PAIN REFERRAL PATTERNS

- Physical Examination & Health Assessment
- Differential Diagnosis in Physical Therapy
- Clinical Anatomy of the Lumbar Spine and Sacrum
VISCERAL PAIN REFERRAL PATTERNS
MECHANISM OF VISCERAL REFERRED PAIN

- Neurology of visceral pain not understood at this time
- Afferent fibres known to run with the blood vessels along similar pathways to the SNS
- Viscerosensory fibres ascend to the thalamus and the brain and project to several areas of the brain which encode for site
- Differentiation done poorly by brain due to:
  - Low receptor density
  - Large overlap in brain
  - Multisegemental innervation
  - Embryological development
  - Direct Pressure (diaphragm)
ANATOMY REVIEW

Mouth
Salivary glands
Eosophagus

Parotid gland

Liver
Gallbladder
Duodenum
Ascending colon
Verniform appendix

Stomach
Pancreas
Transverse colon
Jejunum
Descending colon
Ileum
Sigmoid colon
Rectum
Anus

Common hepatic duct
Common bile duct
Spleen
Gallbladder
Lesser duodenal papilla
Ampulla of Vater
Sphincter of Oddi
Tail of pancreas
Pancreatic duct

Gallstones in gallbladder
OESOPHAGUS
PEPTIC & DUODENAL ULCER
PANCREATITIS
UC & CHRON’S DISEASE
CARDIO RESPIRATORY
Figure 4-1

A. The client with chronic bronchitis may develop cyanosis and pulmonary edema, which cause a characteristic look, the "blue bloater." B. Chronic bronchitis may lead to the formation of misshapen or large alveolar sacs with reduced space for oxygen and carbon dioxide exchange.
PINK PUFFER

Terminal bronchiole

Respiratory bronchiole

Alveolar duct

Alveoli sac (normal)

PANLOBULAR

Terminal bronchiole

Respiratory bronchiole

Alveolar ducts

Alveoli sac (damaged)
LUNG REFERRAL
HEART PAIN REFERRAL
AAA

- Right renal artery
- Left renal artery
- Kidney
- Abdominal aortic aneurysm
ANGINA
MYOCARDIAL INFARCTION

- Localized just under breastbone; or in larger area of mid-chest; or entire upper chest.
- Common combination: mid-chest, neck and jaw.
- Mid-chest and inside arms. Left arm and shoulder more frequent than right.
- Upper abdomen—where most often mistaken for indigestion.
- Larger area of chest, neck, jaw and inside arms.
- Lower center neck; to both sides of upper neck; and jaw from ear to ear.
- Inside right arm from armpit to below elbow; inside left arm to waist. Left arm and shoulder more frequent than right.
- Between shoulder blades.
PERICARDITIS
ZYGAPOPHYSEAL REFERRAL PATTERNS
CERVICAL FACET REFERRAL PATTERNS

Dwyer et al
THORACIC FACET JOINT REFERRAL

Dreyfuss et al
LUMBAR FACET JOINT REFERRAL

- Lumbosacral Region
  - L1 to L5 (68%)
  - L5-S1
  - L3-L4, L4-L5, L5-S1 (5-30%)
  - Occasional Referral
    - L1 - L5 (10 - 16%)

Lumbar Spine Region
- L1 to L4-5

Gluteal Region
- L5-S1 (68%)

Fukui et al.