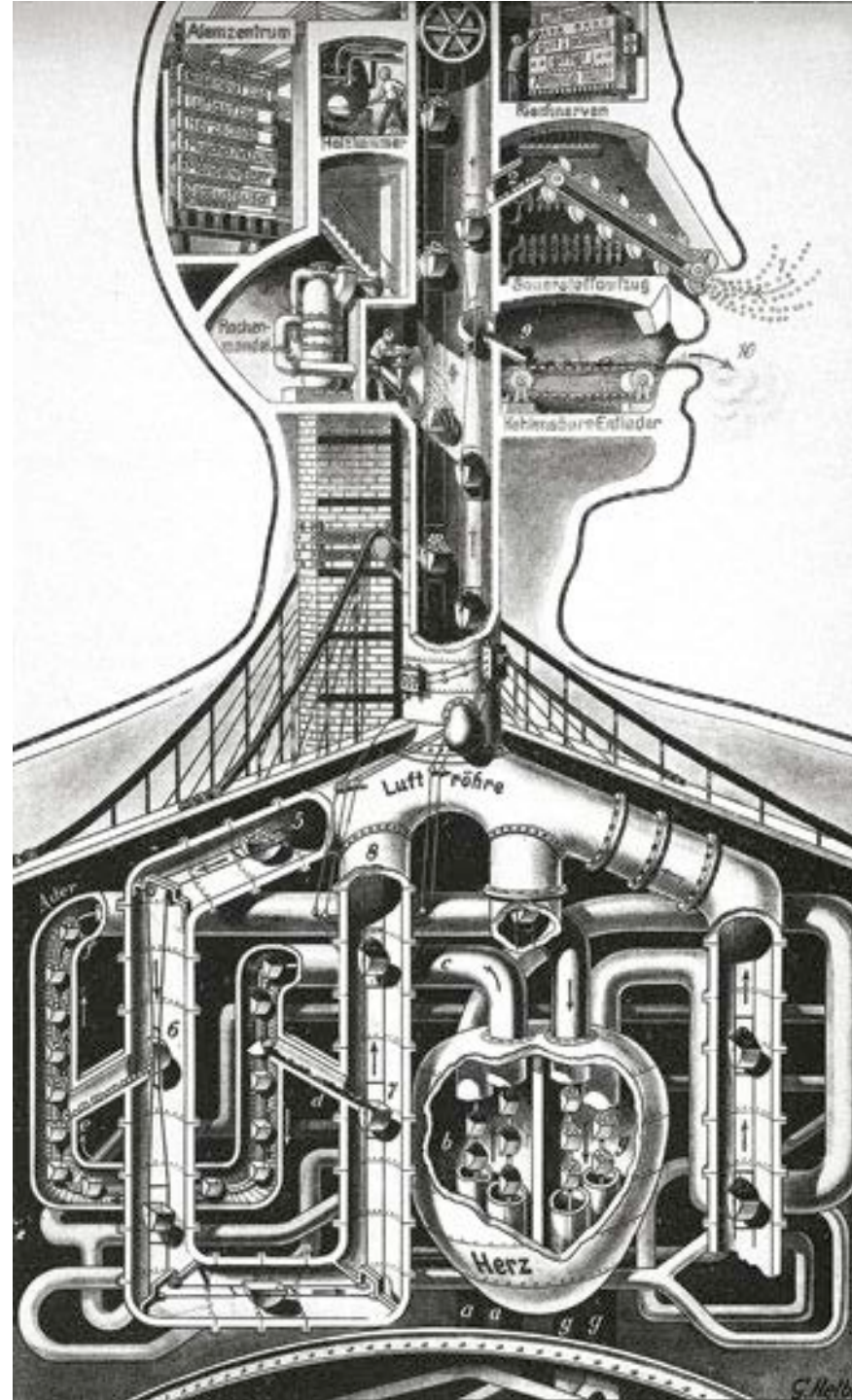


Clinical Case Presentation ESIM Congress

Saas Fee
20. January 2012

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Hospital Uster, Zurich, Switzerland



