

What is trauma?

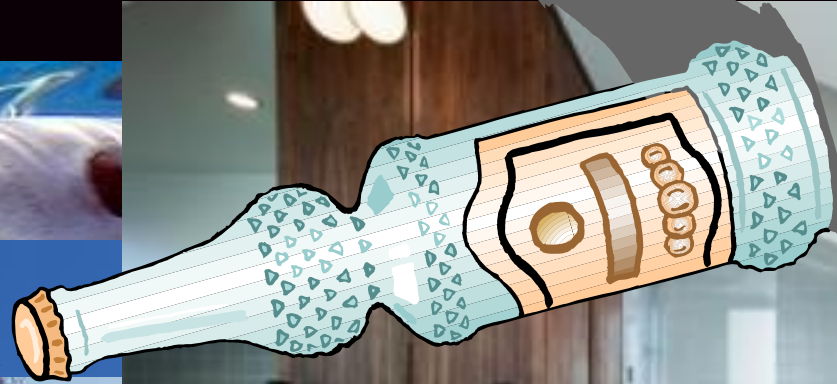
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Radiology Karolinska

Trauma commonest cause
of death for all young
people

Young everyone
age < 45

Trauma causes



WHO Global burden of disease 2010-2021

□ 1 DALY =
 □ represents the
 loss of the
 equivalent of
 one year of full
 health.

□ disability-adjusted life
 years

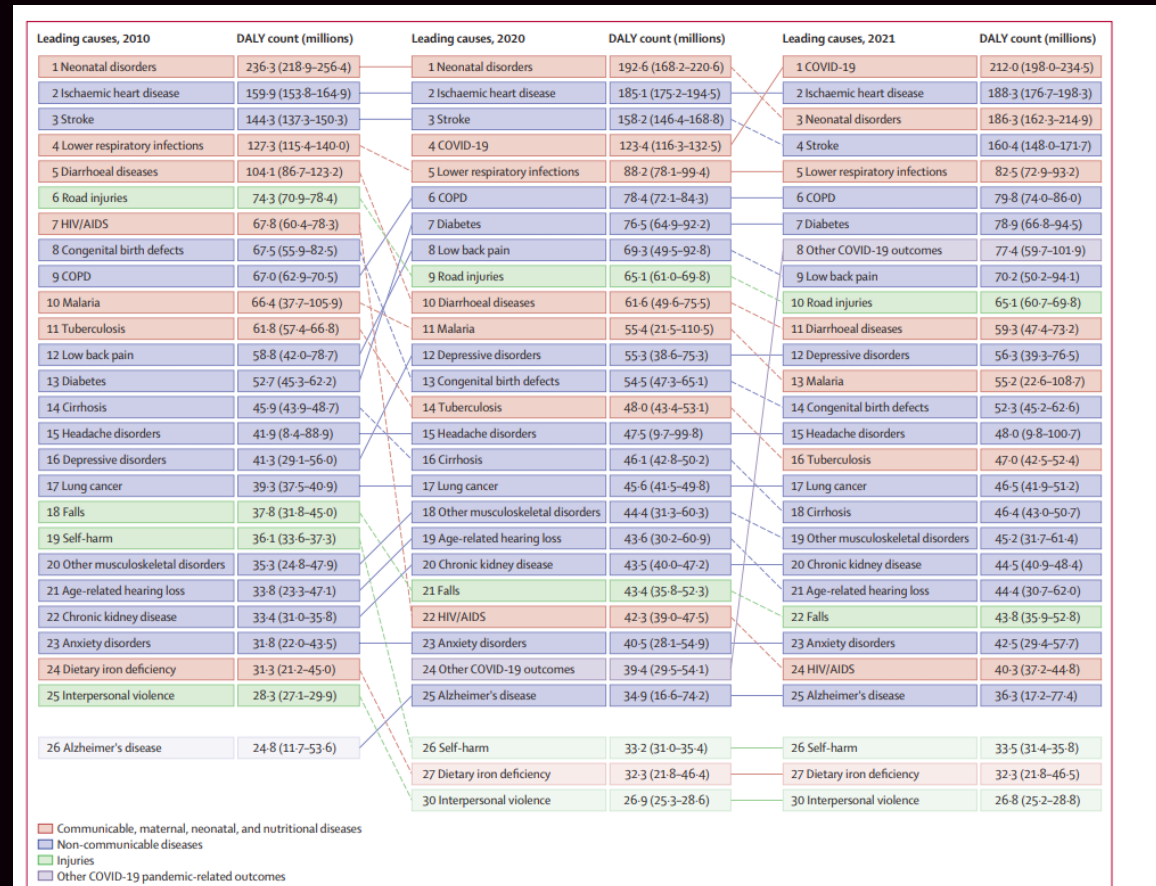


Figure 1: Leading 25 Level 3 causes of global DALYs in 2010, 2020, and 2021, for both sexes combined, and all ages
 Causes are connected by lines between time periods, where solid lines represent an increase or no change in rank and dashed lines represent a decrease in rank. Faded colours indicate that the cause is not within the top 25 causes of DALYs for that year. Data in parentheses are 95% uncertainty intervals. COPD=chronic obstructive pulmonary disease. DALY=disability-adjusted life-year.

