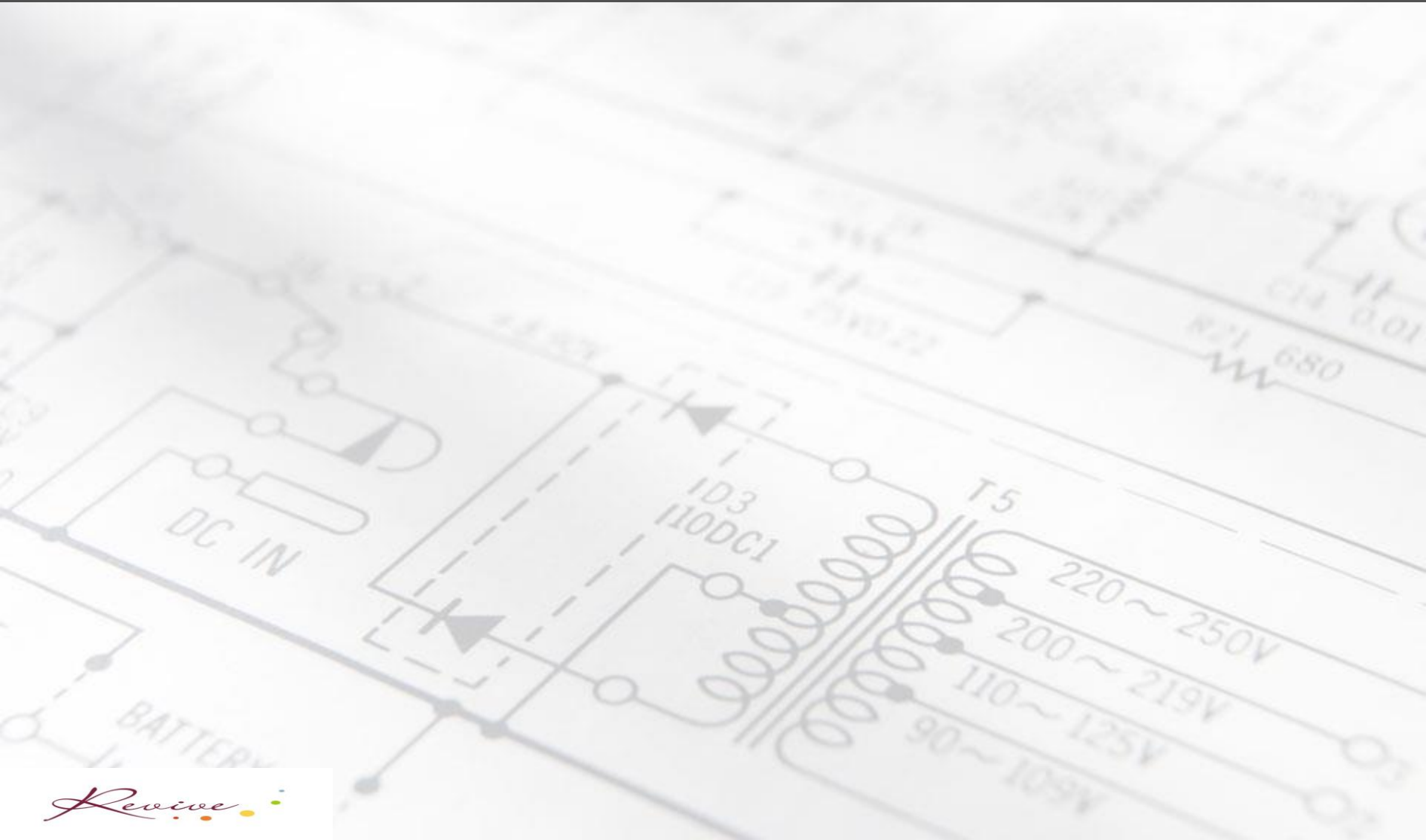


**SHOULDER PAIN
DIFFERENTIAL
DIAGNOSIS**

Dr. MUSTAFA Qaimar



SHOULDER PAIN DIFFERENTIAL DIAGNOSIS

Dr. MUSTAFA Qamar

Assistant Professor, SMC



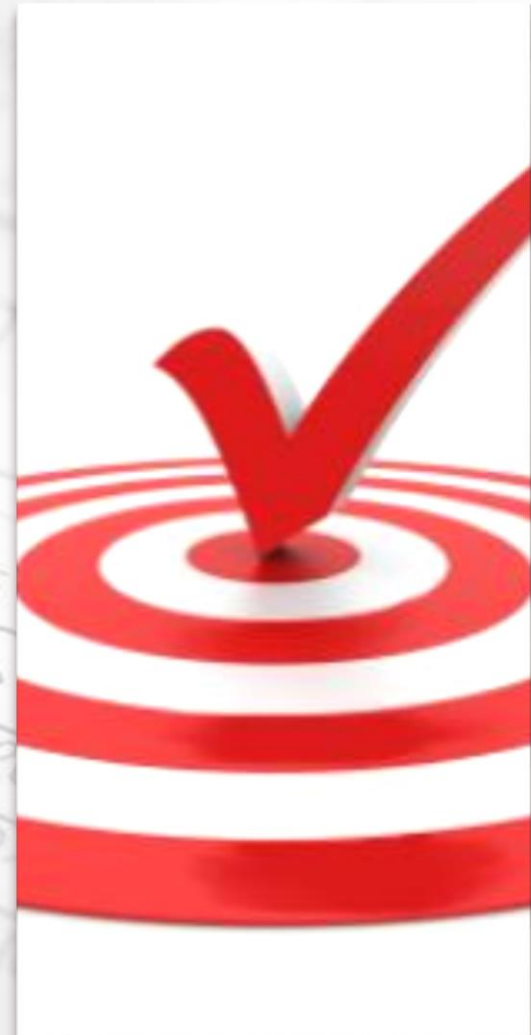
OBJECTIVES

Systemic and viscerogenic causes of shoulder of pain

Unilateral and bilateral shoulder pain

Musculoskeletal shoulder pain

Referred pain from neck and elbow



SCREENING MODAL

Past medical history

Risk factor

Clinical presentations

Associated signs/symptoms

Red Flag Histories, Cancer, Heart Disease, Atherosclerosis, Hypertension, Diabetes, Hyperlipidemia, Angina, Heart Attack, Angiography, Stent Placement, Coronary Artery Bypass Graft (CABG)

Intera articular or extra articular, unilateral or bilateral, systemic disease, visceral illness, frozen shoulder,

Pleuritic component
Exacerbation by recumbency
Coincident diaphoresis (cardiac)
Associated gastrointestinal (GI) signs and symptoms
Exacerbation by exertion unrelated to shoulder movement (cardiac)
Associated urologic signs and symptoms

Red Flag Signs: A red-flag symptom requires immediate attention, either to pursue further screening questions and/or tests, or to make an appropriate referral.

