

# Be Prepared: Palliative Care Emergencies in the Home Blockages (Spinal Cord Compression and Superior Vena Cava)

## Presenters:

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Date: September 28, 2022



# Canadian Homecare Presentation

## Palliative Care Emergencies in the Home

### Blockages (Spinal Cord and SVC): Signs, Symptoms and Responses

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***The Saskatchewan Health Authority works in the spirit of  
truth and reconciliation, acknowledging Saskatchewan  
as the traditional territory of First Nations and Metis  
People.***



# Palliative Care Emergencies in the Home

## Blockages

### Definition:

- Noun
- An obstruction which makes movement or flow difficult or impossible

# Palliative Care Emergencies in the Home

## Blockages

### Types:

- Intrinsic – blockage from inside
- Extrinsic – blockage caused by pressure from outside

# Palliative Care Emergencies in the Home

## Blockages

Intrinsic:    plugged sink  
                  plugged vacuum hose  
                  plugged fuel line

# Palliative Care Emergencies in the Home

## Intrinsic Blockages in Body

### Examples:

Stroke – blocked artery to brain, low oxygen

Heart attack – blocked artery to heart low oxygen

Renal colic – tube between kidney and bladder blocked by a kidney stone

# Palliative Care Emergencies in the Home

## Blockages

Extrinsic: car parked on the garden hose  
collapsed sewer line

# Palliative Care Emergencies in the Home

## Extrinsic Blockages in the Body

### Examples:

Bowel obstruction – bowel twisted upon itself

Bowel obstruction – cancer squeezing bowel closed

Painless jaundice – cancer squeezing bile duct shut

Lower airway obstruction – cancer squeezing breathing passage shut



# Palliative Care Emergencies in the Home

Blockages

Today's topics:

Superior vena cava (SVC) obstruction  
Spinal cord compression (SCC)

# Palliative Care Emergencies in the Home

Blockages: Signs & Symptoms

Sign – something found during physical exam or from a laboratory test

Symptom – a physical or mental problem that a person **experiences**. It cannot be seen or revealed on medical tests

# Palliative Care Emergencies in the Home

## Superior Vena Cava Obstruction

### Symptoms

Shortness of breath/difficulty breathing

Worse breathing with bending or lying down

Feeling of fullness in head or ears

# Palliative Care Emergencies in the Home

## Superior Vena Cava Obstruction

### Symptoms

Headache

Anxiety

Dizziness

Confusion

# Palliative Care Emergencies in the Home

## Superior Vena Cava Obstruction

### Signs

Bluish colour lips and skin (cyanosis)

Horner's syndrome:

- Small pupil

- Drooping eyelid

- No sweating on one side of the face

# Palliative Care Emergencies in the Home

## Superior Vena Cava Obstruction

### Signs

Hoarseness (paralyzed vocal cord)

Swelling of the face, neck, upper body and arms

Coughing

Swollen veins – neck, scalp, chest

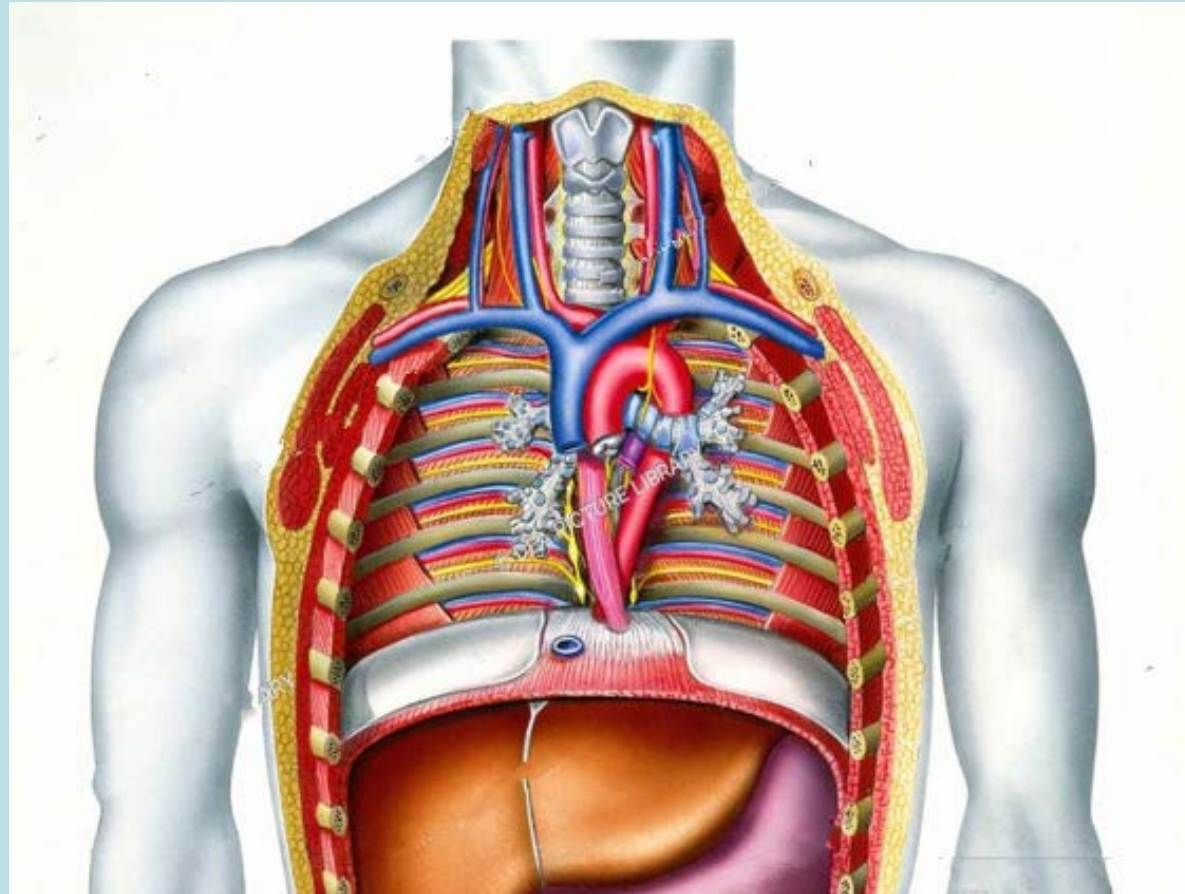
# Palliative Care Emergencies in the Home

How does SVC obstruction happen?