Case History

- A 74 year old lady, non-smoker
- Assigned by the family doctor
- Symptoms:
 - Fatigue, exhaustion, cough without sputum, dyspnea since several weeks
 - Chill, fever (max. 39.5°), night sweat since 4 days, without response on antibiotics

Personal medical history

- Arterial hypertension
- Chronic renal failure
- Coxarthrosis
- No allergy sufferer

Current drugs

- acetylsalicylic acid 100 mg 1-0-0
- antihypertensiva (ace-inhibitor, calcium-antagonist)
- ciprofloxacin 250 mg 1-0-1 since 4 days

Physical examination

- RR: 140/70 mmHg, HR: 76/min, BR: 18/min, afebrile
- Normal first and second heartbeat, no heart murmur
- Vesicular respiratory sound, normal displaceable lung boundaries

Basic diagnostic

- ECG:
inconspicuous
- Arterial blood gas analysis:
pH 7.4, pO₂ 8.9 kPa, pCO₂ 4.5 kPa, HCO₃ 25.2 mmol/l, BE 0.6 mmol/l

Haemogram

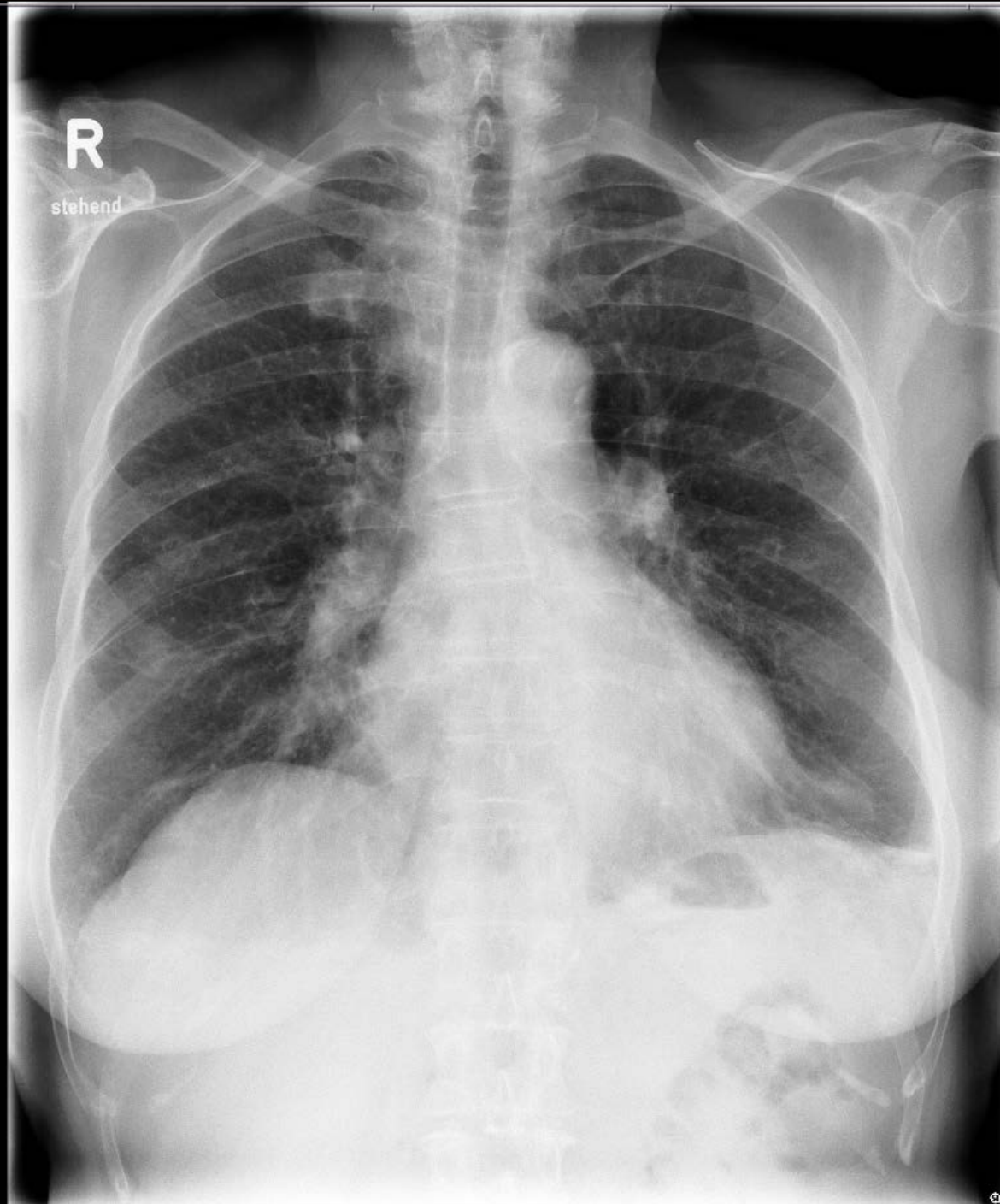
Leucocytosis $26 \times 10^3/\mu\text{l}$
(range $4\text{-}10 \times 10^3$)