Million DALY's

- Covid 213
- Heart 188
- Road 65
- Falls 43
- Self harm 33
- Interpersonal 26
- Sum Trauma 167

Leading cause, 2020	DALY count (millions)
1 COVID-19	213.0 (198.0-234.0)
2 Ischaemic heart disease	188.3 (176.7-198.0)
3 Neonatal disorders	186.3 (162.3-214.0)
4 Stroke	166.6 (148.0-179.7)
5 Lower respiratory infections	82.3 (72.9-93.7)
6 COPD	79.8 (74.0-86.0)
7 Diabetes	78.9 (66.8-94.0)
8 Other COVID-19 outcomes	77.4 (59.7-101.0)
9 Low back pain	76.7 (59.2-94.1)
10 Road injuries	65.1 (50.2-80.0)
11 Neonatal disorders	59.3 (47.4-73.7)
12 Depression disorders	58.3 (49.3-70.0)

WHO REPORT traffic

- India 1998
- 217 000 dead
- 7,2 Million! wounded

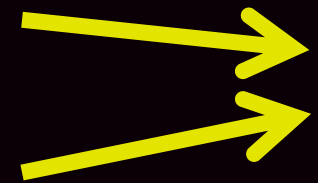
- Globally 1,19 million traffic deaths 2020

- 1,813,188 COVID-19 deaths were reported in 2020

-
- Trauma is an ongoing global pandemic!
 - Hits the young and the frail.

Global trauma

- Road traffic crashes cost most countries 3% of their gross domestic product/ WHO 2023
- 2022
- Sweden 227 deaths = 23/M Trend
- US 42795 deaths =130/M Trend

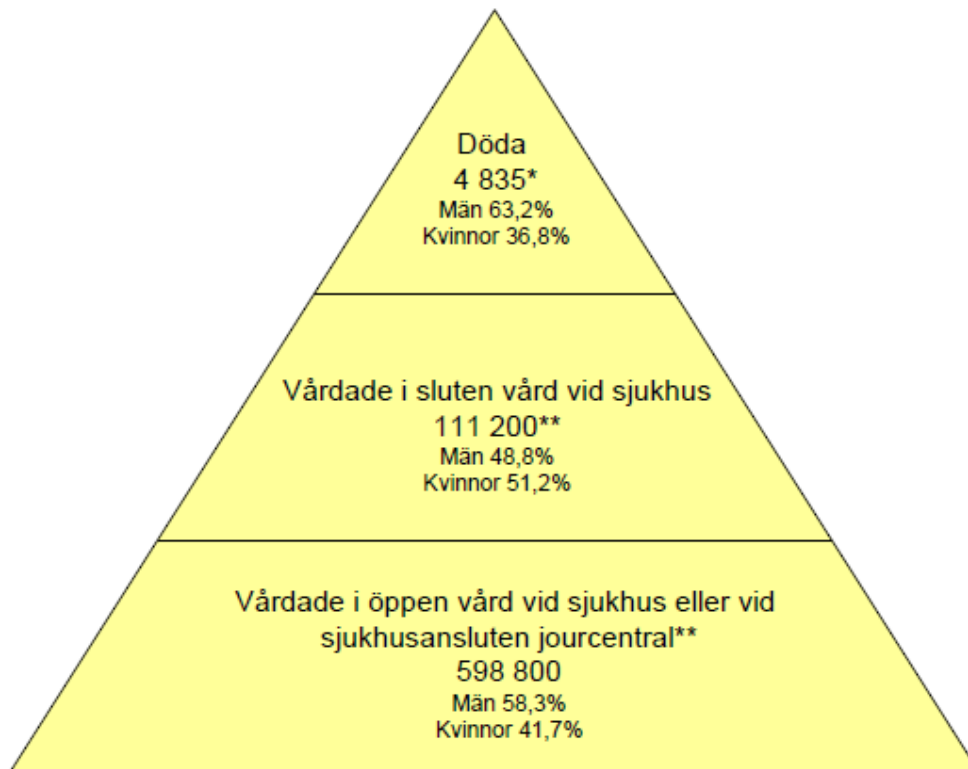


Stockholm



Sweden, the safest country?