Extrinsic - External compression or invasion of the vein  
Tumour (over 90% cancer)

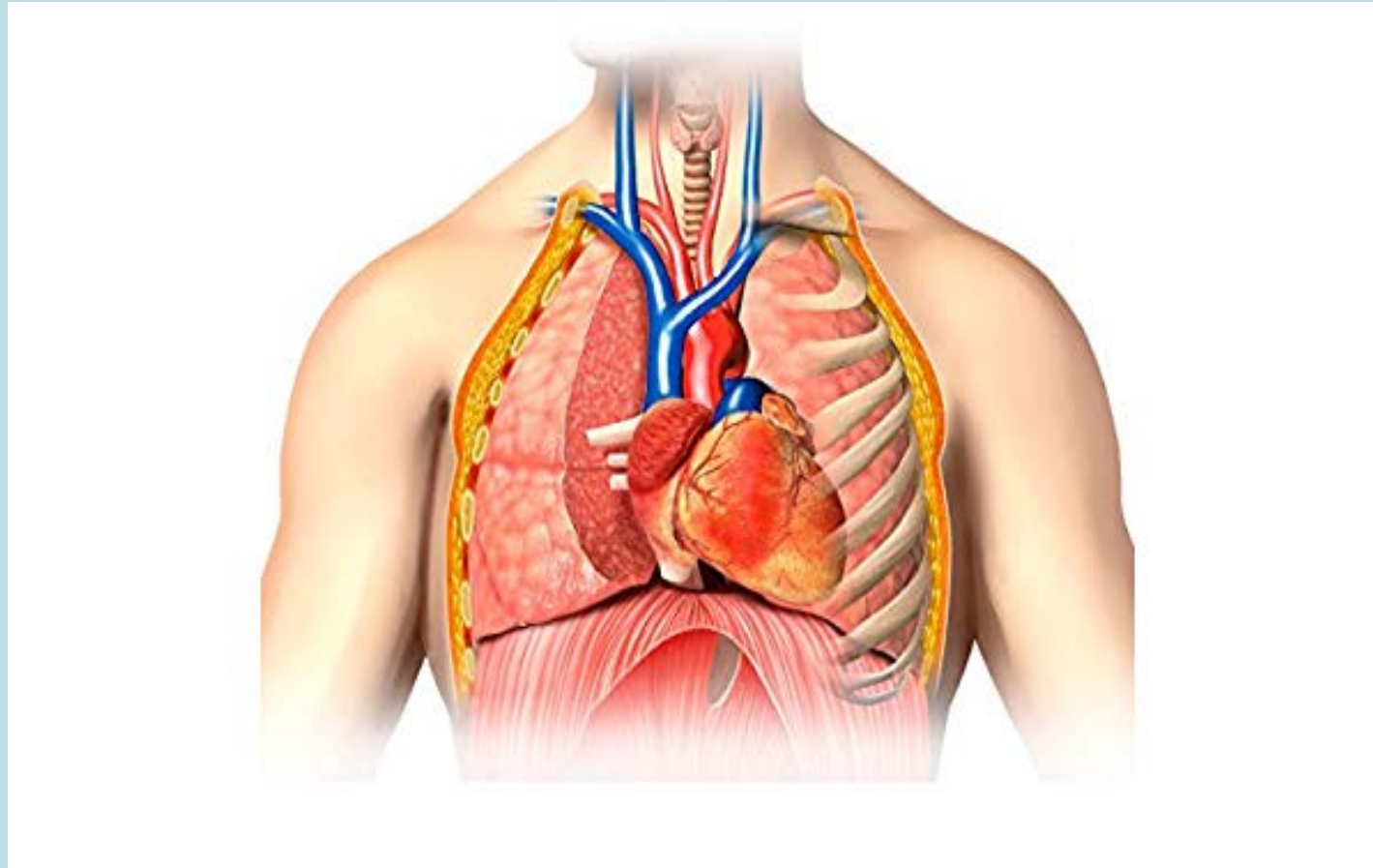
Intrinsic – Thrombosis  
Semi-permanent intravascular catheters