Yellow Flag: A yellow flag is a cautionary or warning symptom that signals "slow down" and think about the need for screening.

Iatrogenic factor

Complication of the treatment like Physician activity, manner or Therapy



Clinical red flags

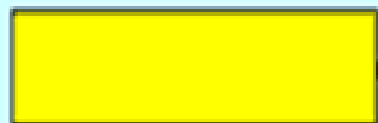


Organic pathology

Concurrent medical problems

Biomedical factors

Clinical yellow flags



Iatrogenic factors

Beliefs

Coping strategies

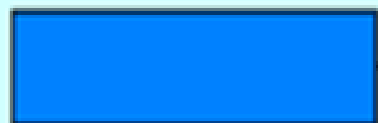
Distress

Illness behaviour

Willingness to change

Psychological or behavioural factors (predictors)

Occupational blue flags



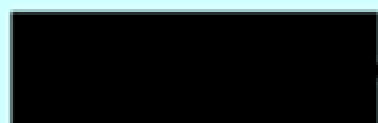
Family reinforcement

Work status

Health benefits and insurance

Social and economic factors

Socio-occupational black flags



Litigation

Work satisfaction

Working conditions

Work characteristics

Social policy

Occupational factors

A red flag sign is positioned on the left side of the image, set against a background of a faded circuit board. The flag is on a thin metal pin and is waving. The circuit board background shows various components and labels such as 'DC IN', 'BATTERY', 'ID3 110DC1', 'T5', and several voltage ranges: '220 ~ 250V', '200 ~ 219V', '110 ~ 125V', and '90 ~ 109V'.

Red Flag Sign

Past Medical History

- Personal or family history of cancer
- Recent (Last 6 Weeks Infection), UTI, URI
- Recurrent cold or flu with cyclic pattern
- Recent history of trauma especially head injury or old age
- History of immunosuppressant
- History of inject able antibiotics



Risk Factors

- Substance abuse
- Tobacco Use
- Age (below 20 and more than 50)
- Gender
- BMI
- Exposure to radiation
- Alcohol Abuse
- Sedentary lifestyle
- Domestic Violence



History

Cancer:

- Persistent Pain at night
- Constant pain anywhere in the body
- Unexplained weight loss
- Loss of Appetite
- Unusual lump or growth
- Unwarranted fatigue



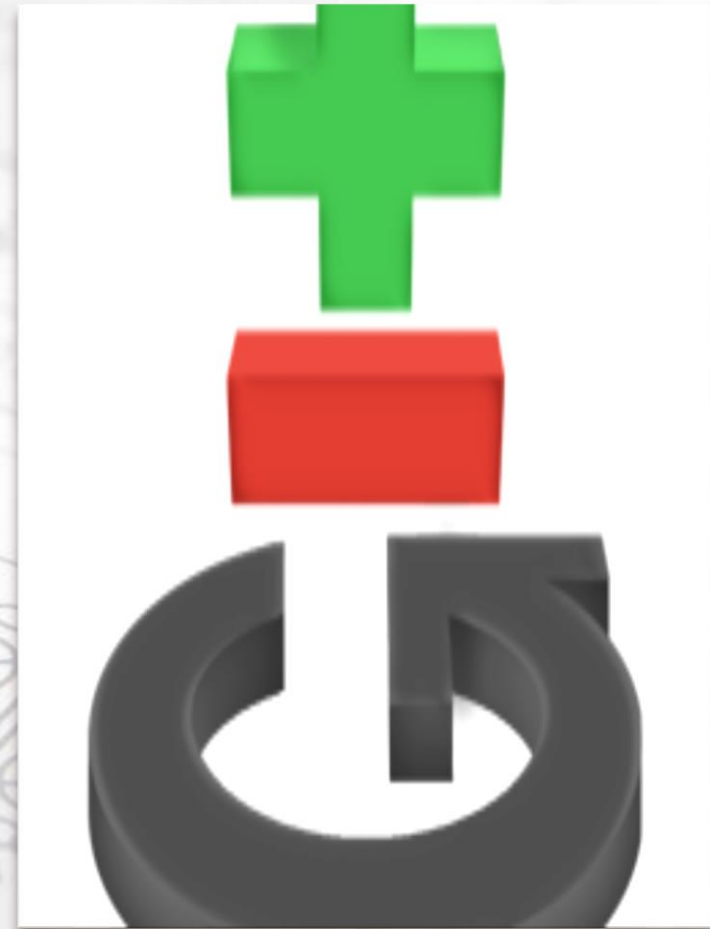
Cardiovascular

- Shortness of breath
- Dizziness
- Pain or feeling of heaviness in the chest
- Pulsating pain anywhere in the body
- Constant or severe pain in the lower leg (Calf) or arm
- Discolored or painful feet
- Swelling without H/O Trauma



Gastrointestinal/Genitourinary

- Frequent or severe abdominal pain
- Frequent heartburn or indigestion
- Frequent nausea or vomiting
- Problems with the bladder function
- Unusual menstrual irregularities



Neurological

- Changes in the hearing
- Frequent or severe headaches with no H/O trauma
- Problems with swallowing or changes in speech
- Changes in the vision (e.g.; blurriness or loss of sight)
- Problems with balance, co-ordination or falling
- Faint spells
- Sudden or progressive weakness



