

Spondylodiscitis.

Delayed diagnosis and the role of obesity

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NOTHING TO DISCLOSE!

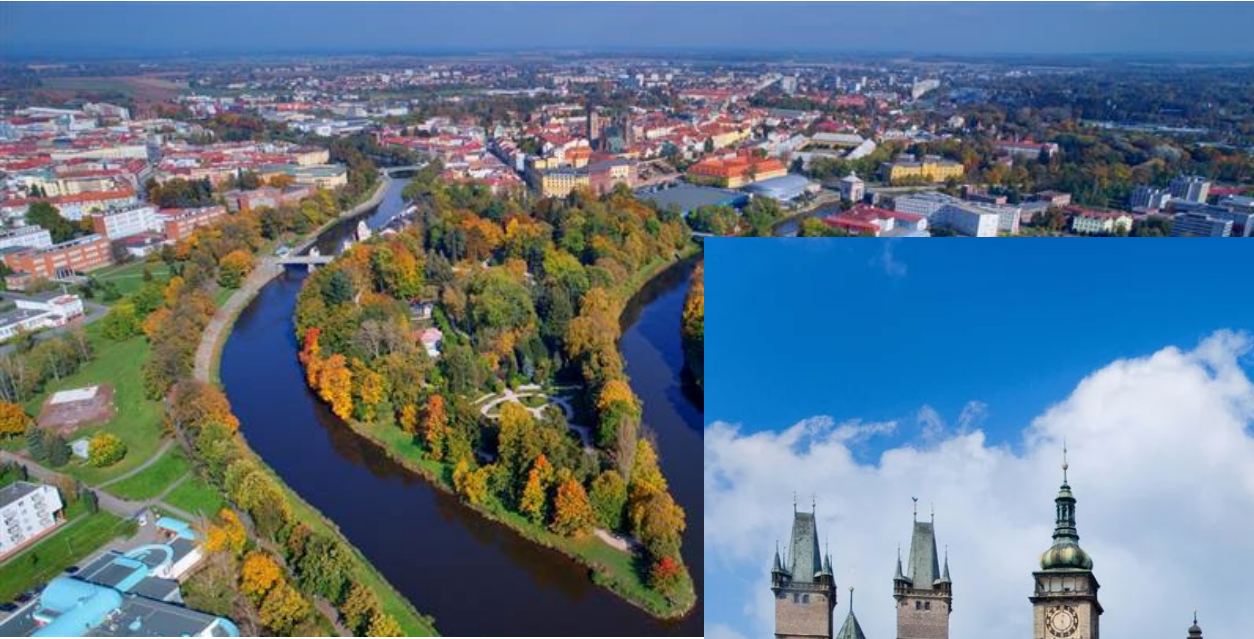
FUNDING ROUND



Hradec Králové



Hradec Králové („queen's castle“)





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A map of Europe with a callout box for Czechia. The callout box contains the following text:

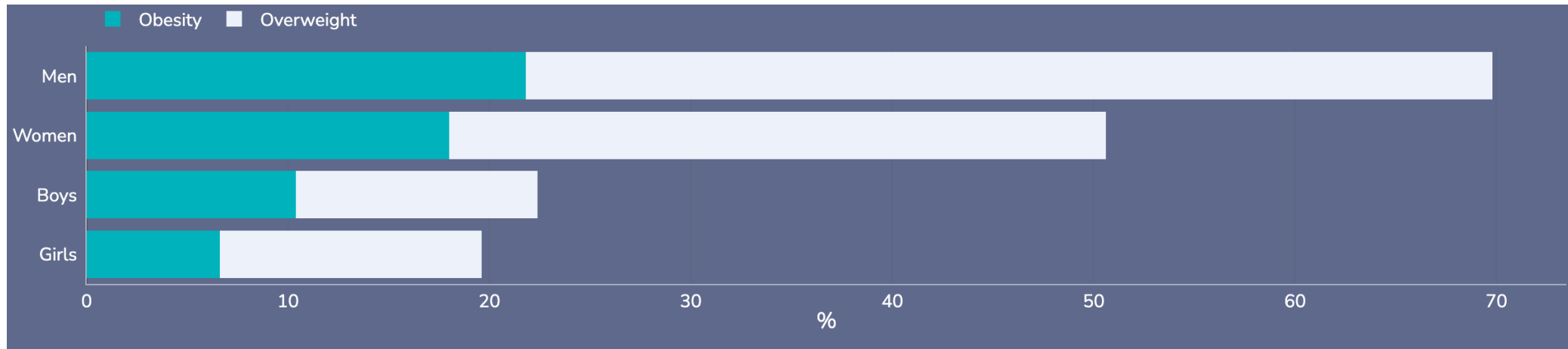
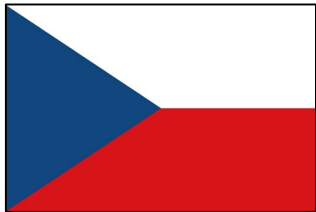
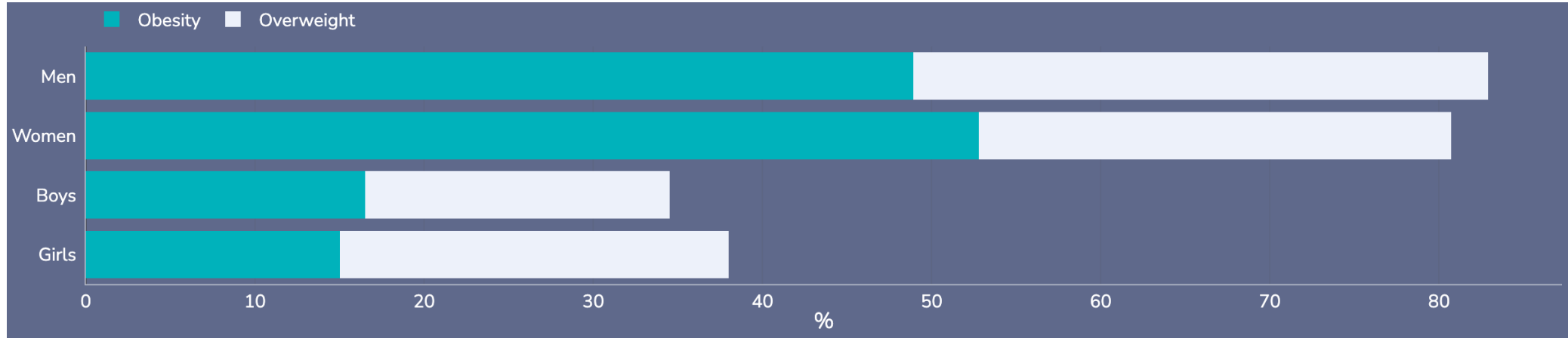
Czechia
Preobese (BMI \geq 25): **60%**
Obese (BMI \geq 30): **19.3%**

The map shows various shades of red and pink across Europe, indicating different levels of obesity prevalence. Czechia is highlighted in a darker shade of red. The callout box is white with a black border and a pointer to the Czechia region.