# Palliative Care Emergencies in the Home

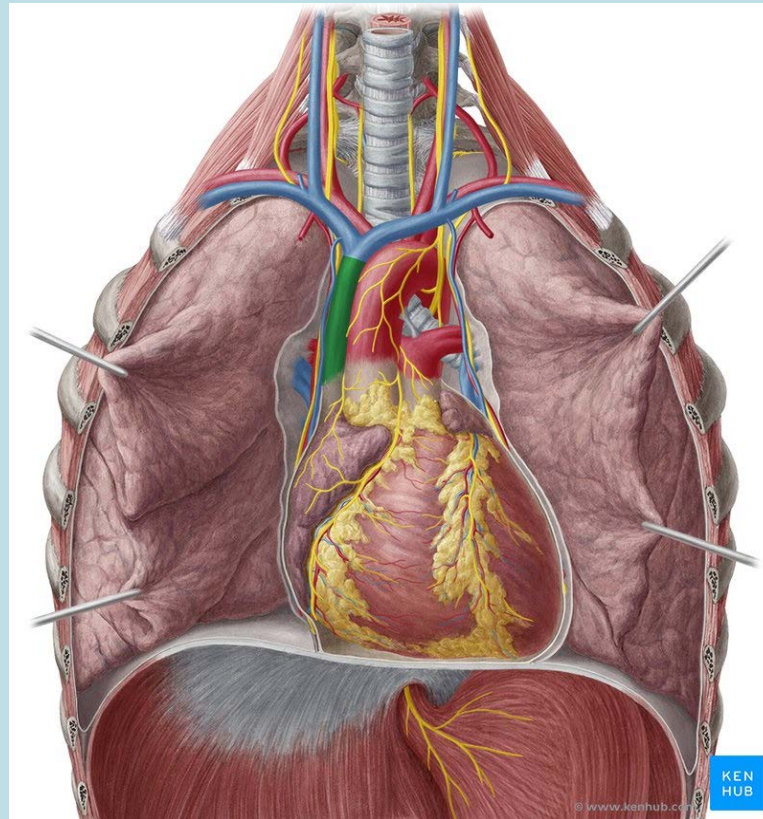




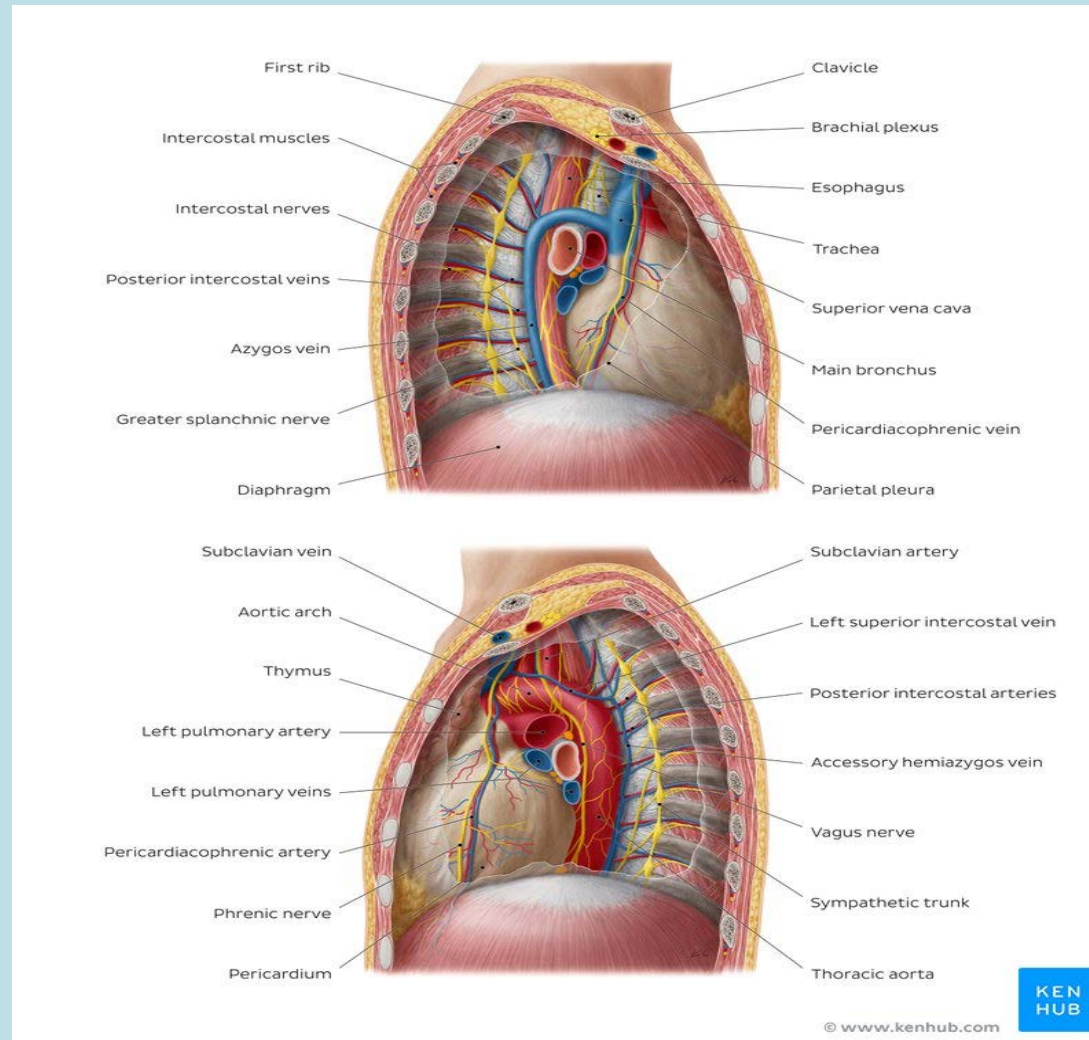
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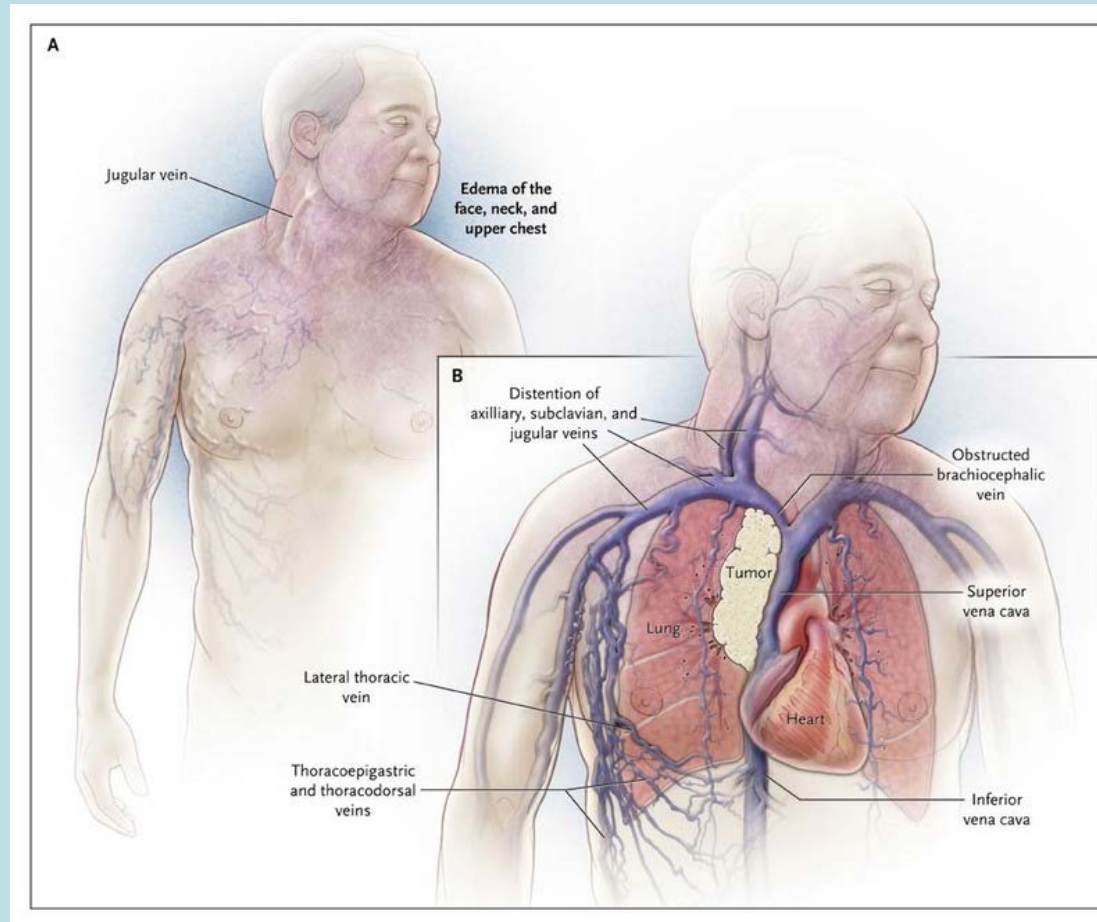
# Palliative Care Emergencies in the Home