Miscellaneous

- Fever or night sweats
- Recent severe emotional disturbances
- Swelling or redness in any joint without H/O injury
- Pregnancy



Clinical Presentation

- Significant Weight loss 10% in 3 weeks
- Progressive or abrupt loss of sensation bilaterally or saddle region
- Cyclical presentation of symptoms
- Growing mass
- Postmenstrual bleeding for more than 1 year



Clinical Presentation

- Night Pain, Constant, Intense Pain
- Musculoskeletal pain don't have the relieving factors
- MSK pain don't fall in any pattern
- Symptoms get better after a session and get worse after the other session
- Pain unrelieved by the rest
- Bowl and Bladder Dysfunction



Changes in the muscle tone (Spasticity, flaccidity, rigidity)

Thoracic spine pain in early age

Bilateral Symptoms

- Edema
- Numbness
- Tingling
- Skin pigmentation changes
- Nail bed changes

REFERRED PAIN TO SHOULDER

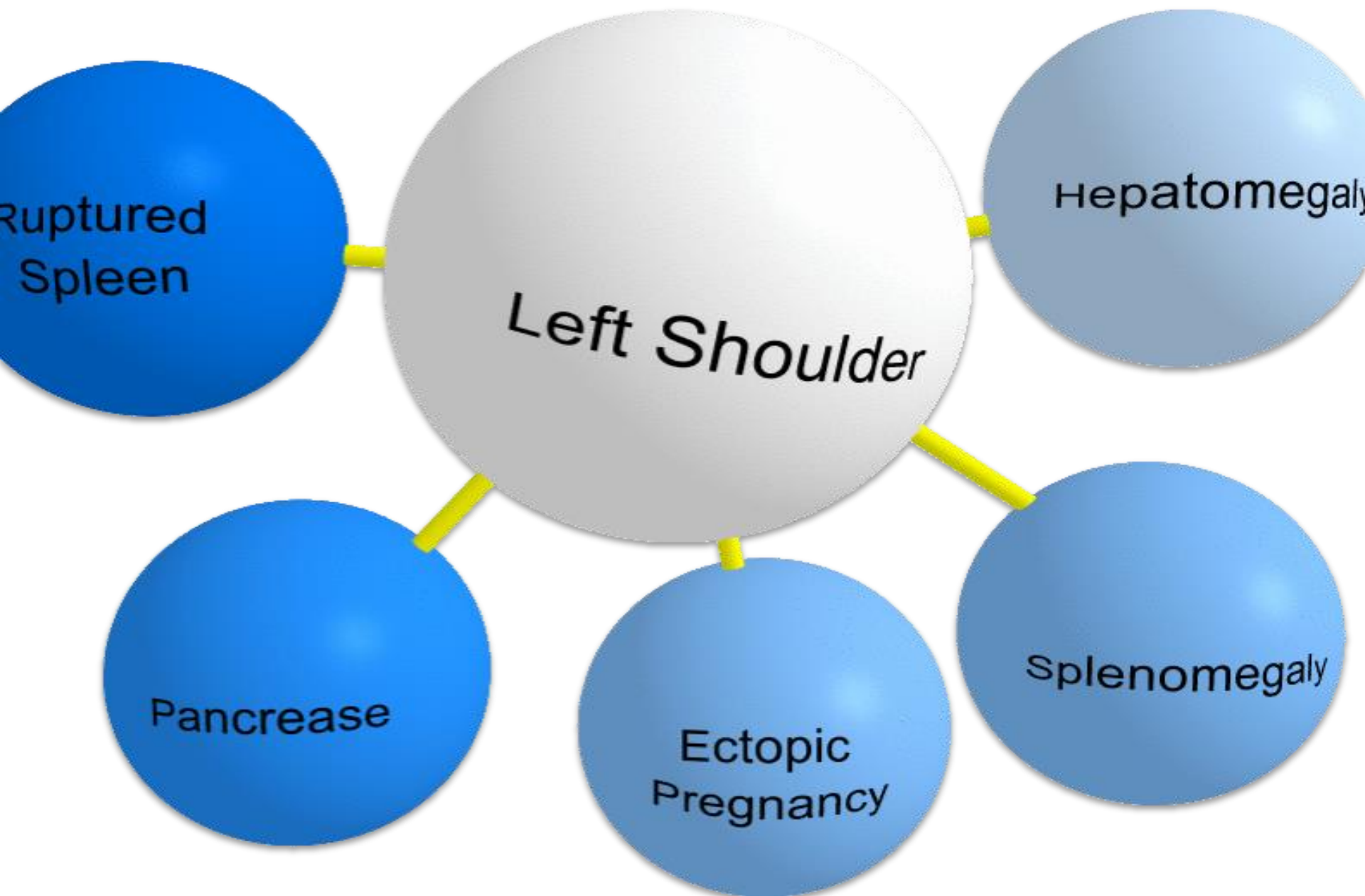
Peptic Ulcer

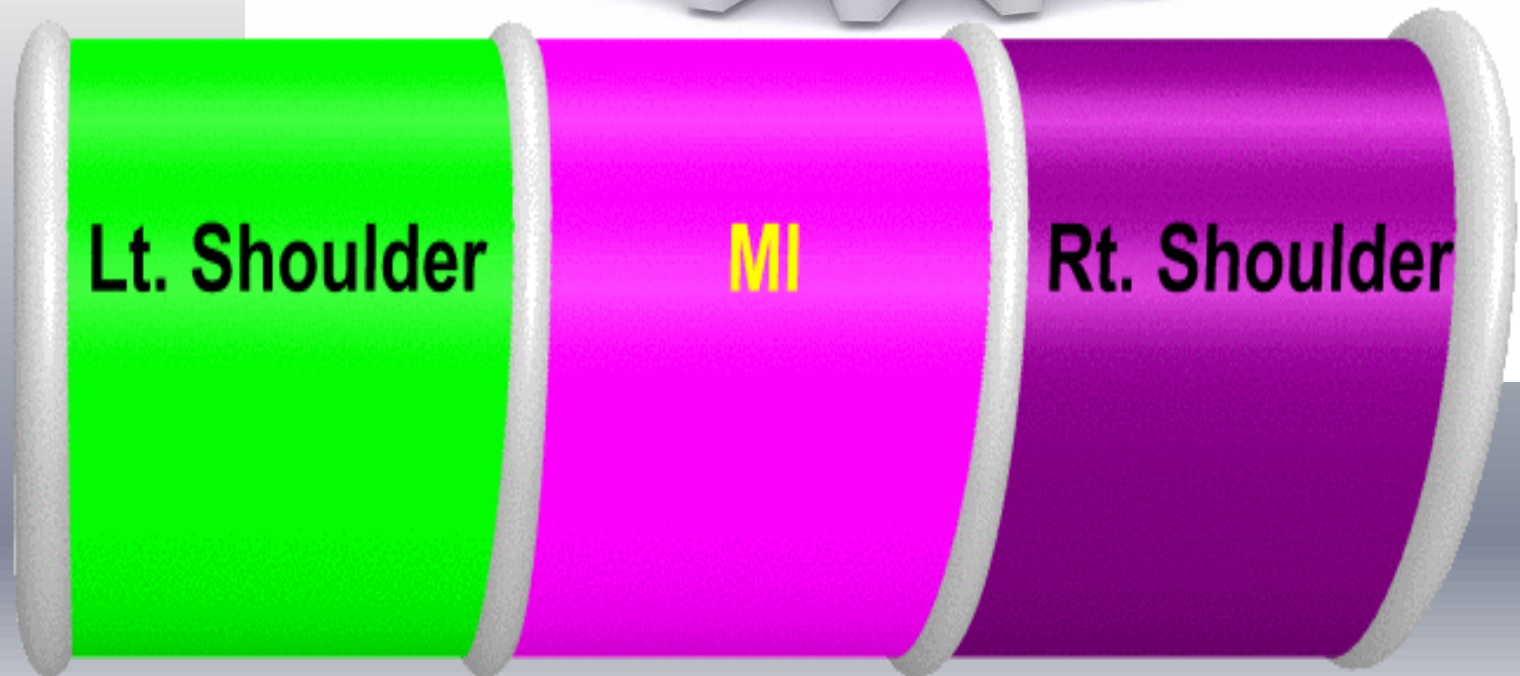
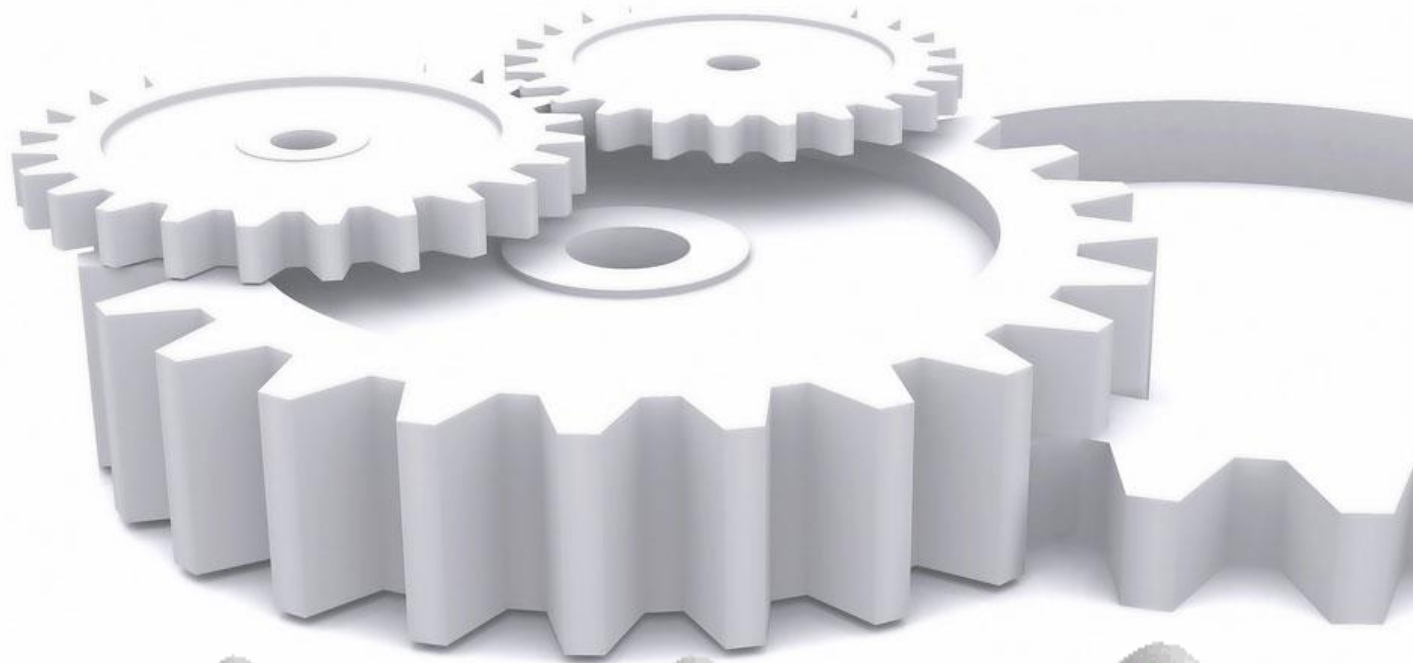
Liver disease