-> 45% eosinophilia
(range 0-7%),
 11×10^3 (range $0\text{-}0.7 \times 10^3$)

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Hämatologie				
Blutsenkung	6-11 mm		44	
CRP	<10 mg/l			41.4
Hämoglobin	12.0-14.7 g/dl			11.9
Hämatokrit	34-42 %			35.8
Erythrozyten	$4\text{-}5 \times 10^6/\mu\text{l}$			4.04
MCV	83-94 fl			88.6
MCH	28-33 pg			29.4
MCHC	32-36 g/dl			33.2
EVB	%			13.3
Thrombocyten	$150\text{-}350 \times 10^3/\mu\text{l}$			262
Leucocyten	$4\text{-}10 \times 10^3/\mu\text{l}$			26.1
Maschinelle Differenzierung	$150\text{-}350 \times 10^3/\mu\text{l}$			
Neutrophile	42.2 - 75.2 %			40.2
Eosinophile	0.0 - 7 %			45.7
Basophile	0.0 - 4 %			0.5
Monocyten	2 - 14 %			2.3
Lymphocyten	20.5 - 51.1 %			11.3
Neutrophile	$1.4 - 8.0 \times 10^3/\mu\text{l}$			10.5
Eosinophile	$0.0 - 0.7 \times 10^3/\mu\text{l}$			11.9
Basophile	$0.0 - 0.15 \times 10^3/\mu\text{l}$			0.1
Monocyten	$0.2 - 1.0 \times 10^3/\mu\text{l}$			0.6
Lymphocyten	$1.5 - 4 \times 10^3/\mu\text{l}$			2.9
Manuelle Differenzierung	$0.2 - 1.0 \times 10^3/\mu\text{l}$			
Gerinnung	$1.5 - 4 \times 10^3/\mu\text{l}$			
Quick	70 - 100 %			72
INR	0.7 - 1.5			1.17
Diverses	30-50 %			
Ec-Transfusion	2-4 %			
Lymphocyten	0-1 %			
Hämoglobine	2-8 %			
Malarianachweis	25-40 %			
Eiweiss Elektrophorese	0-1 %			

Chest X-ray

Bihilar
lymphadenopathy,
solitary pulmonary
nodule apical
upper lobe of the
right lunge
(diameter 2cm)



1. Eosinophilia
2. Anormal chest x-ray

And now?