Czechia

Preobese (BMI \geq 25): **60%**

Obese (BMI \geq 30): **19.3%**





Spondylodiscitis (SD)

... vertebral osteomyelitis

cca 6 (**7.5**) / 100 000 hab./year

3rd most common osteomyelitis at
age > 50 let

endogenous infection

Spondylodiscitis (SD)

Monobacterial infection

> 50% *Staphylococcus aureus*

11–25% *Escherichia coli*

(*Mycobacterium tuberculosis*)

Urinary/respiratory tract, soft tissue...

Risk factors

A person is seen from behind, rappelling down a dark, craggy rock face. They are wearing a black t-shirt, blue jeans, and a climbing harness. Their arms are outstretched to the sides, and they are holding onto a white rope that extends from the top of the frame. The background is a vast, dark, and textured rock wall.

Age (>35), sex (male), obesity

Polymorbidity (diabetes, arthritis, malignancy)

Anticoagulants, drugs

Immunosuppression, HIV...

Diagnosis

Delay: 2-12 w up to 6 MONTHS!!
- mortality cca 20%

Anamnesis

Physical examination

Laboratory

Imaging



Why is this delay???



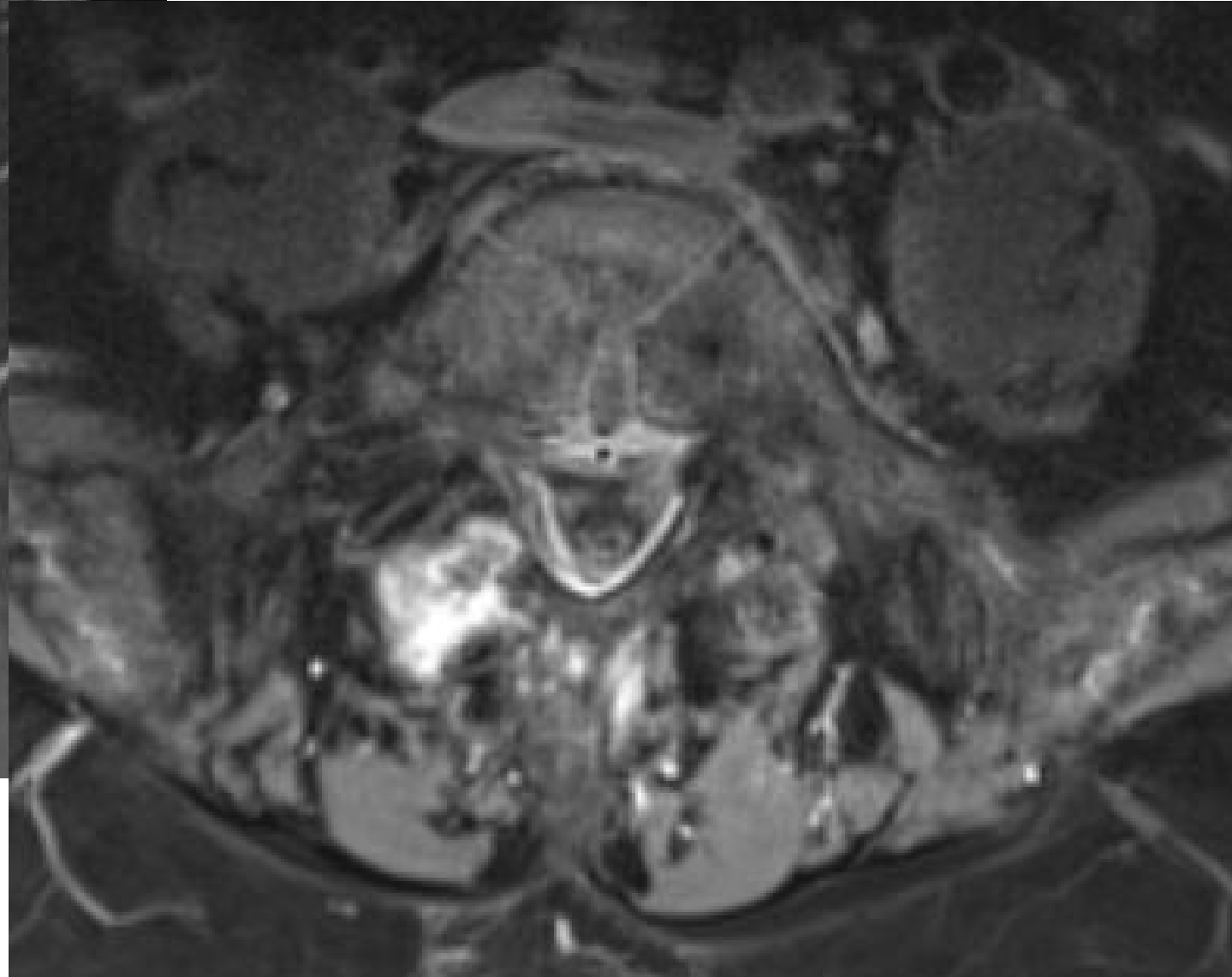


Anamnesis

Physical examination



Imaging



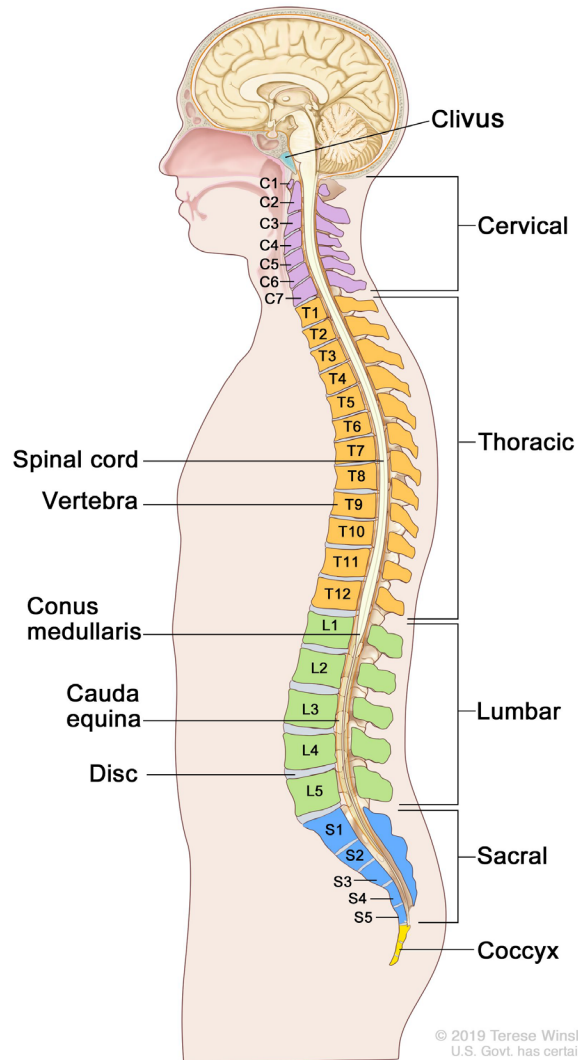
MRI

Retrospective analysis

- OPERATED spondylitis, discitis, spondylodiscitis
- 2015–2020
- 94 patients (35 ♀ □, 50 ♂ □)
 - mean age 66 years
 - 81 patients (86.17%) with etiologic diagnosis
Staphylococcus aureus in 52 patients



Localization of SD



Proportions - Level

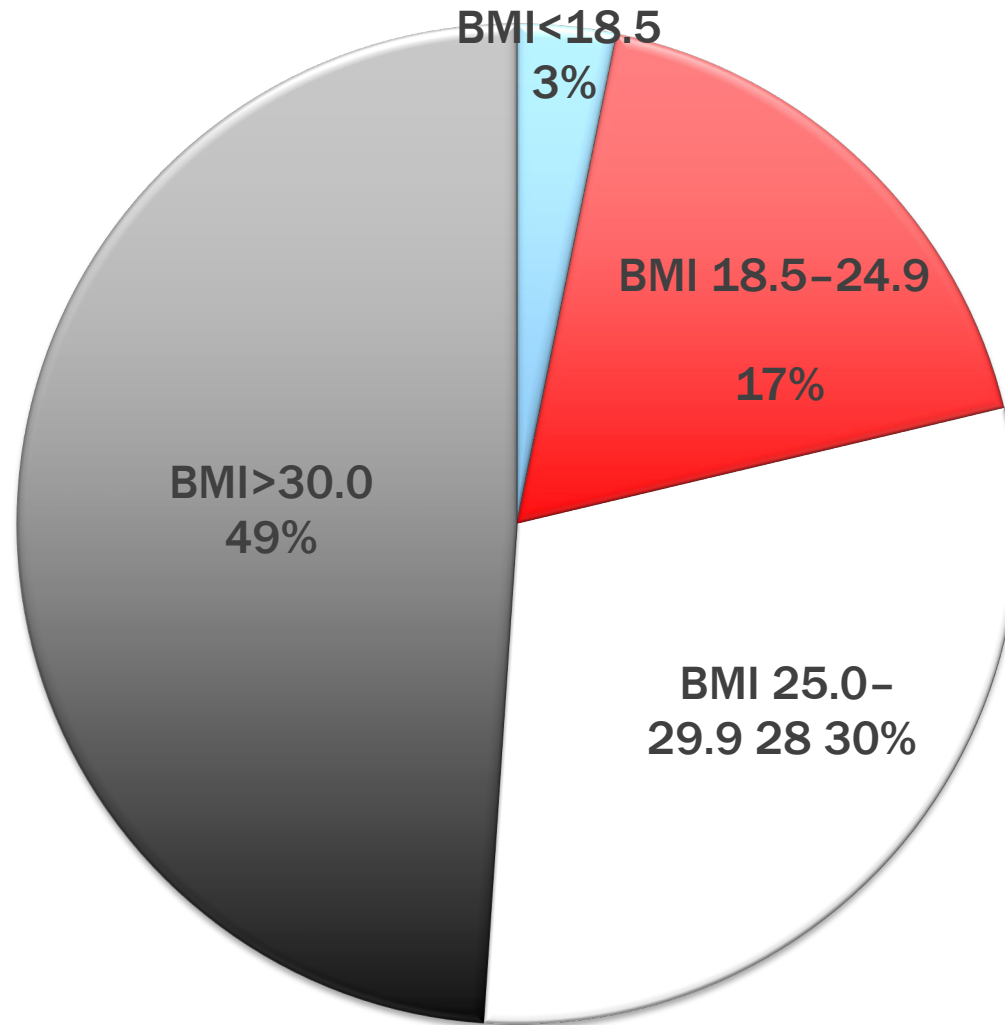
Level	Count	Proportion
C	15	0.179
T	25	0.298
L	44	0.524