Alla skador



*Dödsorsaksregistret 2007, **IDB 2008

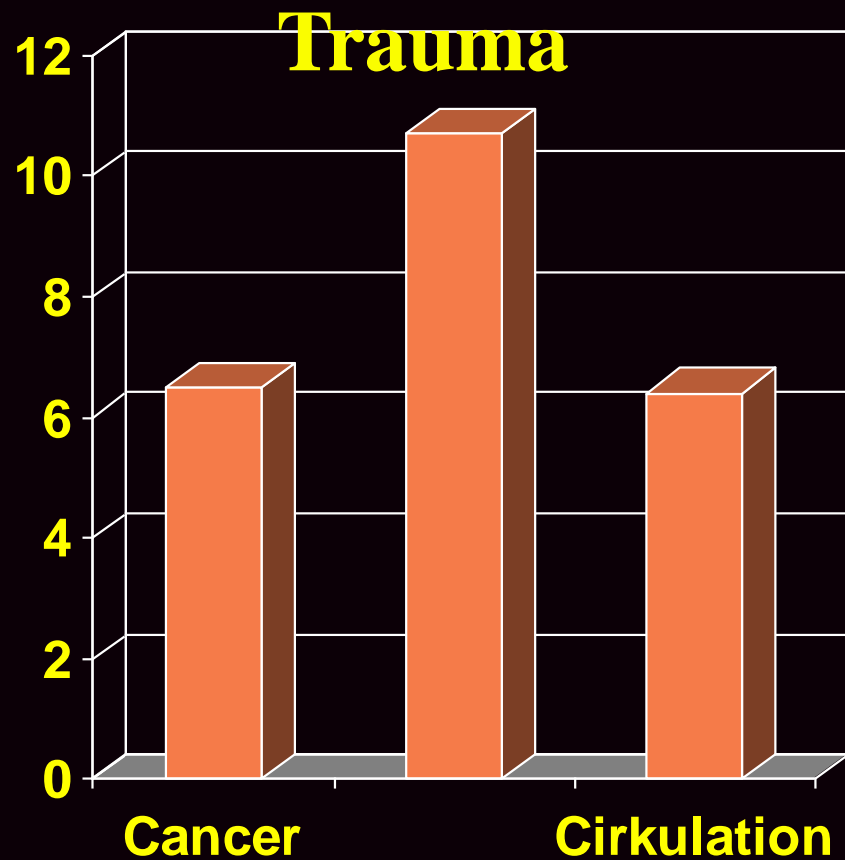
- Deaths 483/ M
- Hospital >11 000/ M
- Out patient care
» 60 000/ M

Tourism...

- Yearly ca 100 Swedes die in Thailand
- > 50% traffic accidents....