Differential diagnosis of the eosinophilia

- Primary eosinophilia:
Hematologic malignancies (acute leukemias, chronic myeloid disorders)
- Secondary eosinophilia:
Infections (parasitic, fungal, hiv, tuberculosis),
allergic disorders (asthma, atopic dermatitis),
medications, autoimmune diseases (vasculitis) and
endocrine disorders (e.g. M. Addison)
- Eosinophilic inflammation of specific organs:
Respiratory, gastrointestinal, genitourinary tracts

Work up of eosinophilia

- **Anamnesis:**
allergic symptoms, international travel, medications, constitutional symptoms
- **Analysis:**
manual haemogram, three stool specimens for ova and parasites, serologic test in case of international travelling, nasal smear in case of allergic rhinitis, biopsy of the specific organ of concern

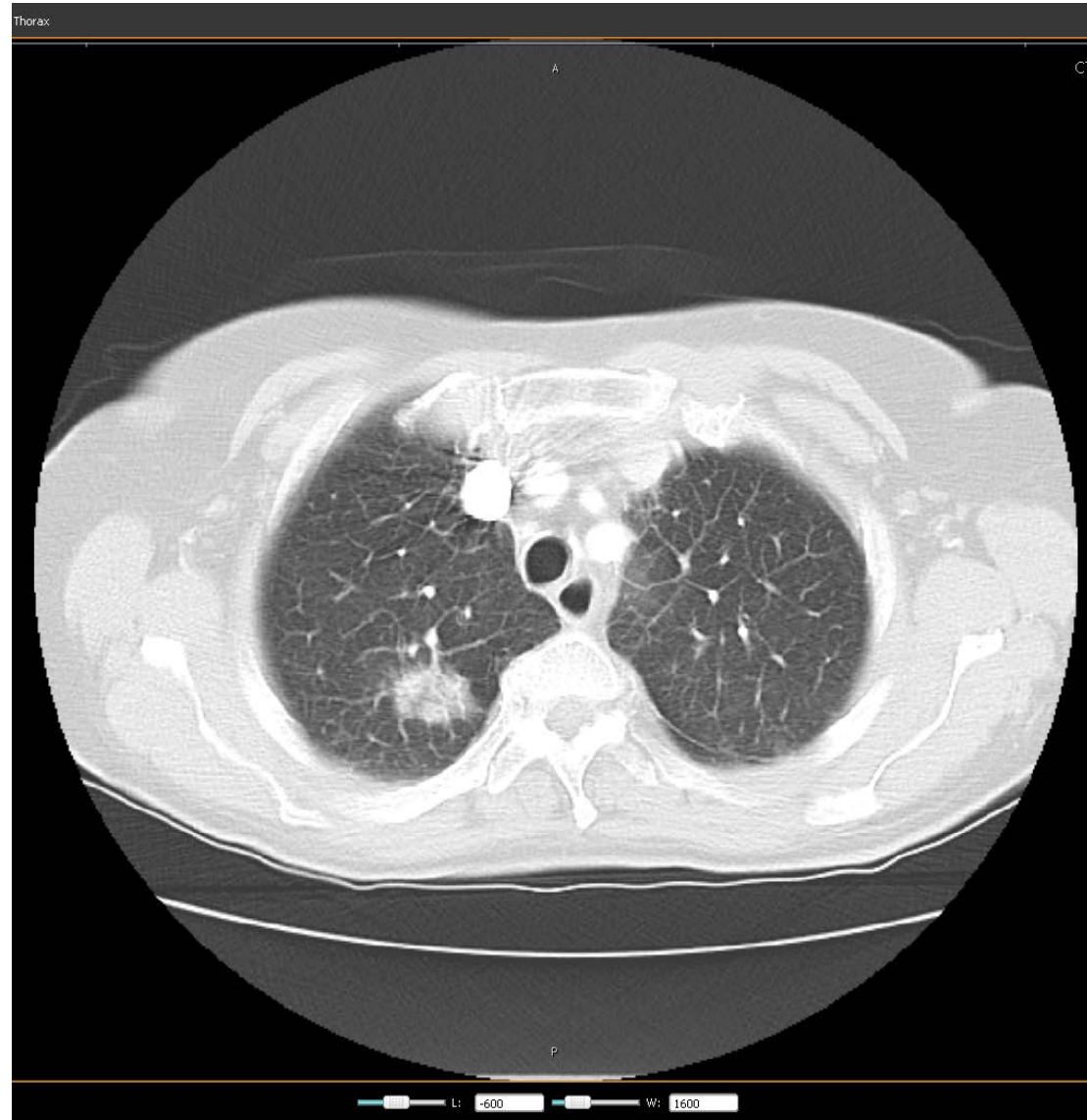
Differential diagnosis of the bihilar lymphadenopathy