Right Shoulder

Kidney
Disease

Pulmonary
disease





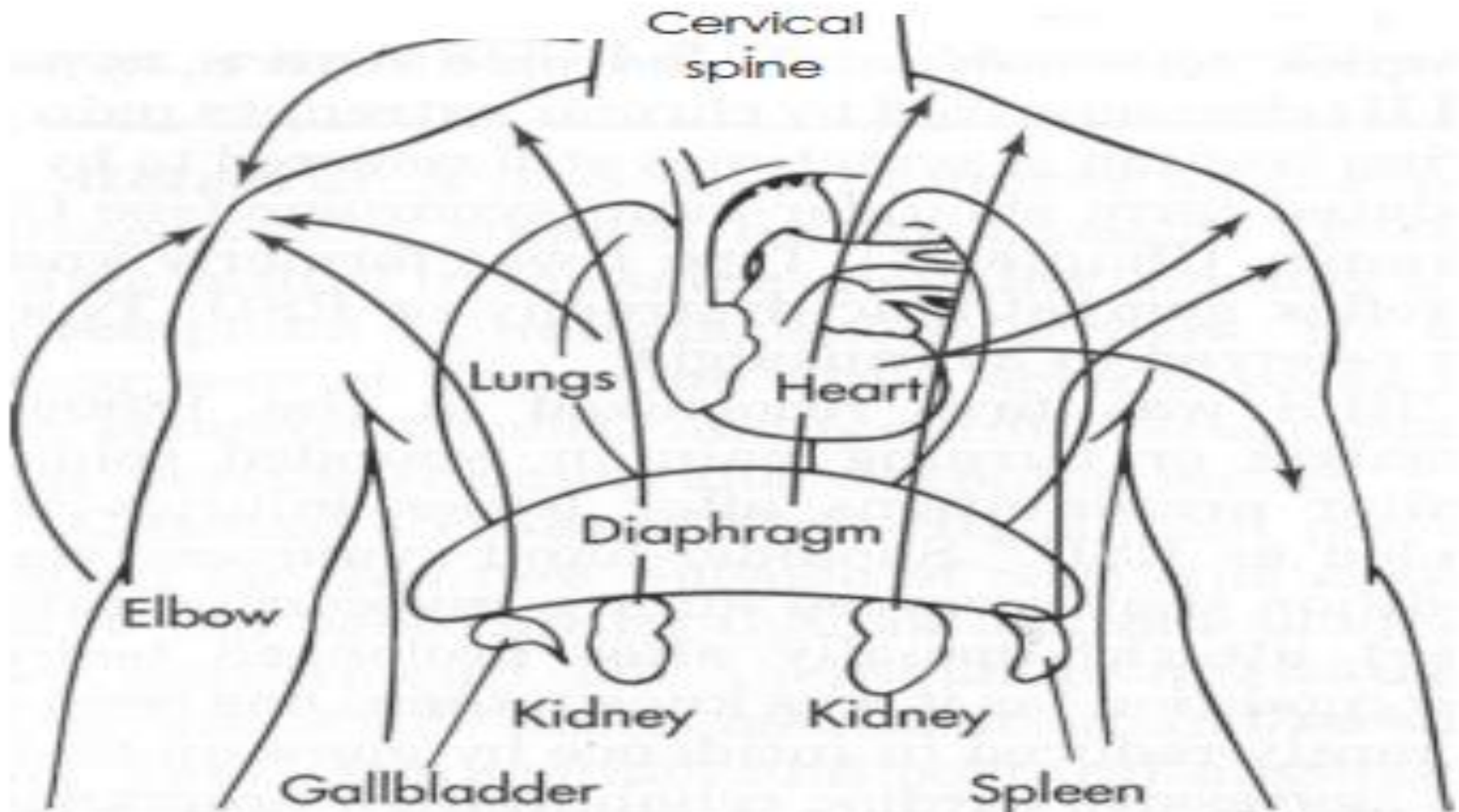
Kehr's sign



Kehr's sign is the occurrence of acute pain at the tip of the shoulder due to the presence of blood or other irritants in the peritoneal cavity when a person is lying down and the legs are elevated.

- ❖ May result from diaphragmatic or peridiaphragmatic lesions, renal calculi, splenic injury or ruptured ectopic pregnancy.

REFERRED PAIN TO SHOULDER



SHOULDER PAIN

Systemic causes

Musculoskeletal causes



CANCER (causes)

Leukemia

Hodgkin's Disease

Cord Tumour

Bone Tumour

Metastases to lungs

Bone

Breast

Kidney

Colorectal

Pancreas

TOS (NECK)

Angina/MI (Chest)

CABG

Endocarditis

Aortic Aneurysm

Empyeme

Lung Abscess

Collagen Vascular Disease

Dissecting Aortic Aneurysm

Pulmonary Disorder

Liver Disorder

GIT disorder

Renal Disorder

Gynae Disorder

SHOULDER PAIN PATTERNS

Embryologic development

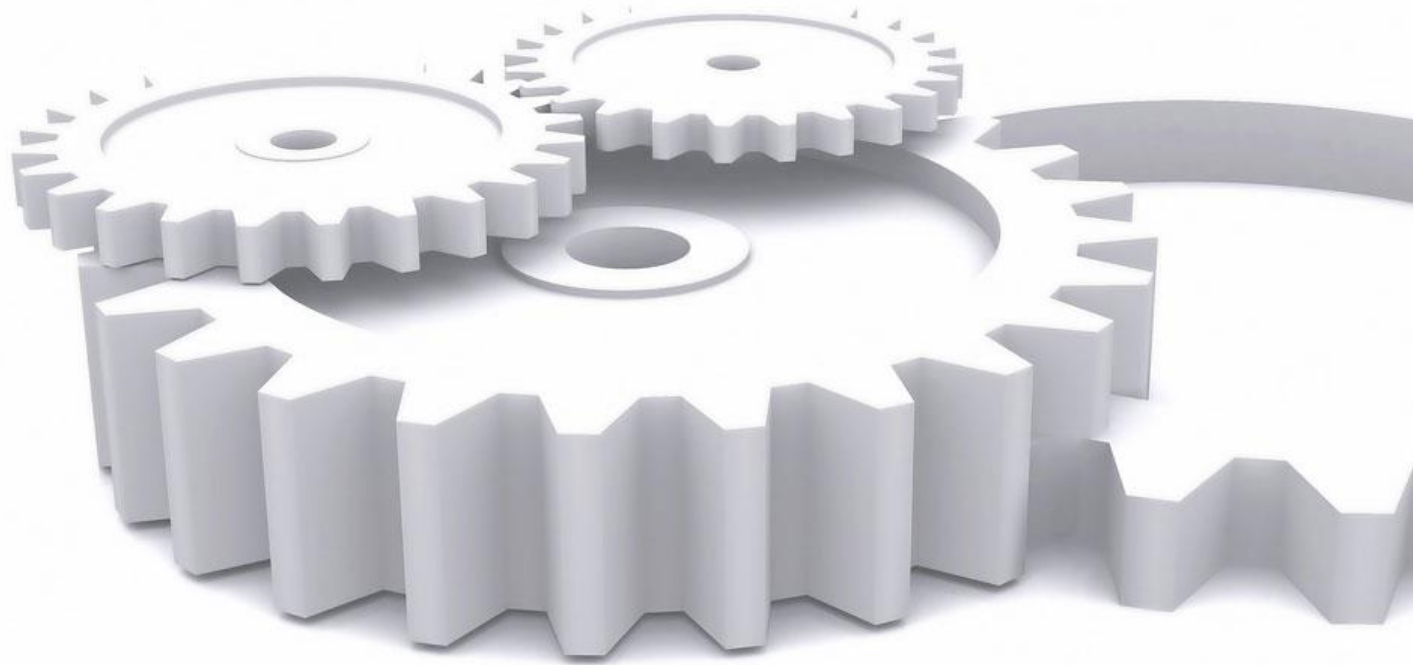
Pain is referred to a site where the organ was located in fetal development.