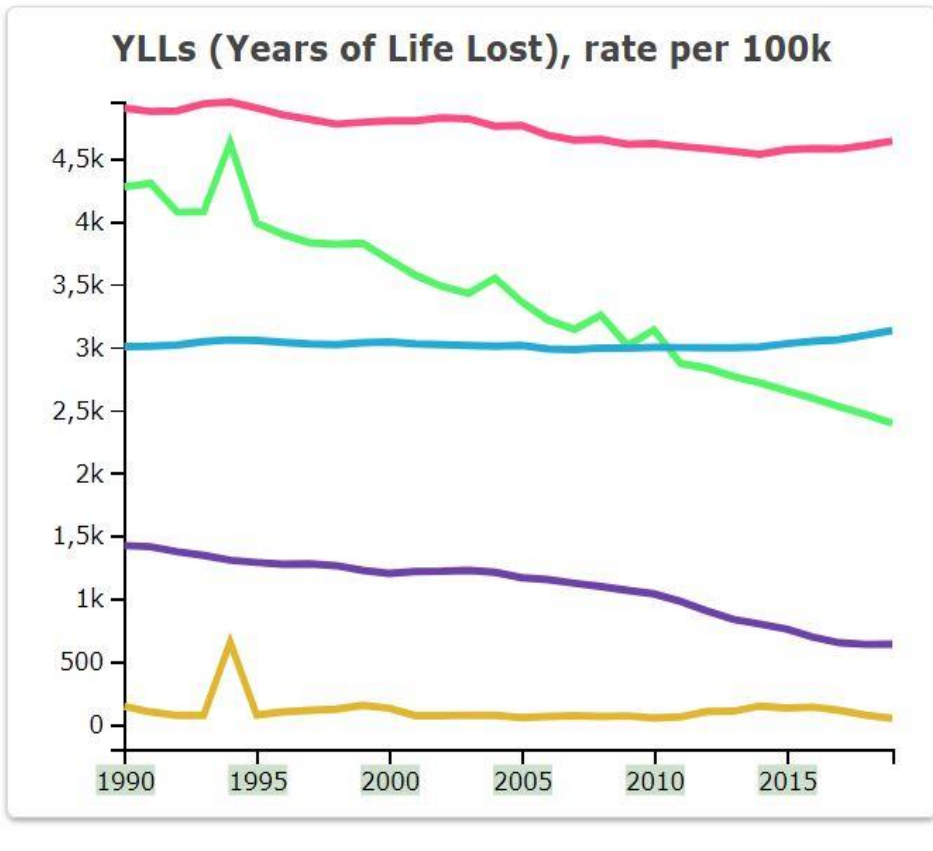


Lost young life years



□ <65

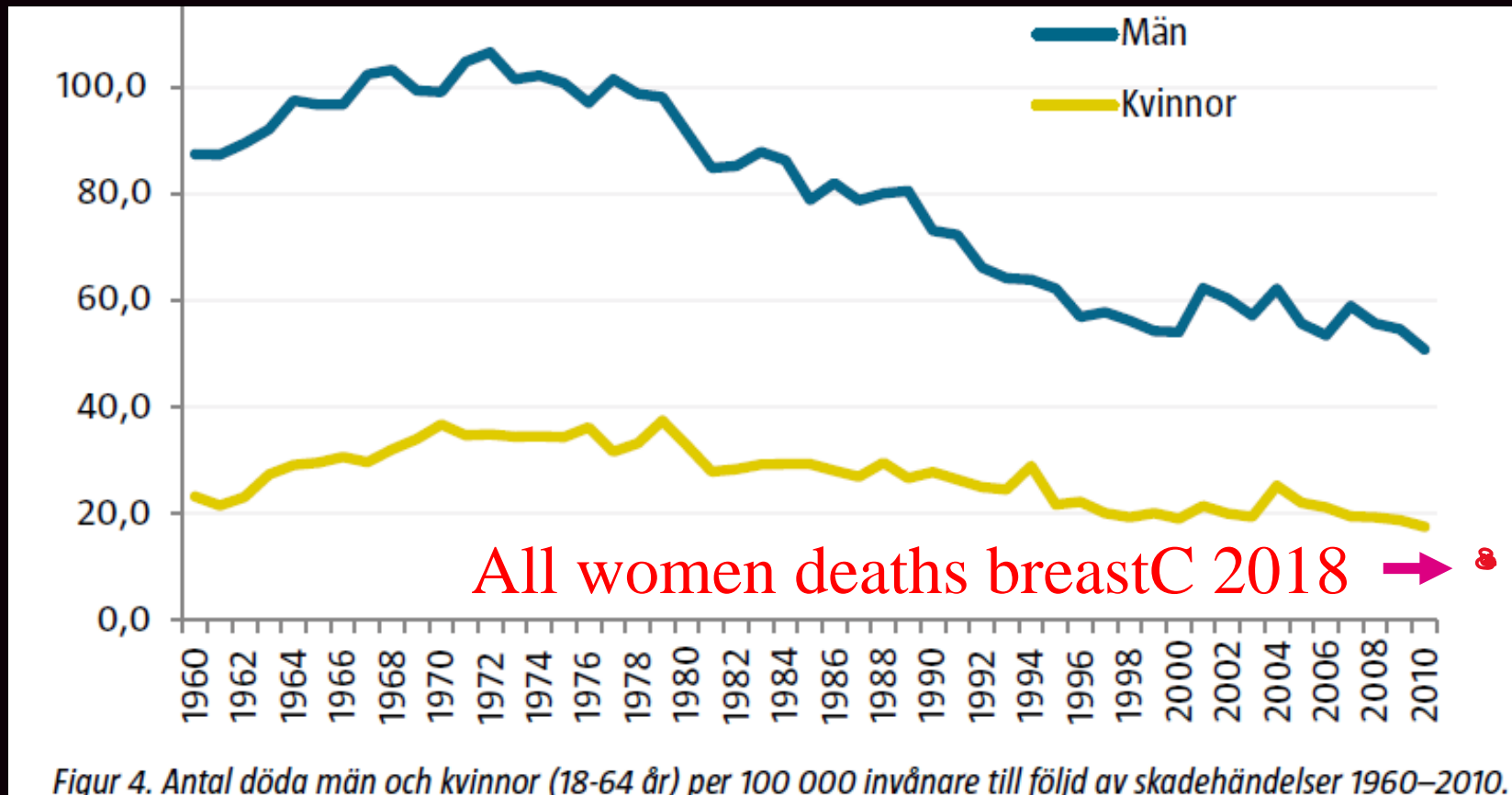
Global burden of disease



- Global, Both sexes, All ages, Neglected tropical diseases and malaria
- Global, Both sexes, All ages, Cardiovascular diseases
- Global, Both sexes, All ages, Conflict and terrorism
- Global, Both sexes, All ages, Injuries
- Global, Both sexes, All ages, Total cancers



Trauma deaths 18-64 yo Sweden 1960-



Figur 4. Antal döda män och kvinnor (18-64 år) per 100 000 invånare till följd av skadehändelser 1960–2010.