84

BMI

Czechia

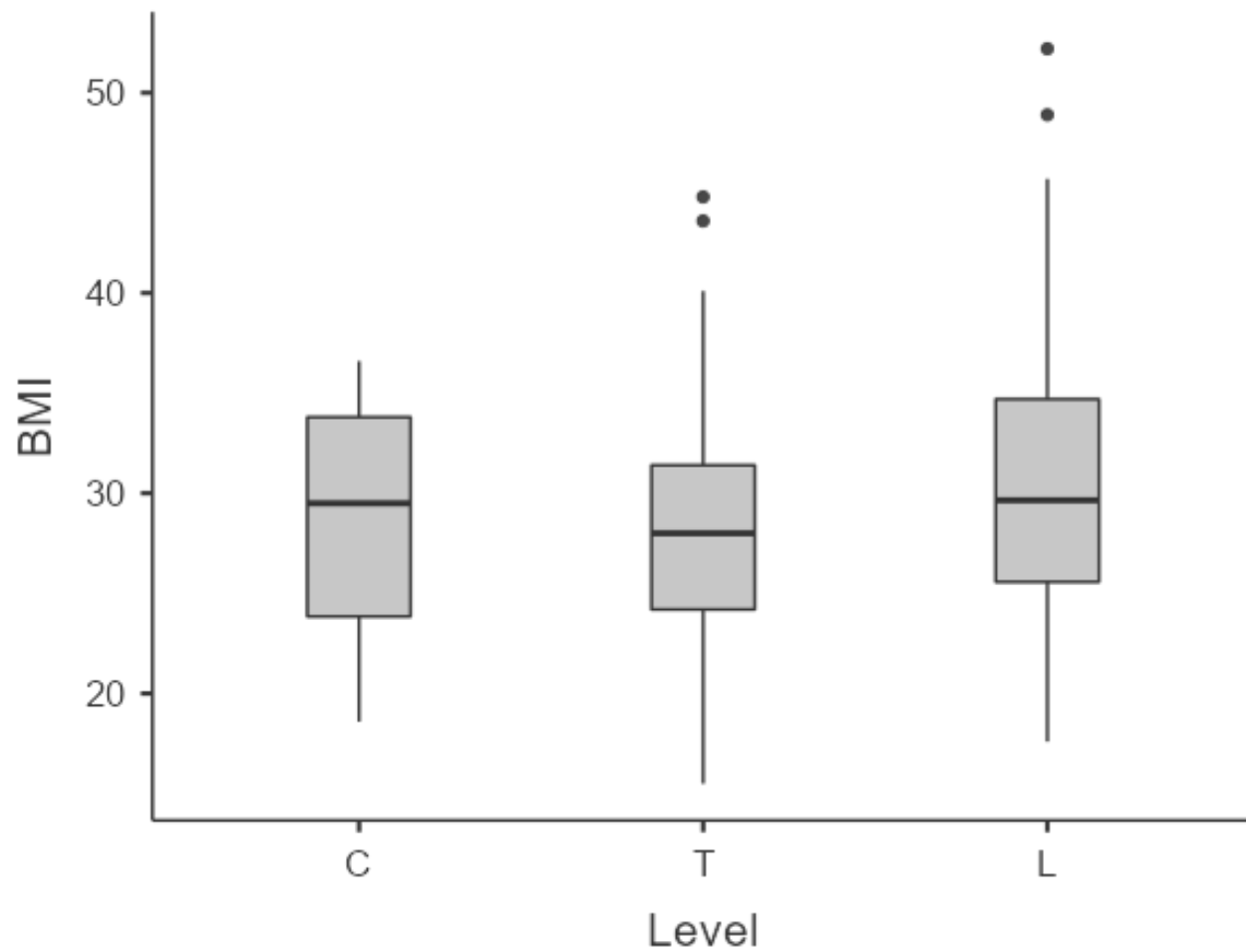
Obese (BMI \geq 30): **19.3%**



BMI x Localization

	Level	N	Mean	SD	Minimum	Maximum
BMI	C	15	28.340	6.216	18.600	36.600
	T	25	29.004	7.289	15.500	44.800
	L	44	30.557	7.637	17.600	52.200