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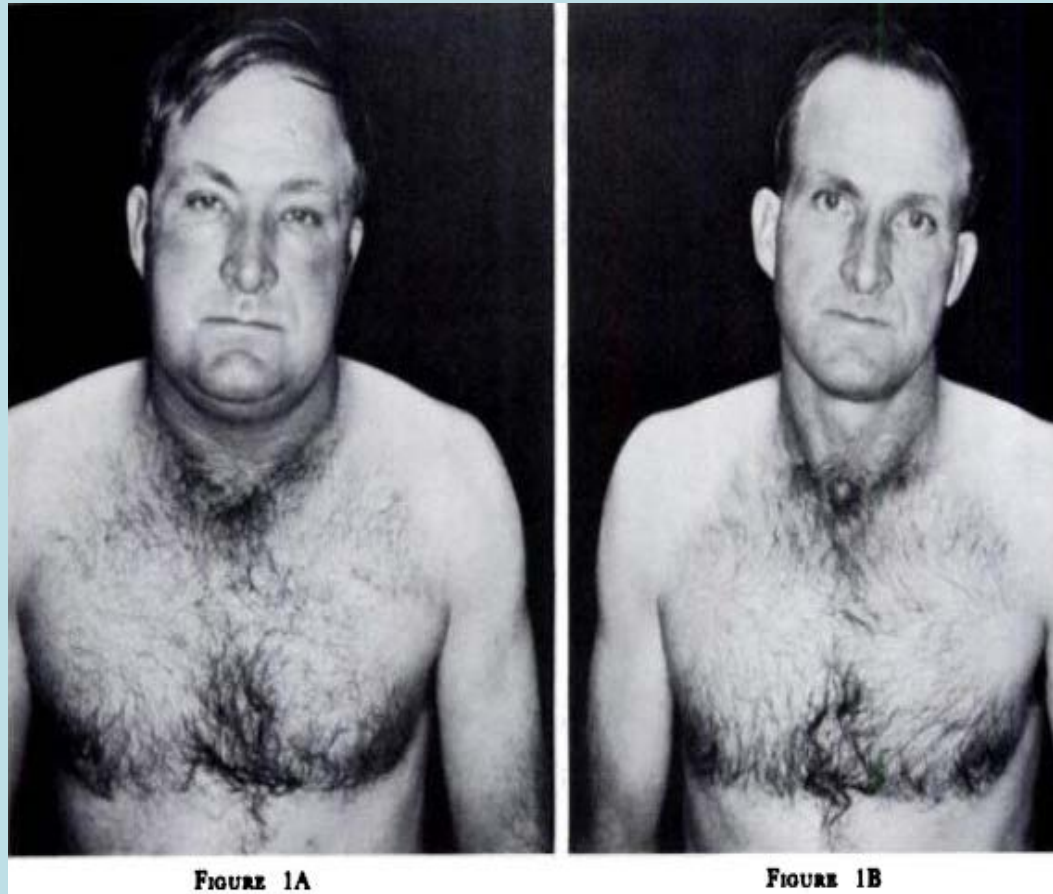
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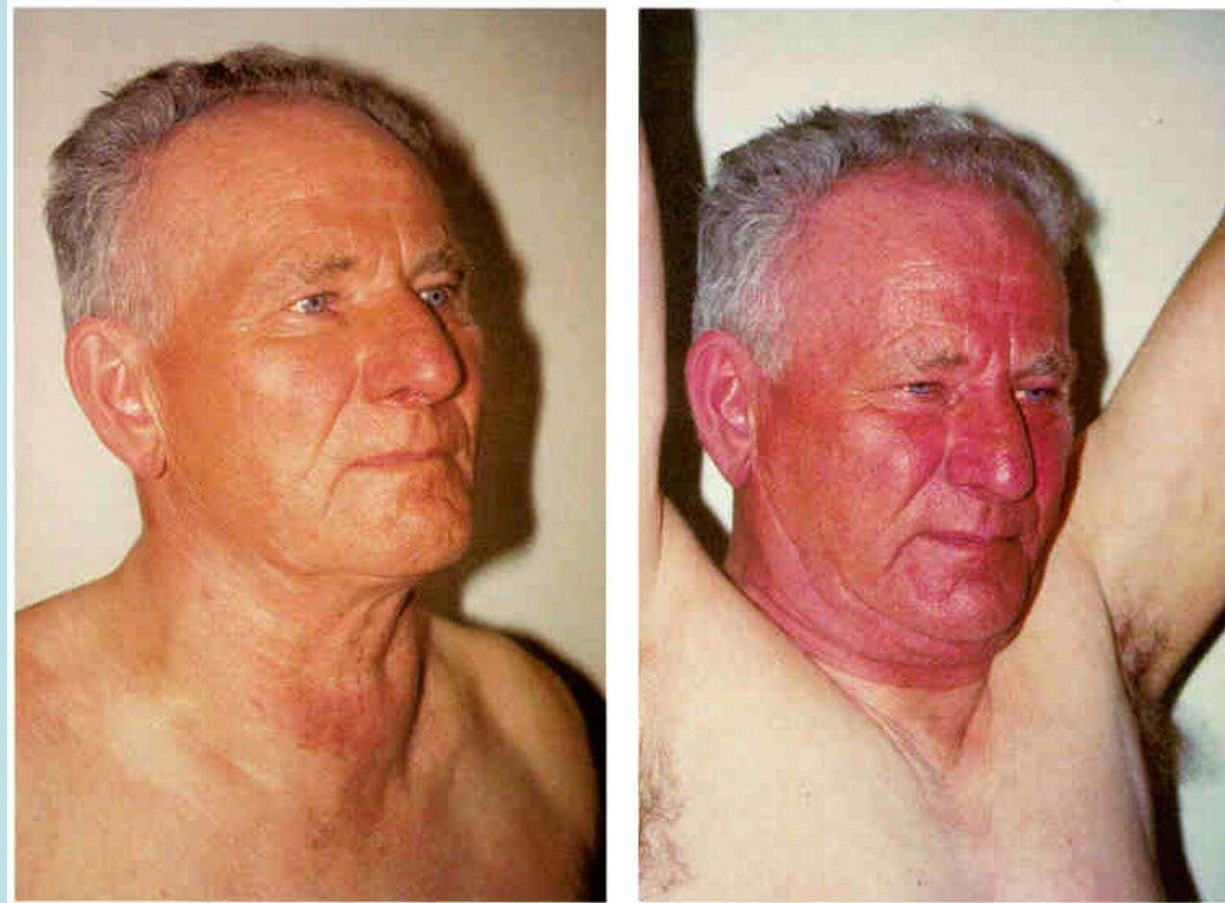
## PEMBERTON'S SIGN

- **PROCEDURE:-**
  - ASK THE PATIENT TO RAISE BOTH RHE ARMS OVER THE HEAD TOUCHING THE EARS AND MAINTAIN IT FOR 2-3 MINS.
- **INTERPRETATION:-**
  - POSITIVE
  - NEGATIVE





# Palliative Care Emergencies in the Home



# Palliative Care Emergencies in the Home

## Superior Vena Caval Obstruction (Pemberton's Sign) due to Hashimoto's thyroiditis



Arms are at side but very large thyroid causes some neck vein distention



Arms are raised causing accentuation of superior vena cava syndrome with some facial congestion and marked neck vein distention because the very large thyroid is acting like a cork between the trachea and sternum



Very large thyroid

# Palliative Care Emergencies in the Home

How often does SVC obstruction occur?

Wide range of occurrence in literature:

1: 650 - 1: 3,100 patients

Increasing numbers – semi-permanent intravascular catheters

US Data: Approximately 15,000 persons/year

More than 90% due to cancer

# Palliative Care Emergencies in the Home

Patient: DH

66 year old male

Breathlessness since December 2020

June 2021 - Chest x-ray

Right pleural effusion, drained – malignant cells

CT – lining (pleural) of inside of chest wall thickened

# Palliative Care Emergencies in the Home

Patient: DH

June 2021 – Diagnosed sarcomoid mesothelioma; asbestos exposure

June 2021 – Started chemotherapy

February 2022 – DVT left leg

CT – few lung lesions, appeared stable  
segmental pulmonary embolism  
Started anti-coagulation

# Palliative Care Emergencies in the Home

Patient: DH

April 2022 – Chest infection, chemotherapy briefly stopped during illness, then restarted

May 2022 – CT shows progression despite chemotherapy  
Chemotherapy discontinued

Outpatient consult – Palliative, pain management

# Palliative Care Emergencies in the Home

Patient: DH

July 2, 2022 – Admitted to Palliative Care Unit

Pain, constipation

CT – Enlarged hilar and mediastinal lymph nodes

Erosion of 5<sup>th</sup> to 7<sup>th</sup> ribs

# Palliative Care Emergencies in the Home

Patient: DH

July 13, 2022 – Discharge home

Pain well controlled

Significant anxiety

3 separate passes to home before discharge



# Palliative Care Emergencies in the Home

Patient: DH

July 29, 2022 – Seen by Palliative Homecare

increased work of breathing

neck pain, neck swelling

difficulty swallowing

generalized fever/chills

generalized myalgias/artralgias

# Palliative Care Emergencies in the Home

Patient: DH

July 29, 2022 - ER

Admission advised to assess for SVC obstruction

CT – Narrowing proximal SVC with tumor obstruction

COVID 19 +

Admitted to hospitalist service

Steroids increased

# Palliative Care Emergencies in the Home

Patient: DH

August 3, 2022 – Palliative Care consult

Distended (swollen) veins scalp

Swollen right neck and lower face

August 5, 2022 – Radiology Oncology consult

Offered 5 fractions of 20 Gy (Gy = unit of radiation)