Multisegmental innervations

Shoulder is innervated by the same spinal nerves that innervate the diaphragm (c3c5)

Direct pressure on the diaphragm

Anything that impinges the *central diaphragm* can refer pain to the *shoulder*



Systemic causes of shoulder pain

Differential diagnosis

SCREENING FOR PULMONARY CAUSES OF SHOULDER PAIN

Extensive disease, **pleura** irritation

Pleural irritation then results in sharp, localized pain that is aggravated by any respiratory movement.

pain is alleviated by lying on the affected side

shoulder symptoms made worse by recumbence





- **Pneumonia** in the older adult may appear as shoulder pain
- Look for the presence of a **pleuritic component** such as a persistent or productive cough and/or chest pain
- Look for **associated symptoms**= tachypnea, dyspnea, wheezing, hyperventilation

SCREENING FOR CARDIAC CAUSES OF SHOULDER PAIN



Angina & M.I

- Angina and/or myocardial infarction can appear as arm and shoulder pain that can be misdiagnosed as arthritis or other musculoskeletal pathologic conditions





PE

cardiac related shoulder
pain should be
differentiated from MSK
pathologies

Complex Regional Pain Syndrome (CRPS)

Reflex neurovascular dystrophy (RND) is an **amplified musculoskeletal pain syndrome (AMPS)**. It is a chronic systemic disease characterized by severe pain, swelling, and changes in the skin. CRPS often worsens over time. It may initially affect an arm or leg and spread throughout the body

Complex Regional Pain Syndrome (CRPS)

- Chronic extremity pain following trauma
- Shoulder-hand syndrome= after M.I, prolong bed rest, hinder the cardiac rehabilitation program



**TYPE I
(RSD)**

Affecting the limbs,
Bone fracture or
injury
Surgery

CRPS

**TYPE II
(CAUSALGIA)**

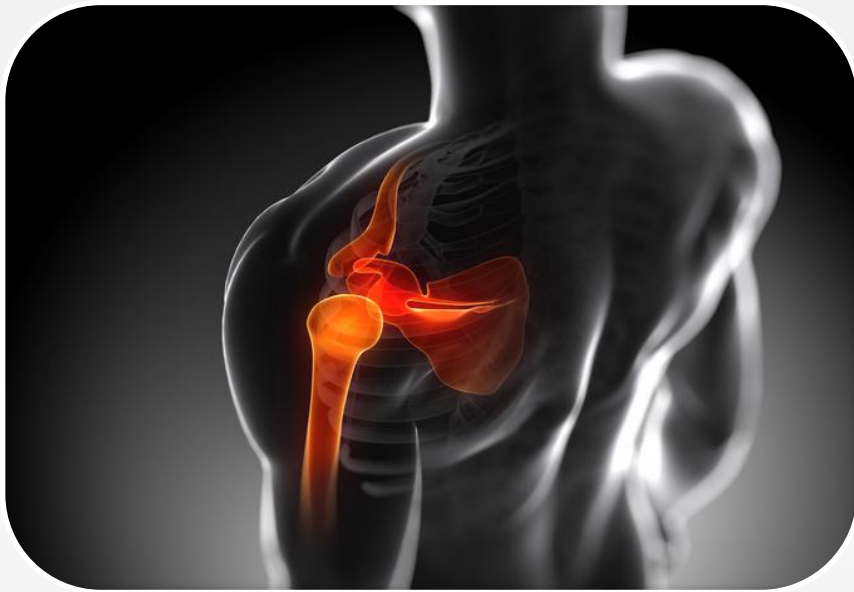
Type II develops after
trauma with nerve
lesion

CRPS

When this condition occurs after a myocardial infarction, the shoulder initially may demonstrate pericapsulitis.

Tenderness around the shoulder is diffuse and not localized to a specific tendon or bursal area.