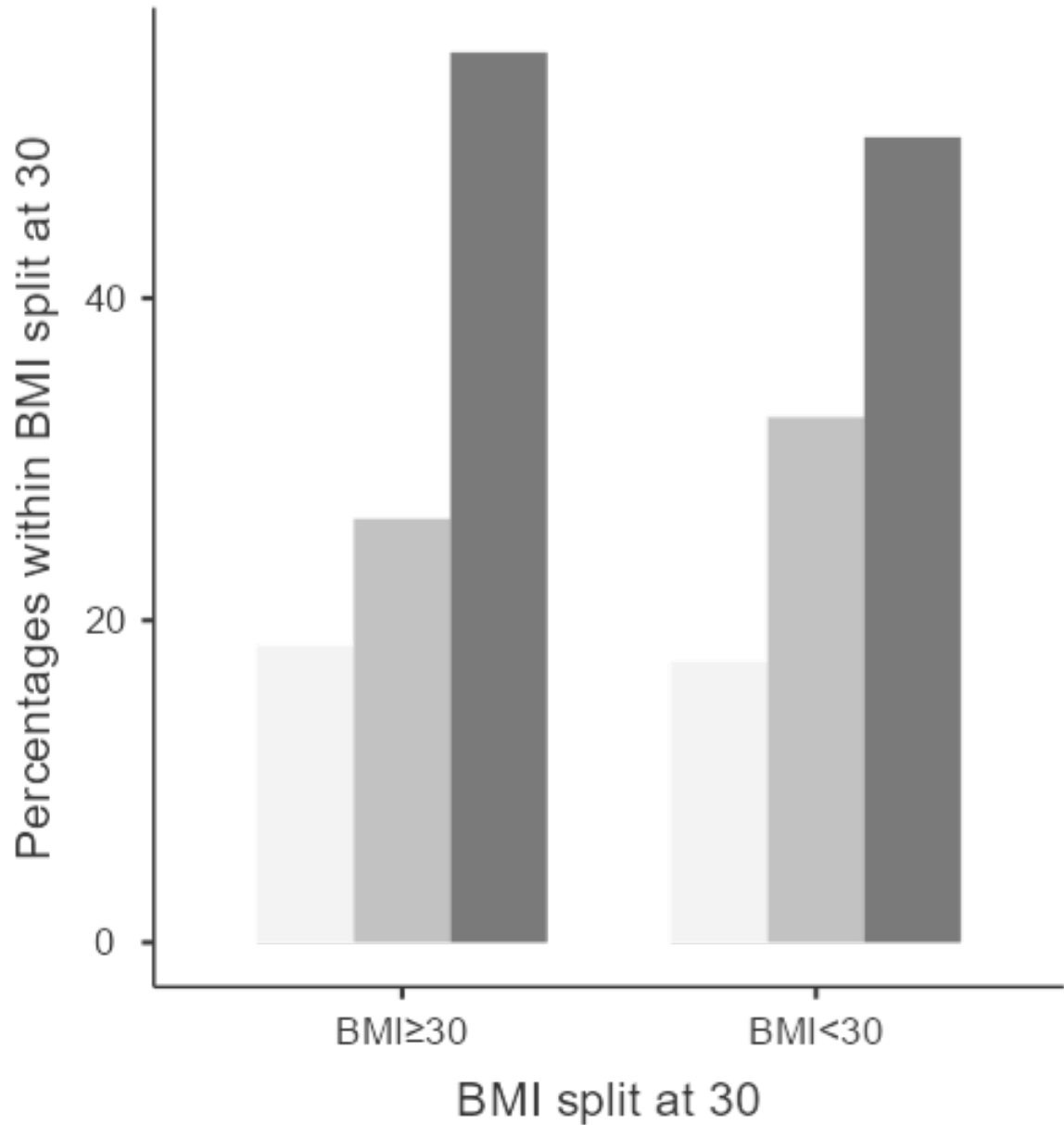
BMI x Localization



BMI \geq 30 x Localization

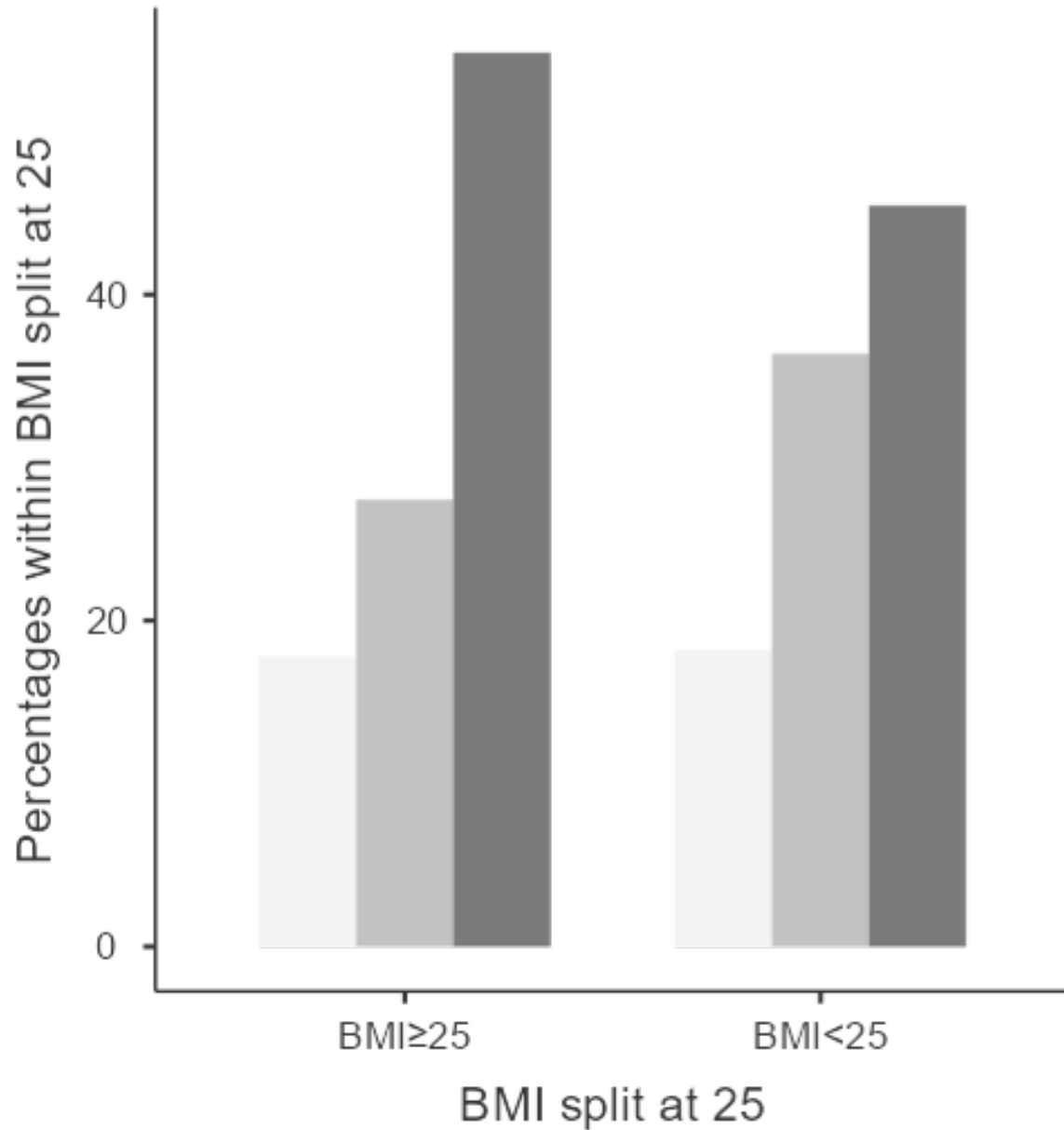
BMI split at 30	Level			Total
	C	T	L	
BMI \geq 30	7	10	21	38
BMI < 30	8	15	23	46
Total	15	25	44	84