- Infectious: tuberculosis
- Neoplasia: lymphoma, lymph node metastasis
- Autoimmune: sarcoidosis

Results

CT Thorax

- Bihilar lymphadenopathy,
pulmonary nodule
upper lobe of the right
lunge



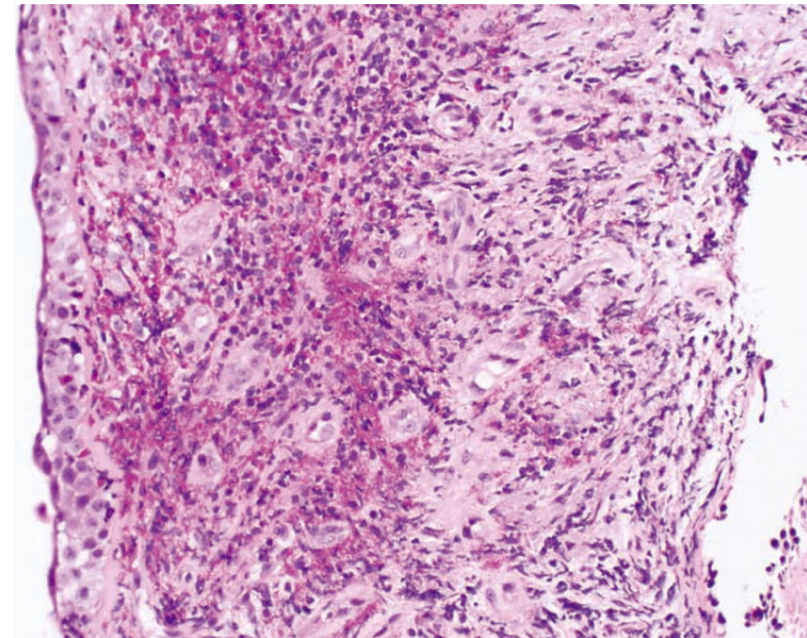
Results

Bronchoscopy

– Biopsy of the lymph node:
increased eosinophil
granulocytes

– Biopsy of the solitary
pulmonary nodule:
increased eosinophil
granulocytes

– Bronchoalveolar lavage:
19.5 % eosinophil
granulocytes (range < 1%)



Bronchoalveoläre Lavage (BAL)				
Z11.11383	Ergebnis		Normalwerte	
Volumen	30.0	ml		
Gesamtzellzahl	240.0	$\times 10^6/l$	bis 300	$\times 10^6/l$
Differential-Zellbild				
Makrophagen	17.5	%		%
	42.0	$\times 10^6/l$	N-R 50-100 R bis 300	$\times 10^6/l$
Lymphozyten	2.5	%	bis 13	%
	6.0	$\times 10^6/l$		$\times 10^6/l$
Neutrophile	60.5	%	bis 3	%
	145.2	$\times 10^6/l$		$\times 10^6/l$
Eosinophile	19.5	%	bis 1	%
	46.8	$\times 10^6/l$		$\times 10^6/l$
Mastzellen	0.0	%	<1	%
	0.0	$\times 10^6/l$		$\times 10^6/l$
Plasmazellen	0.0	%	<1	%
	0.0	$\times 10^6/l$		$\times 10^6/l$

Diagnosis:

- chronic eosinophilic pneumonia

Definition:

- Peripheral blood eosinophilia with radiographically or tomographically identified pulmonary abnormalities
- Lung tissue eosinophilia demonstrated in transbronchial or open lung biopsies
- Increased eosinophils in bronchoalveolar lavage fluid
- Exclusion of any known cause of eosinophilic disease
- Response to therapy