The shoulder may be "**stiff**" for several months before the hand becomes involved , or both may become stiff simultaneously



Other signs= edema, skin (trophic) changes, and vasomotor (temperature, hydrosis) changes

Type I (signs and symptoms)

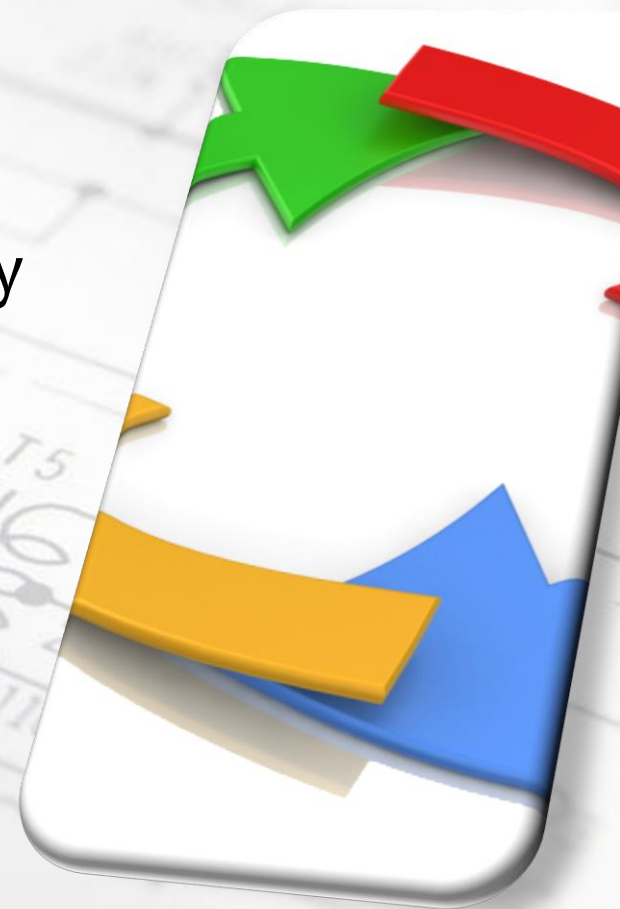
Stage I (acute, lasting several weeks)

- Pain described as burning, aching, throbbing
- Sensitivity to touch
- Swelling
- Muscle spasm
- Stiffness, loss of motion and function
- Skin changes (warm, red, dry skin changes to cold (cyanotic), sweaty skin)
- Accelerated hair growth (usually dark hair in patches)



Stage II (subacute , lasting 3 to 6 months)

- Severity of pain increases
- Swelling may spread; tissue goes from soft to boggy to firm
- Muscle atrophy
- Skin becomes cool, pale, bluish, sweaty
- Nail bed changes (cracked, grooved, ridges)
- Bone demineralization (early onset of osteoporosis)



Stage III (chronic, lasting more than 6 months)

Pain may stay same, improve, or get worse; variable

Irreversible tissue damage

Muscle atrophy and contractures

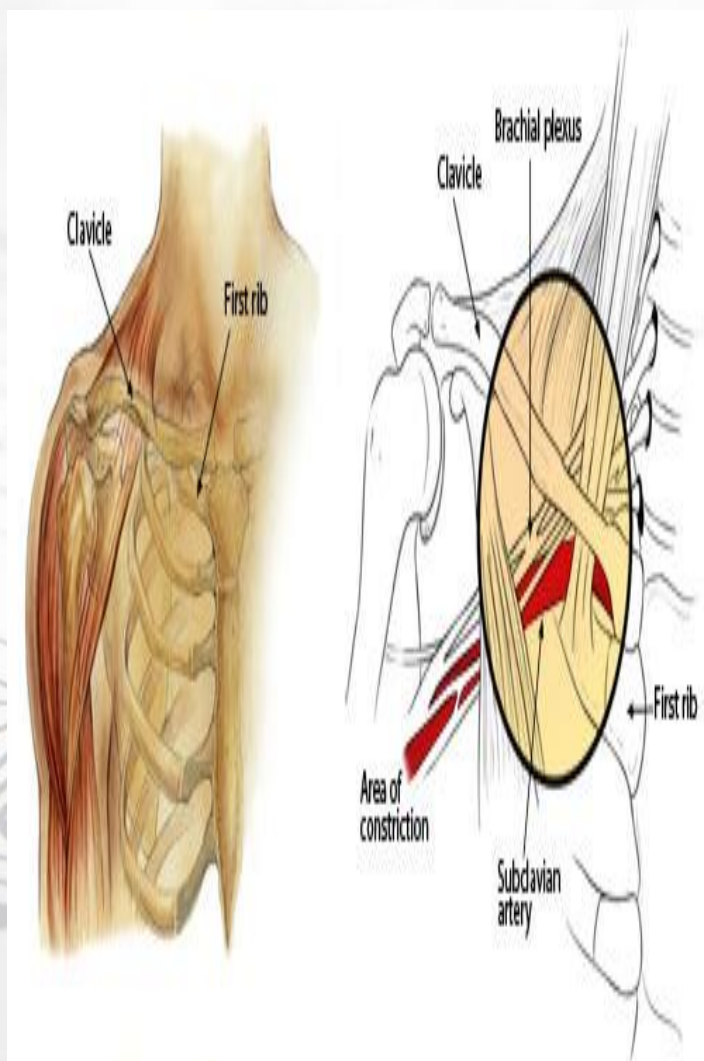
Skin becomes thin and shiny

Nails are brittle

Osteoporosis

TOS

Compression of the neurovascular bundle consisting of the brachial plexus and subclavian artery and vein can cause a variety of symptoms affecting the arm, hand, shoulder girdle, neck, and chest



Bacterial Endocarditis

Common musculoskeletal symptom in clients with bacterial endocarditis is arthralgia