# Palliative Care Emergencies in the Home

Patient: DH

August 6, 2022 – Patient undecided re: Radiation Therapy (RT)  
Discharged home. Palliative Homecare to follow

August 7, 2022 – Re-admit hospital, unable to cope at home  
Patient now wants RT  
Palliative Care consult

# Palliative Care Emergencies in the Home

Patient: DH

August 9, 2022 – Radiation Oncology sees in consult  
To start RT on August 12, 2022

August 12, 2022 – Transferred to Palliative Care Unit  
Fluctuating consciousness

August 13, 2022 – Died comfortably, family supported

# Palliative Care Emergencies in the Home

## Spinal Cord Compression

A condition that puts pressure on the spinal cord  
Blocks or reduces the flow of electricity from the brain  
to the body

Symptoms may develop gradually or suddenly  
depending on the cause

If not identified and treated within 48 hours, injury usually permanent

# Palliative Care Emergencies in the Home

## Spinal Cord Compression

### Symptoms

Pain in neck, back

Pain in band-like distribution around the body

Numbness

Pain worse at night

# Palliative Care Emergencies in the Home

## Spinal Cord Compression

### Signs

Weakness – hands, arms, shoulders

Weakness – buttocks, legs, feet

Imaging – CT and MRI studies

Urinary retention/incontinence

Bowel incontinence



# Palliative Care Emergencies in the Home

## Spinal Cord Compression (SCC)

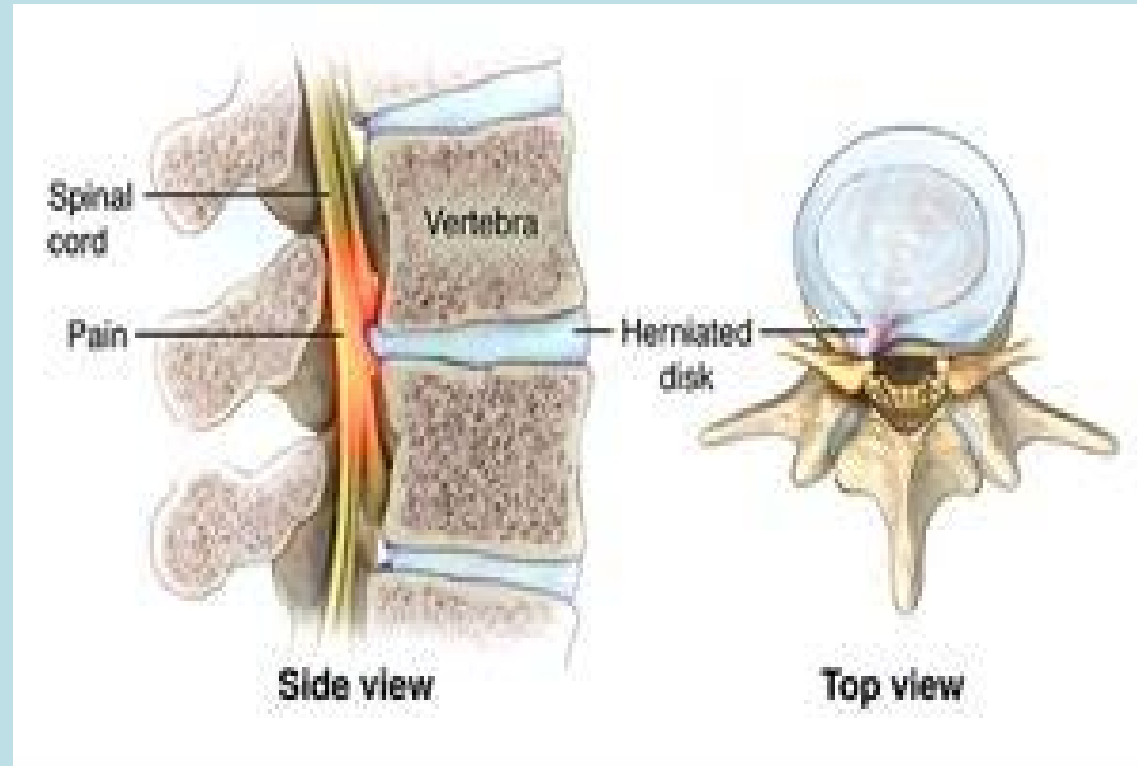
How does SCC happen?

Most common is osteoarthritis - wear & tear bones

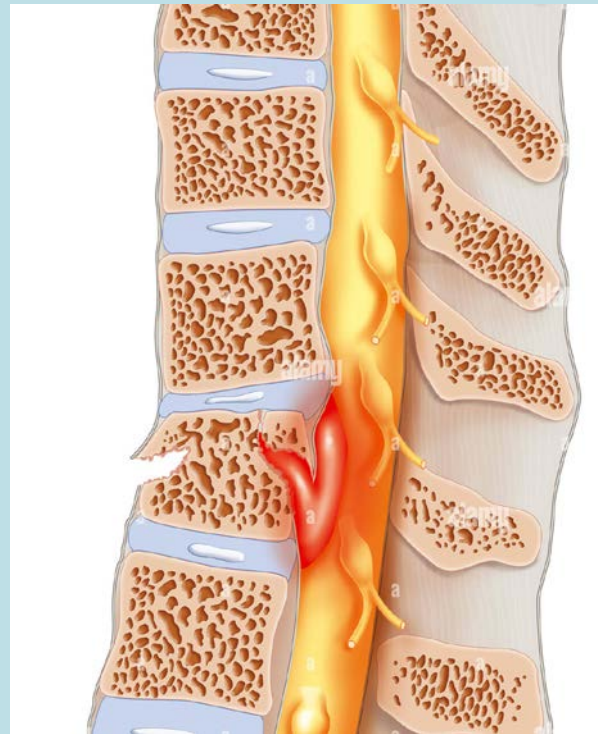
Abnormal spine alignment (scoliosis)

Injury to the spine (trauma)

# Palliative Care Emergencies in the Home



# Palliative Care Emergencies in the Home



# Palliative Care Emergencies in the Home

## Spinal Cord Compression (SCC)

How does SCC happen?