BMI \geq 30 x Localization



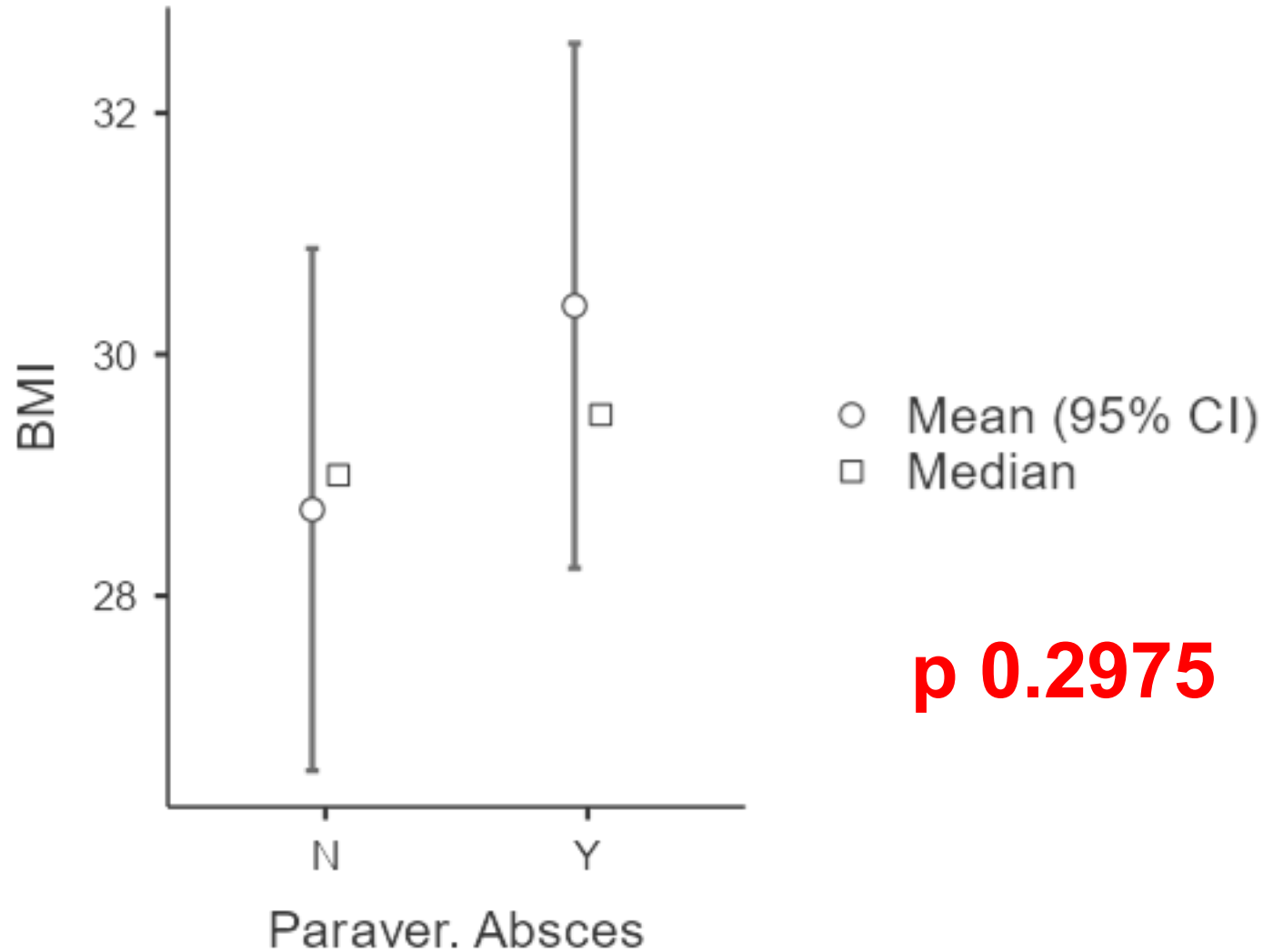
p 0.819

BMI \geq 25 x Localization

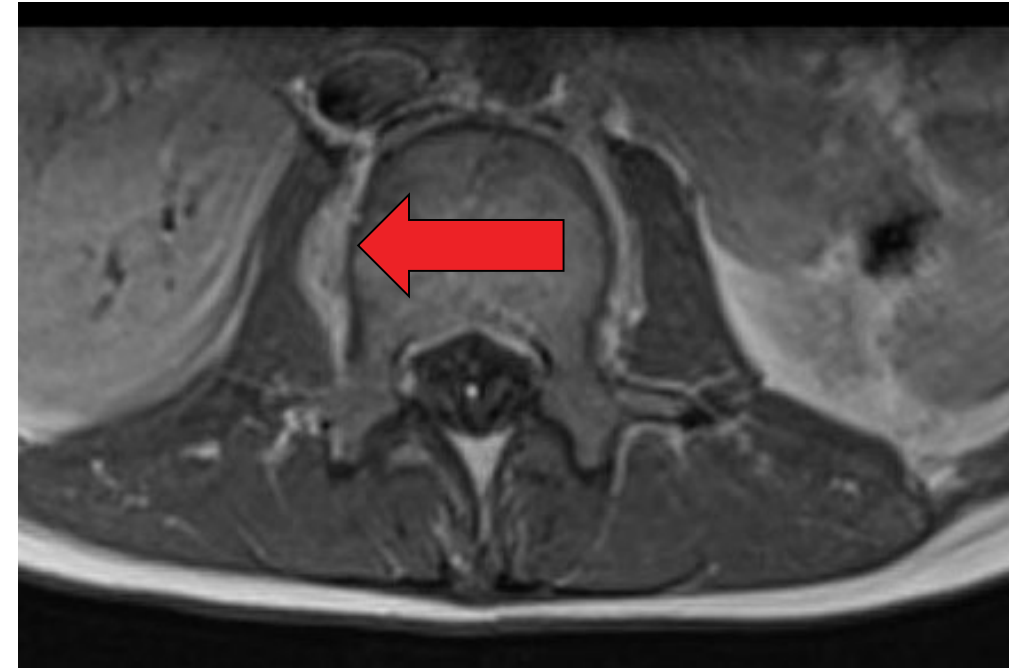


p 0.7007

BMI **x** Paravertebral absces



p 0.2975



BMI \geq 30 **x** Paravertebral absceses

BMI split at 30	Paraver. Absceses		Total	p 0.415
	N	Y		
BMI \geq 30	14	24	38	
BMI $<$ 30	21	25	46	
Total	35	49	84	

Level	Count	Proportion
E	7	0.083
E, P	7	0.083
P	50	0.595
F	4	0.048
S	3	0.036
F, P	1	0.012
E, P, R	1	0.012
E, R	1	0.012
P, R	2	0.024
P, S	4	0.048
?	2	0.024
I	2	0.024

First signs

P - pain

E - paresis

I - infection signs (local, CRP)