Causes:

- Idiopathic disorder, occurs predominantly in women and nonsmokers

Treatment:

- Oral or intravenous glucocorticoids for six to nine months

Course of disease

		25.10.2011 14:14	07.10.2011 08:57	07.10.2011 08:56	06.10.2011 07:30	05.10.2011 08:11	03.10.2011 08:30	29.09.2011 09:14	28.09.2011 15:30	28.09.2011 15:16	28.09.2011 11:12
Hämatologie											
Blutsenkung	6-11 mm									44	
CRP	<10 mg/l	<5	<u>Hinweis</u>	6.9		7.4	11.0	33.2			41.4
Hämoglobin	12.0-14.7 g/dl	11.4	<u>Hinweis</u>	11.2		11.0	11.8	11.2			11.9
Hämatokrit	34-42 %	34.4	<u>Hinweis</u>	33.2		33.1	34.2	34.1			35.8
Erythrozyten	4-5 10^6 /ul	3.84	<u>Hinweis</u>	3.73		3.75	3.88	3.83			4.04
MCV	83-94 fl	89.6	<u>Hinweis</u>	89.0		88.3	88.2	89.2			88.6
MCH	28-33 pg	29.8	<u>Hinweis</u>	30.1		29.2	30.4	29.3			29.4
MCHC	32-36 g/dl	33.2	<u>Hinweis</u>	33.8		33.1	34.4	32.8			33.2
EVB	%	14.9	<u>Hinweis</u>	13.6		13.2	13.4	13.5			13.3
Reticulocyten	0.4-2.5 %							0.71			
Reticulocyten	10^6 /ul							0.027			
Thrombocyten	150-350 10^3 /ul	276	<u>Hinweis</u>	268		240	236	236			262
Leucocyten	4-10 10^3 /ul	10.6	<u>Hinweis</u>	10.7		18.6	23.7	22.7			26.1
Maschinelle Differenzierung											
Neutrophile	42.2 - 75.2 %	87.1	<u>Hinweis</u>	14.8		15.0	11.0	22.2			40.2
Eosinophile	0.0 - 7 %	2.0	<u>Hinweis</u>	47.7		57.4	67.5	63.3			45.7
Basophile	0.0 - 4 %	0.3	<u>Hinweis</u>	0.9		0.5	0.9	0.6			0.5
Monocyten	2 - 14 %	1.9	<u>Hinweis</u>	9.0		6.3	3.8	3.5			2.3
Lymphocyten	20.5 - 51.1 %	8.7	<u>Hinweis</u>	27.6		20.8	16.8	10.4			11.3
Neutrophile	1.4 - 8.0 10^3 /ul	9.2	<u>Hinweis</u>	1.6		2.8	2.6	5.0			10.5
Eosinophile	0.0 - 0.7 10^3 /ul	0.2	<u>Hinweis</u>	5.1		10.7	16.0	14.4			11.9
Basophile	0.0 - 0.15 10^3 /ul	0.0	<u>Hinweis</u>	0.1		0.1	0.2	0.1			0.1
Monocyten	0.2 - 1.0 10^3 /ul	0.2	<u>Hinweis</u>	1.0		1.2	0.9	0.8			0.6
Lymphocyten	1.5 - 4 10^3 /ul	0.9	<u>Hinweis</u>	3.0		3.9	4.0	2.4			2.9
Manuelle Differenzierung											
Stabkernige	<18 %							0.0			
Segmentierte	30-50 %							22.5			
Eosinophile	2-4 %							57.5			
Basophile	0-1 %							0.5			
Monocyten	2-8 %							4.0			
Lymphocyten	25-40 %							15.5			
Plasmazellen	0-1 %							0.0			
Myeloblasten	%							0.0			
Promyelocyten	%							0.0			
Myelocyten	%							0.0			
Metamyelocyten	%							0.0			
Erythroblasten / 200 Lc								0			
Diagnostik								Komponente			

Thank you!