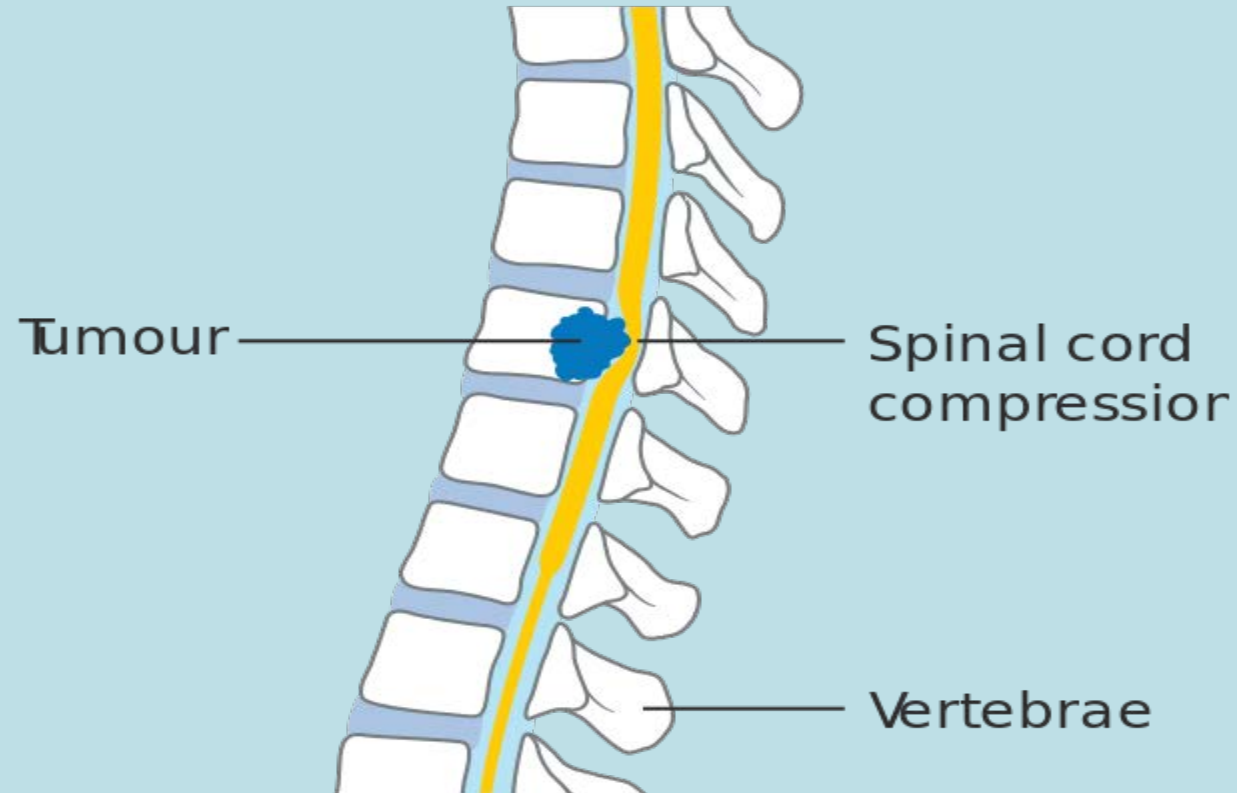
Spinal tumor

Certain bone diseases

Rheumatoid arthritis

Infection

# Palliative Care Emergencies in the Home



# Palliative Care Emergencies in the Home

## Spinal Cord Compression (SCC)

How often does SCC occur? Difficult to estimate – 1 study

1736 patients – 28 patients developed SCC (1.6%)

Lung cancer most common (42.8%)

Thoracic spine most affected (12 cases, 42.8%)

Pain was the predominant symptom (13 cases, 46.4%)

Survival less than 3 months

Hospital death 32.4%

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# Palliative Care Emergencies in the Home

Patient: SK

July 31, 2022

Recently moved to SK to be closer to family

Lived in USA for 30 years prior

Colon cancer diagnosed 8 years prior, now metastatic

Previously treated chemotherapy and RT

Last treatment February 2022

# Palliative Care Emergencies in the Home

Patient: SK

July 31, 2022

Increasing back pain over past few months

Current analgesia not adequate

August 2, 2022

Palliative Care consult

Medications aggressively adjusted



# Palliative Care Emergencies in the Home

Patient: SK

August 2, 2022

CT – Severe L2 vertebral body compression fracture

Fragment retropulsion – not candidate for kyphoplasty

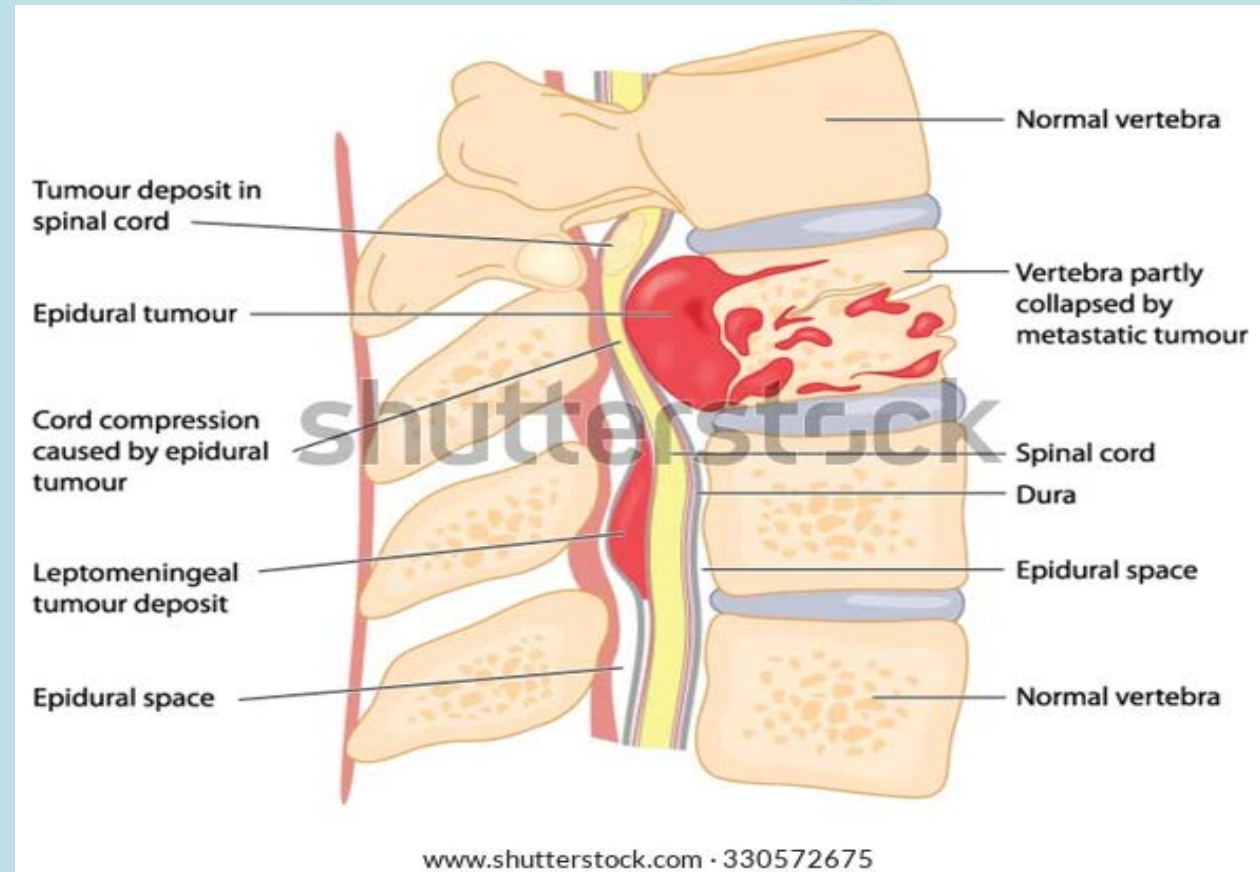
- (kyphoplasty - use of acrylic cement stabilize and reduce pain)