F - fever

R - urinary retention

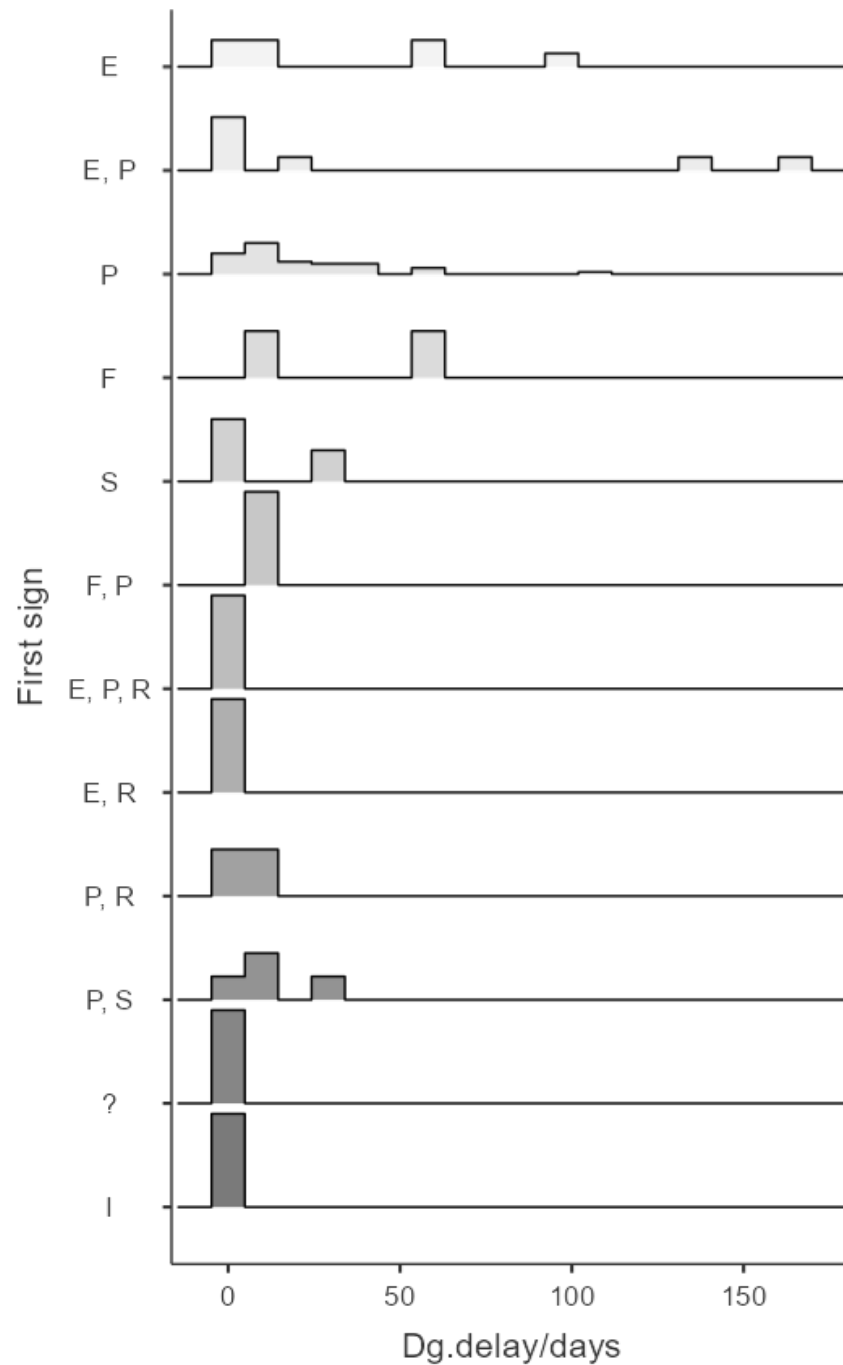
S - sepsis

p < 0.0001



Signs x Delay

	First sign	N	Missing	Mean	Median	SD	Minimum	Maximum
Dg.delay/days	E	7	0	32.571	7.000	38.755	0.000	98.000
	E, P	7	0	46.571	0.000	73.125	0.000	165.000
	P	45	5	19.667	14.000	21.457	0.000	110.000
	F	4	0	33.250	31.500	30.445	7.000	63.000
	S	3	0	9.333	0.000	16.166	0.000	28.000
	F, P	1	0	7.000	7.000	NaN	7.000	7.000
P - pain	E, P, R	1	0	0.000	0.000	NaN	0.000	0.000
E - paresis	E, R	1	0	0.000	0.000	NaN	0.000	0.000
I - infection signs	P, R	2	0	3.500	3.500	4.950	0.000	7.000
F - fever	P, S	4	0	10.500	7.000	12.124	0.000	28.000
R - urinary retention	?	1	1	0.000	0.000	NaN	0.000	0.000
S - sepsis	I	2	0	0.000	0.000	0.000	0.000	0.000