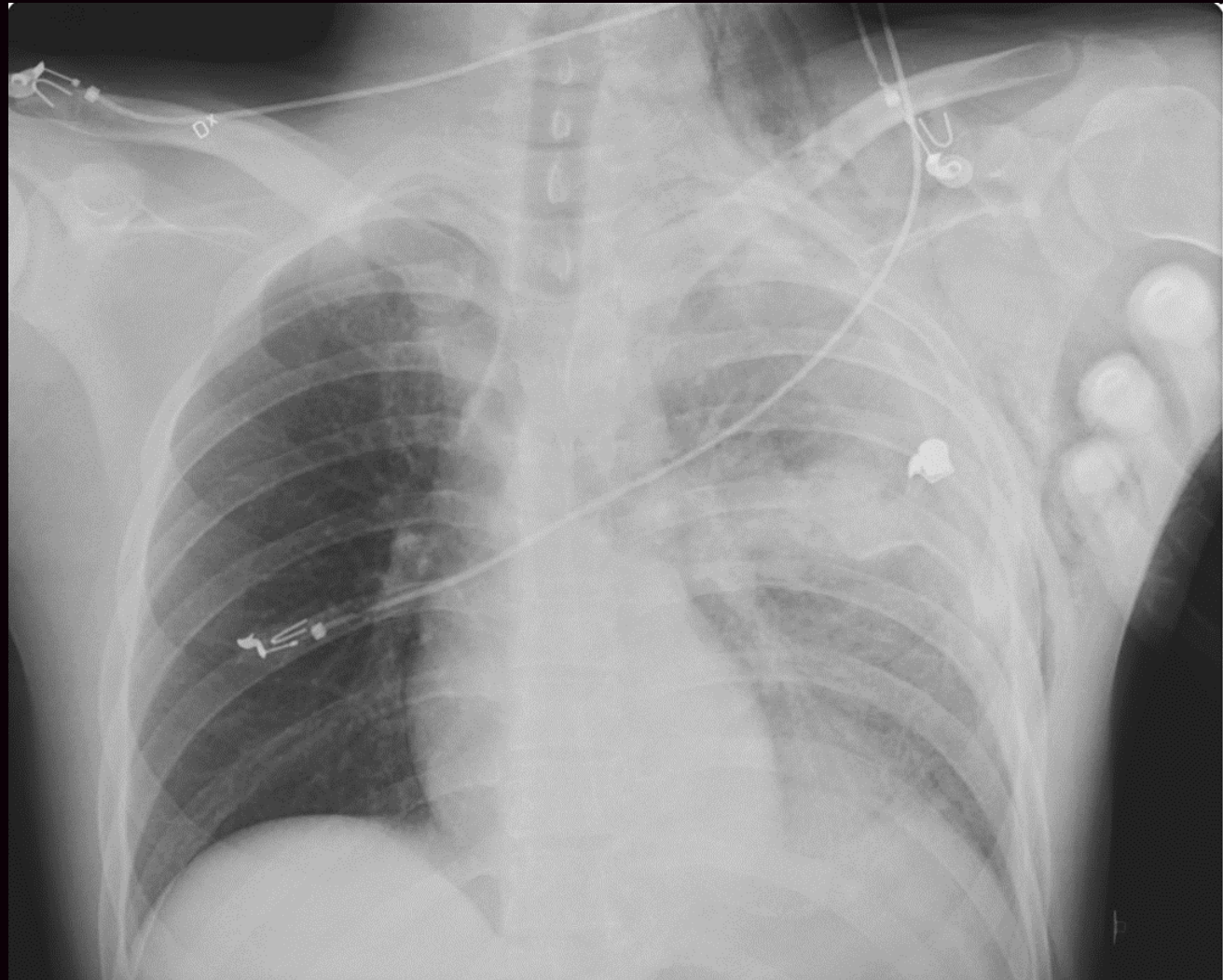
Trauma 1 definitions Sweden

A Physiology

- » Breathing support needed
- » Breath freq <10 or >29
- » BP <90
 - Or no radial pulse
 - Children :
 - Capillary refill $>2s$
 - Pulse 0-1 yo <90 or >190
 - 1-5 yo <70 or >160
- » GCS ≤ 13 (RLS ≥ 3)