L1 transverse process fracture

Soft tissue mass encroaching left neural foramen

Partially calcified right retroperitoneal mass - ?kidney

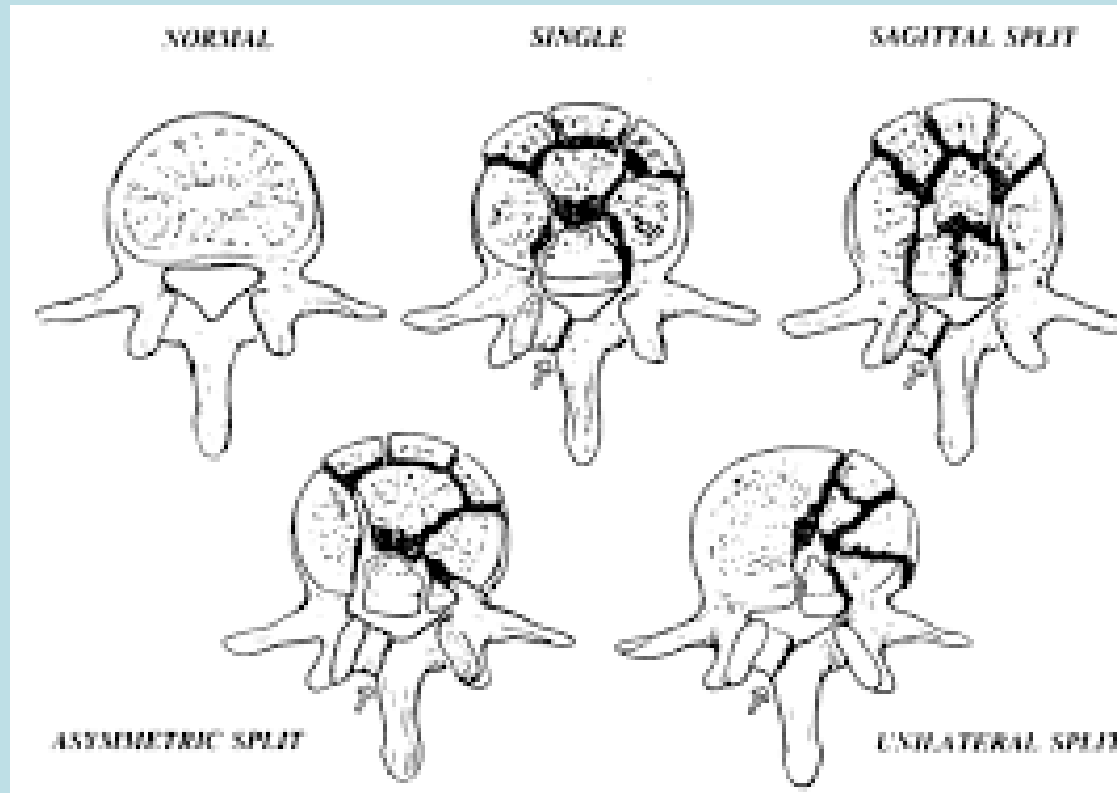
# Palliative Care Emergencies in the Home



# Palliative Care Emergencies in the Home

Patient: SK

Retropulsion



# Palliative Care Emergencies in the Home

Patient: SK

August 3, 2022

MRI – lumbar spine, metastatic disease L1, L2, L3

Confirms pathological L2 fracture – retropulsion

Tumour extension – left sided severe central canal stenosis

Right retroperitoneal mass

# Palliative Care Emergencies in the Home

Patient: SK

August 3, 2022

Goal of care – comfort measures

Neurosurgery consult cancelled

No Radiation Oncology consult placed

August 5, 2022

Transferred to Palliative Care Unit

# Palliative Care Emergencies in the Home

Patient: SK

August 5, 2022

Had fallen on other unit before transfer, legs buckled

Previously ambulating, now supervision with walker

Poor pain control – not asking for analgesics

Tremulousness, twitching noted - ? Early delirium

# Palliative Care Emergencies in the Home

Patient: SK

August 8, 2022

Pain manageable, tremulousness resolved  
Clear sensorium

August 10, 2022

Patient stated USA Radiation Oncologist – more Radiation  
Treatment (RT) possible if needed  
Consult placed to Radiation Oncology