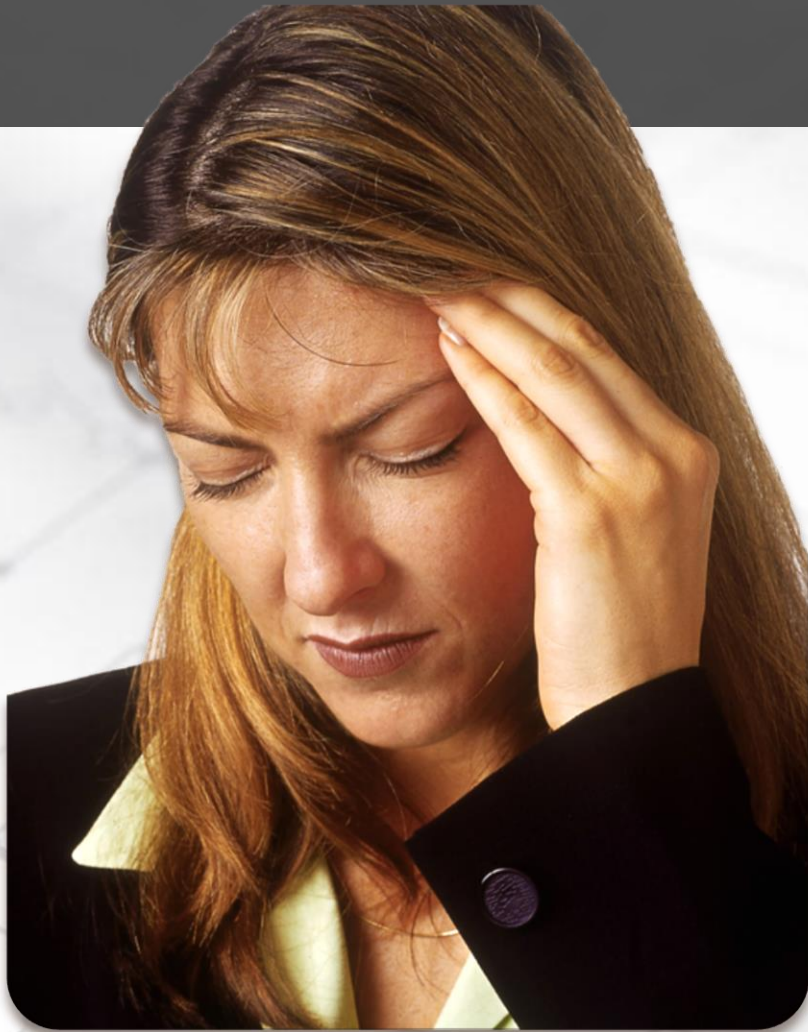
Proximal joints

Shoulder is affected most often, followed (in declining incidence) by the knee, hip, wrist, ankle, metatarsophalangeal and metatarsophalangeal joints, and by acromioclavicular involvement



Pericarditis & Aortic Aneurysm

- These conditions can also cause chest and shoulder pain as we have discussed it in previous lectures



**SCREENING
FOR
GASTROINTE
STINAL
CAUSES OF
SHOULDER
PAIN**

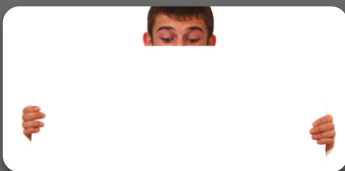
SCREENING FOR GASTROINTESTINAL CAUSES OF SHOULDER PAIN



Upper abdominal or gastrointestinal problems with diaphragmatic irritation can refer pain to the ipsilateral shoulder



Peptic ulcer, gallbladder disease, and hiatal hernia are the most likely GI causes of shoulder pain



Associated signs and symptoms such as nausea, vomiting, anorexia, melena



Previous history of NSAID and peptic ulcers

SCREENING FOR GASTROINTESTINAL CAUSES OF SHOULDER PAIN

Midback , scapular, and right shoulder regions.

These musculoskeletal symptoms can occur alone or in combination

shoulder motion is not compromised and local tenderness is not a prominent feature

Biomechanical changes in muscular contractions



SCREENING FOR RHEUMATIC CAUSES OF SHOULDER PAIN

Ankylosing spondylitis

Rheumatoid arthritis

Polymyalgia rheumatica and
polymyositis

SCREENING FOR INFECTIOUS CAUSES OF SHOULDER PAIN

Septic arthritis

Osteomyelitis

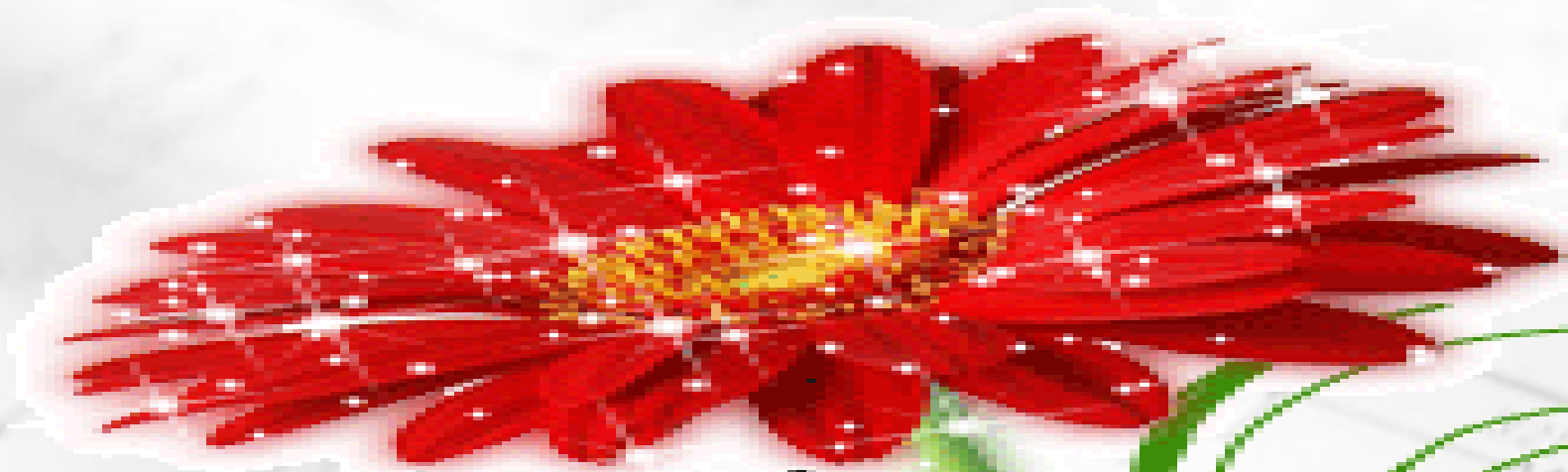
Infectious mononucleosis

SCREENING FOR ONCOLOGIC CAUSES OF SHOULDER PAIN

- Past medical history of cancer anywhere=red flag
- Brachial plexus radiculopathy can occur in either or both arms with cancer metastasized to the lymphatics
- **Primary bone neoplasm**
- **Pulmonary (secondary) neoplasm**
- **Breast cancer**



THANK YOU



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