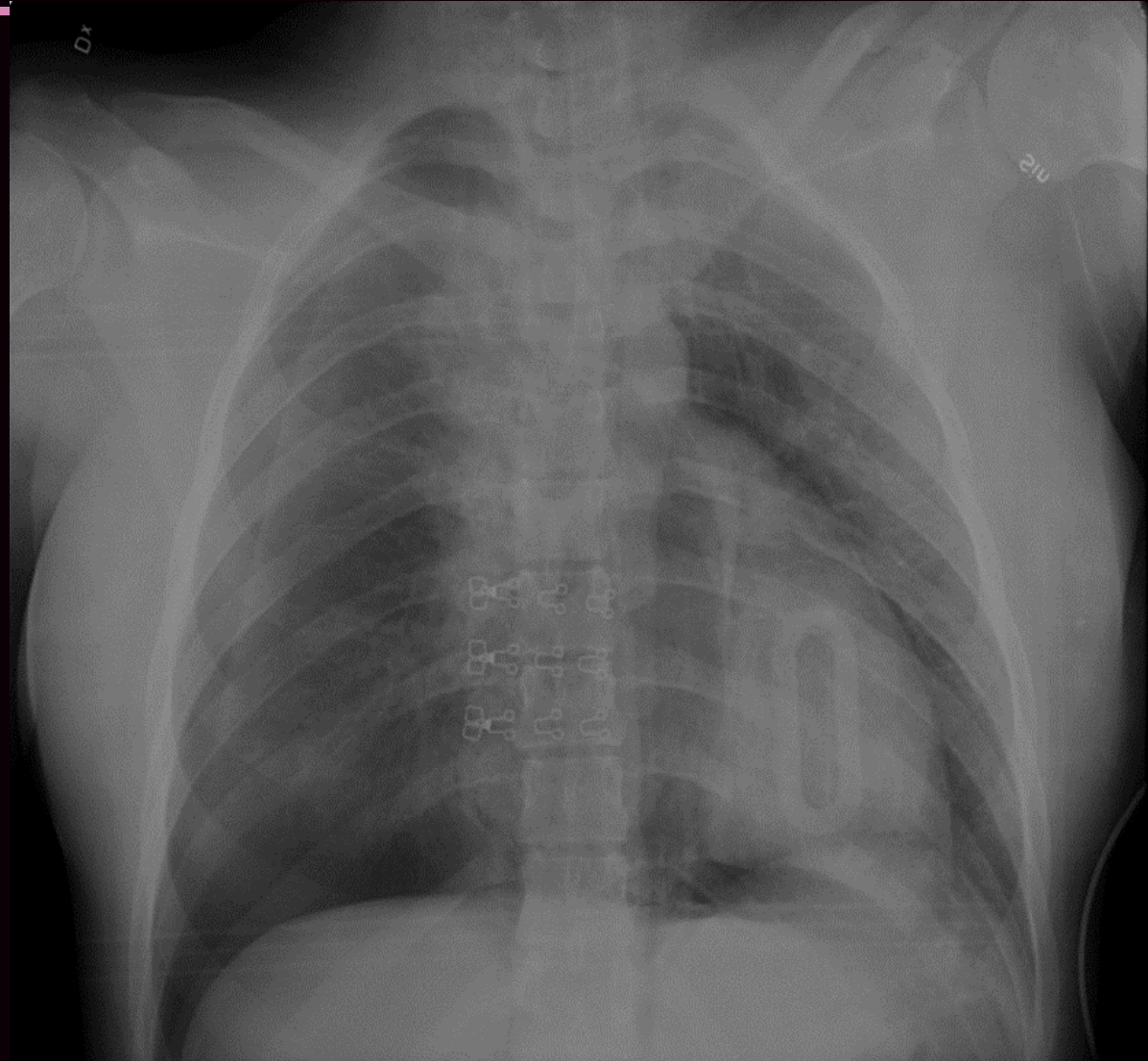
What is trauma

□ White



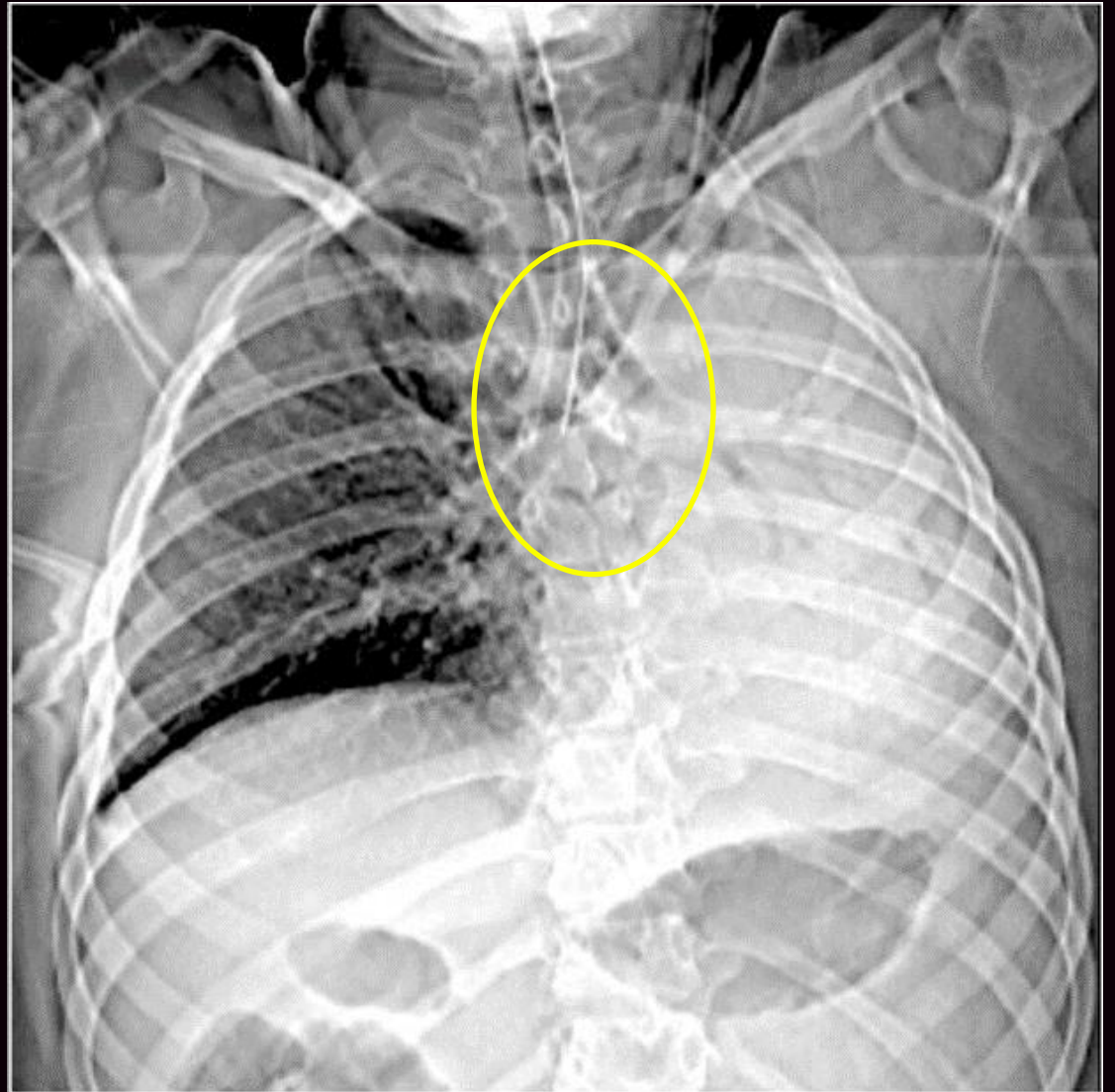
What is trauma

□ Black



Timely interpretation

- Black and white?



Trauma 1 alert definitions Swe

B Anatomical criteria

- Penetrating above knee/ elbow
- Open head wound
- Threatend airway
- Deformed chest
- Pelvis c High energy
- Spinal cord
- ≥ 2 long bones fx
- Amputations above hand/foot
- Arge bleedout
- Burn $\geq 18\%$ or inhalation

Trauma 2 alert definitions Swe

- Car ≥ 50 km/h
- Thrown from vehicle
- Trapped ≥ 20 min
- MC ≥ 35 km/h
- Fall ≥ 5 m
 - » Child Fall ≥ 3 m

Trauma alert observanda

- Worsening condition
- Anticoagulants etc
- Age <5 or >60
- Hypothermia <35 deg
- Drugs
- Pregnancy

Run over by lorry

- Breathing frequency 19
- Pulse 88
- BP 112

- Trauma Alert??