# Palliative Care Emergencies in the Home

Patient: SK

August 11, 2022

Seen by Radiation Oncology (Rad Onc) – request sent for USA treatment records

SK Health Insurance pending

Urinary catheter in place; urinary retention

August 16, 2022

Unable to use her left leg



# Palliative Care Emergencies in the Home

Patient: SK

August 18, 2022

Right leg starting to weaken significantly

Records received from USA

August 19, 200

Planning RT notes not included in records

More information needed and requested

# Palliative Care Emergencies in the Home

Patient: SK

August 23, 2022

Legs flaccid, incontinent stool

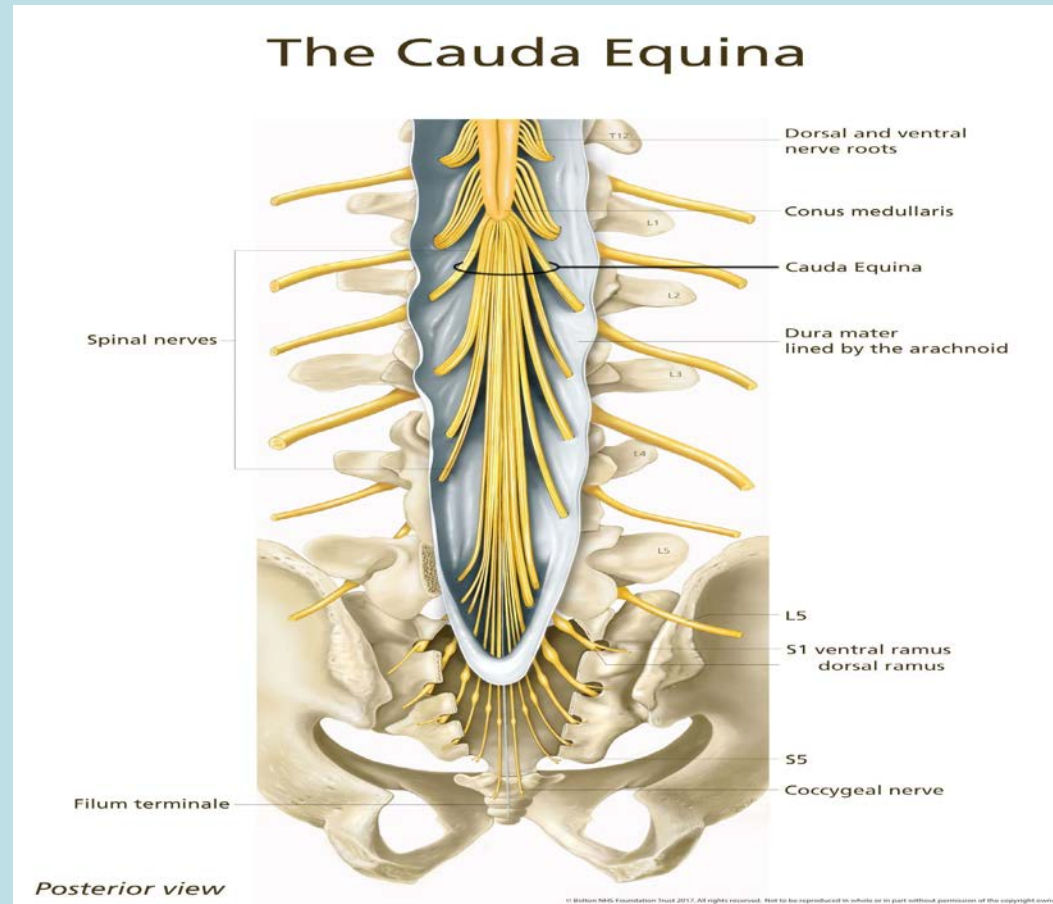
Rad Onc on vacation

New Rad Onc – wanted surgical consultation

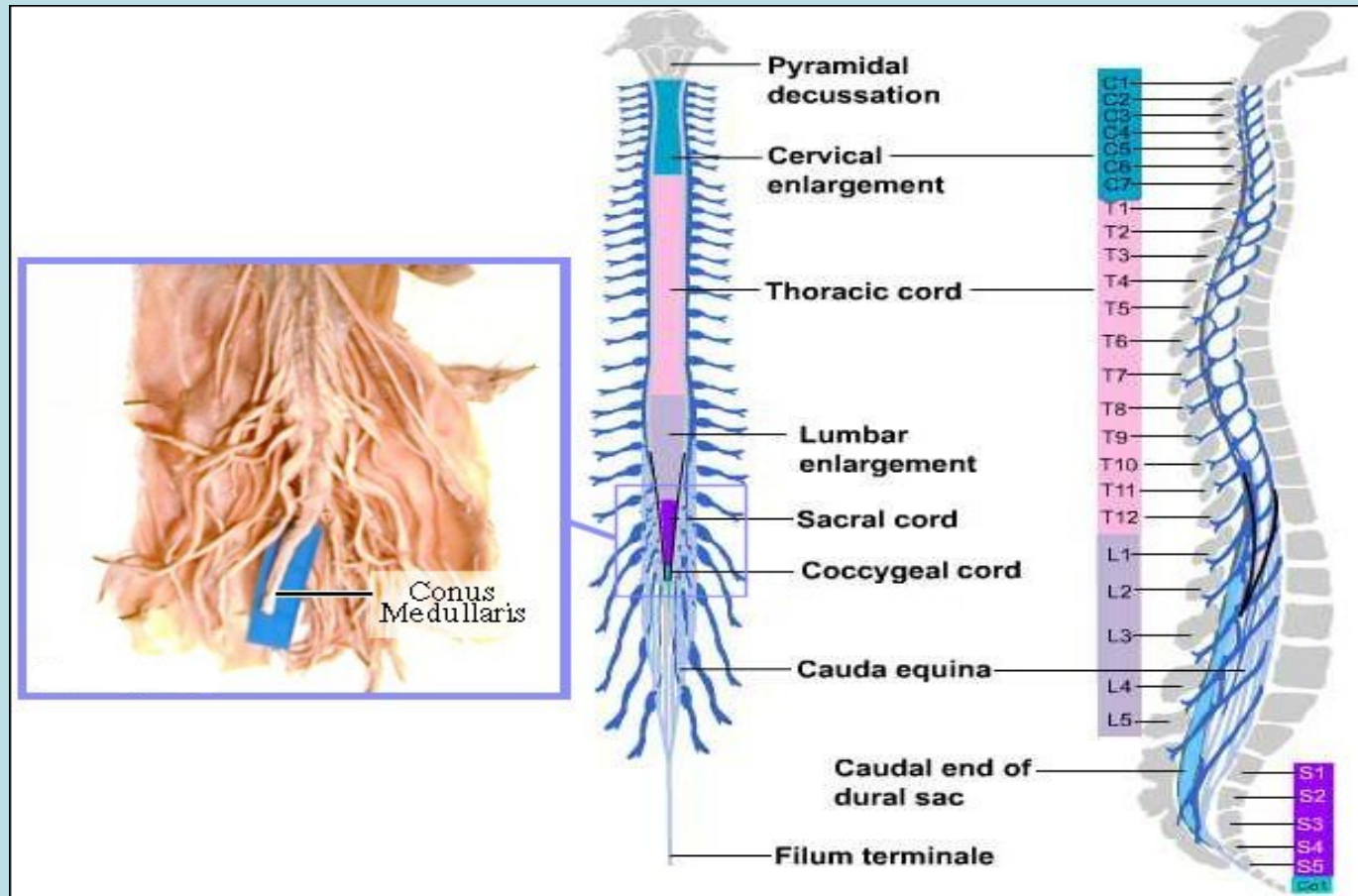
Rationale: Spinal cord ends L2 – Injury not directly on spinal cord therefore not an upper motor neuron injury

Lower motor neuron injury – some recovery possible

# Palliative Care Emergencies in the Home



# Palliative Care Emergencies in the Home



# Palliative Care Emergencies in the Home

Patient: SK

September 1, 2022

Neurosurgery – patient not a surgical candidate

September 9, 2022

Ongoing reduction in mental clarity – delirium

Received one dose of RT

September 14, 2022

Patient died peacefully

# Case Study: Spinal Cord Compression

Royanne Gale, RN CHPCN(C)  
Clinical Practice Specialist Palliative Care and Oncology  
Professional Practice, Research and Education Team  
CarePartners



# Case Study: Tom

- Tom, 56 year old male with a dx of Ca of the prostate. Receiving treatment with chemotherapy.
- Hx of chronic back pain related to an injury. Patient receiving a disability pension.
- Admitted to nursing services for symptom management, visit frequency weekly. Patient was resistant to increased visits. Very private man, lived alone, minimal external support.
- PPS 60%
- Patient rating ESAS-r scores below 3 with the exception of increased fatigue 6/10 and increased pain 6/10 in lower back. Patient on oral Hydromorphone.
- When addressing the patient's symptoms of fatigue and pain, he contributes fatigue to chemo regime and the increased pain to spending more time sleeping (patient's bed was an old mattress on the floor) and history of back pain. This was consistent for a couple of weeks.
- One morning patient got up to go to the bathroom, lost control of his bladder and fell.

# Treatment Plan

- 911 was initiated.
- Tom was discovered to have a SCC and was admitted to hospital.
- Initial treatment plan included palliative radiation, which required transfer to a center 3 ½ hours from patients home.
- Tom returned home post treatment.
- Tom fully recovered from SCC and was eventually discharged from nursing services to self-care.



# Case Study: Return to Care

- 2 years later Tom was readmitted to nursing care for pain and symptom management.
- Goals of care are focused on comfort and remaining at home to die.
- PPS 30%
- Pain to lower back increasing, weakness in legs, incontinence a concern.

# Treatment Plan

- Hospital bed obtained for increased comfort.
- Subcutaneous port initiated for dexamethasone BID.
- Subcutaneous port initiated for pain pump.
- Urinary catheter inserted to manage incontinence.
- Nursing services BID.
- Tom declined quickly over a couple of weeks. He was able to die comfortably in his home.