Paresis
Pain
Fever

The aim

Pathogen

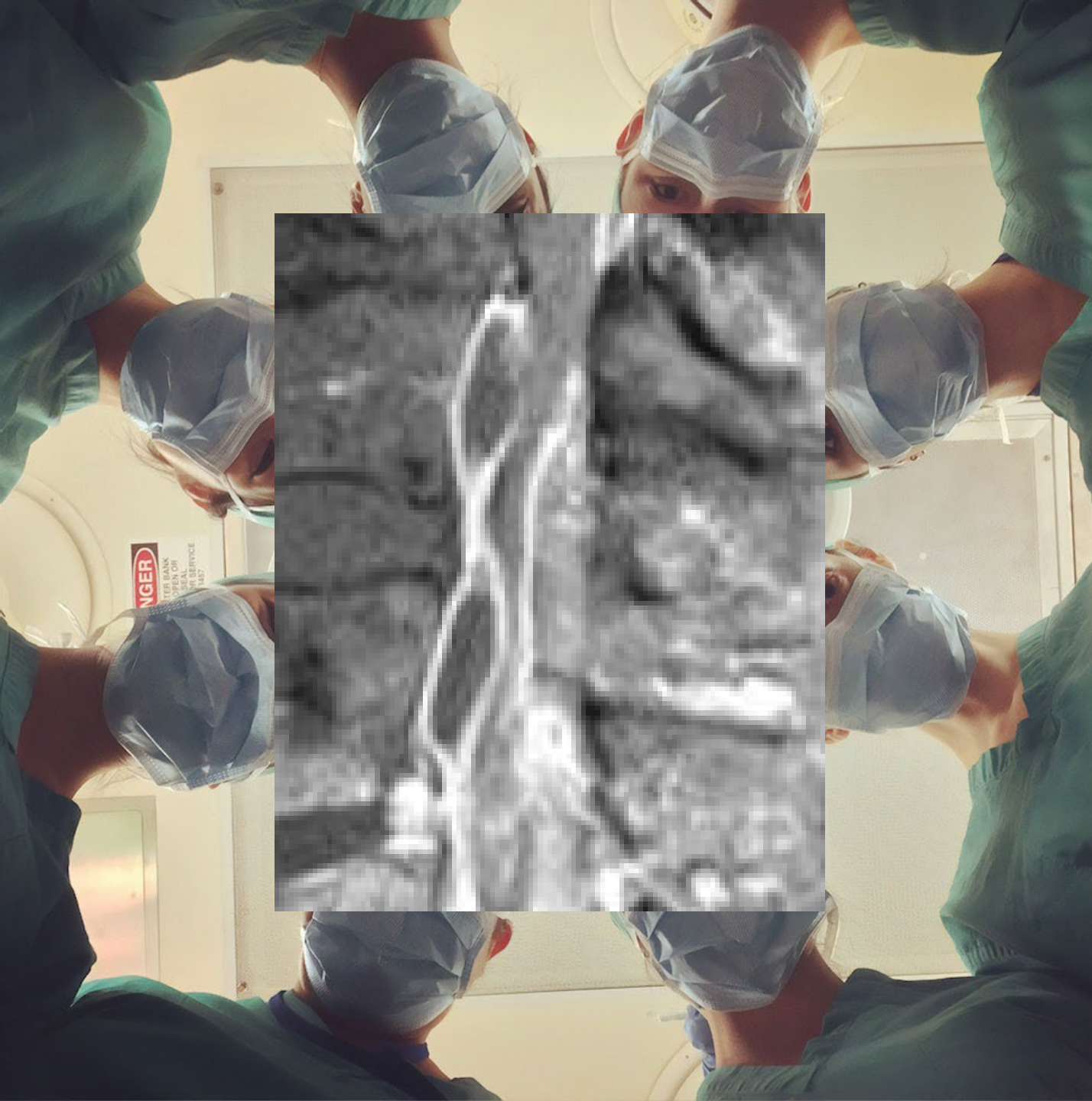
Primary infection

Blood culture

Biopsy

Surgery





Treatment

ATB – 8W

(4W intravenous)



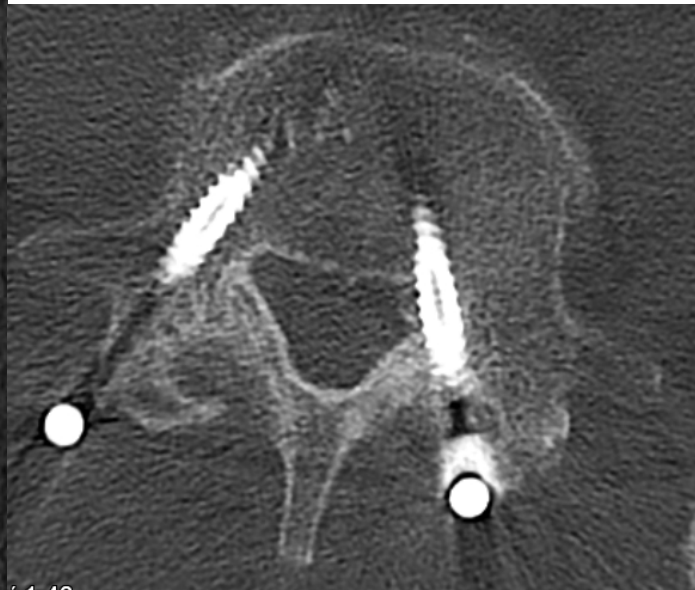
Stabilization – indication

28 patients

Instability

Rapid postoperative
patients' mobilisation

Reduces the risks of
pseudarthrosis and
kyphotic deformation





Take work message



(determinants & signs)

Pathogen

Length of **ATB** therapy

Function restoration (RHB...)





Clinical signs



Back pain

+

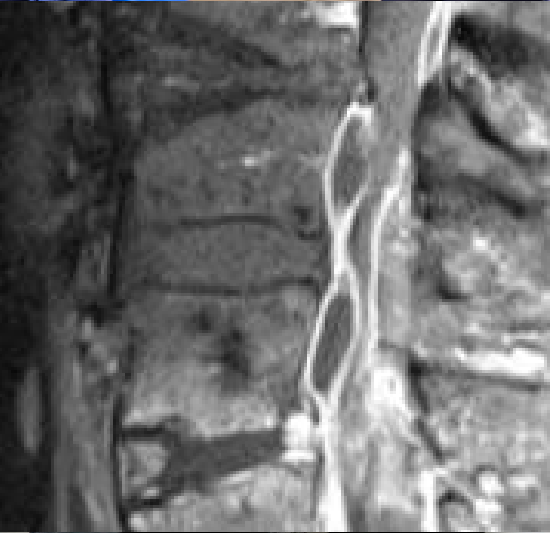
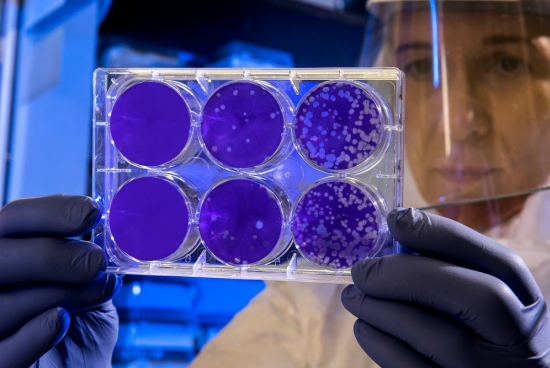
Fever, fatigue, other ongoing inflammation, sepsis...

Neurological symptoms

Urological symptoms

Spinal deformities





Diagnositics

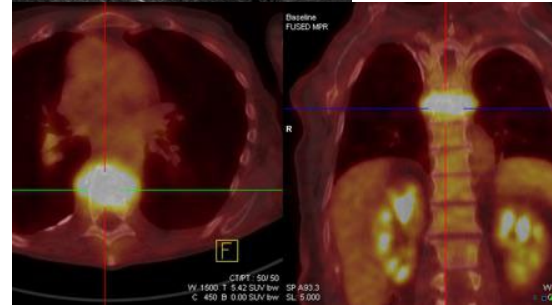
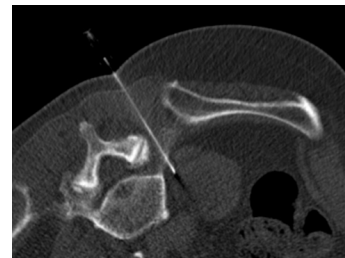
CRP (90-98%)

Procalcitonin (sepsis)

Blood culture and PCR !!

MRI (CT)

PET-CT



Literature

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Thank you for your attention