Run over by lorry

2007-08-15, 16:15:56
31607993 02

Karolinska Solna DTCOP

CT

1

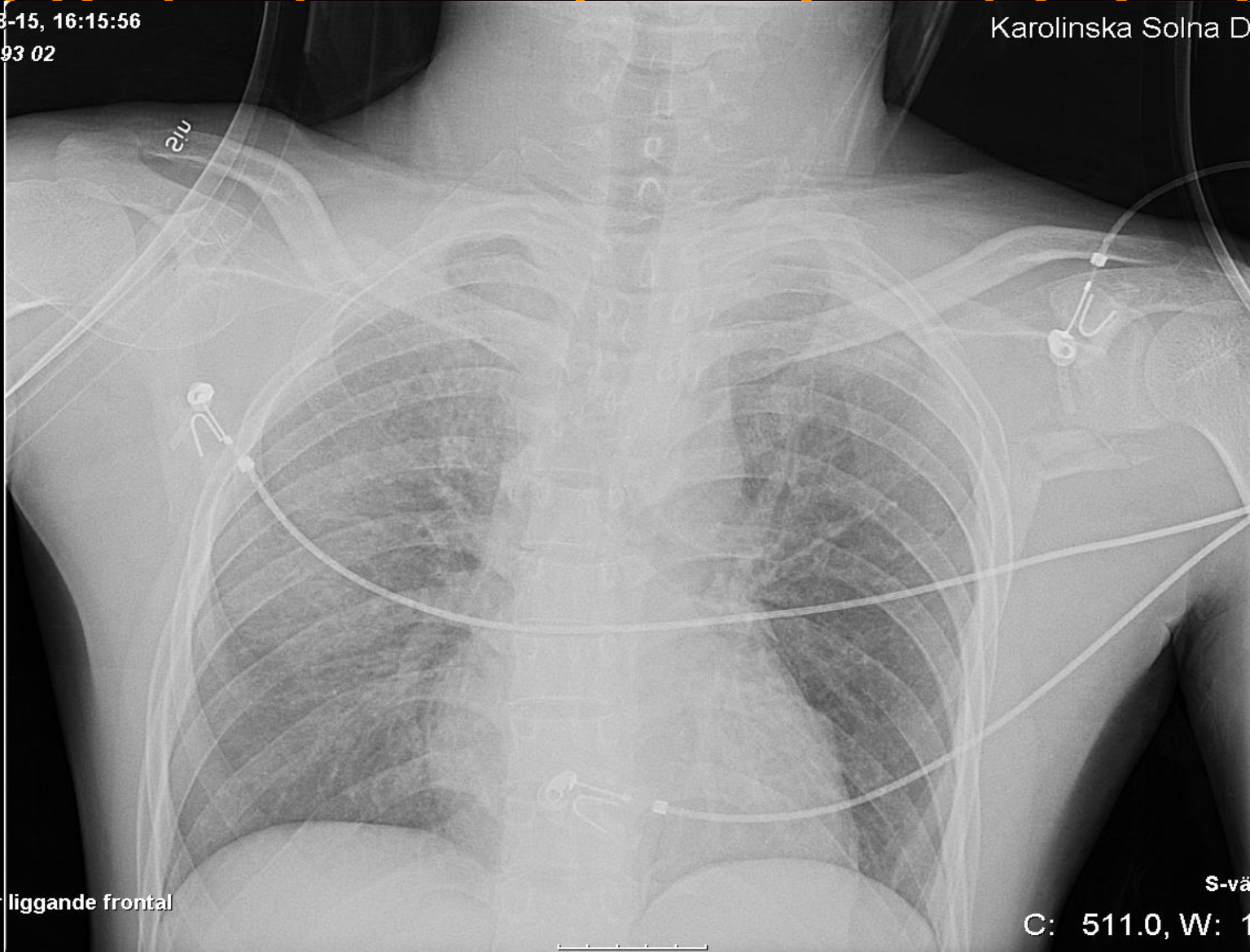


Lgm:

S-värde: 115

C: 511.0, W: 1023.0

Lungor liggande frontal



Do not dawdle, do CT

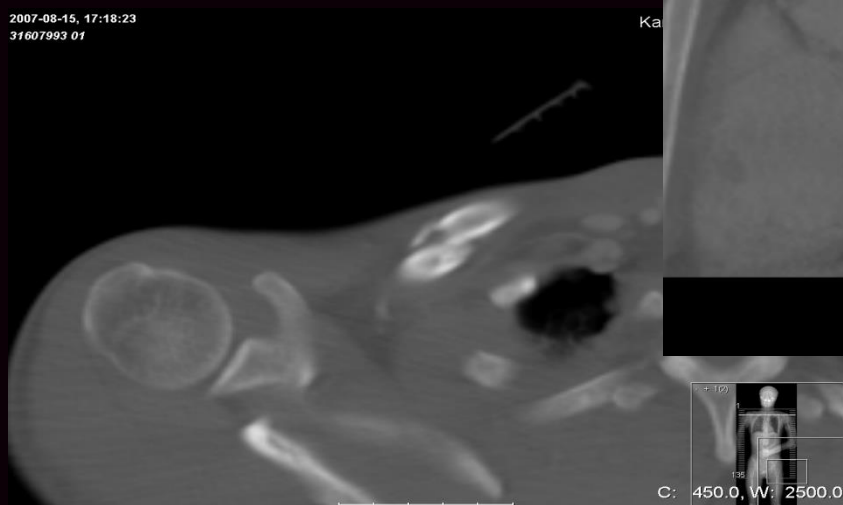
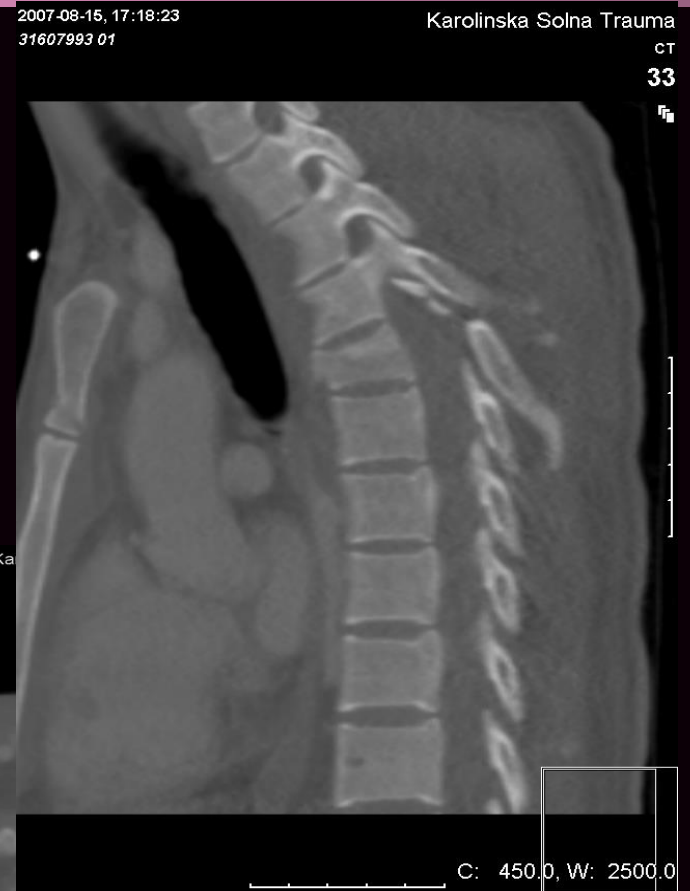
Or you might die DWD
Death Without Diagnosis

When do CT

- ABCDE CT
- ABC CT
- AB CT

▪ AB CT

Pntx bilat, ribfx, flail, scapula, clavicle, thfx, sternum



Murphy's law^[a]

"Anything that can
go wrong will go
wrong."

Trauma : Shit will
happen

Thank you!



Example of
pretraumatic
behaviour?