"Derivatives of Endodermal Germ Layer"

》 Gastrointestinal Tract Derivation

- Main organ system from endodermal germ layer is GIT
- Covers ventral embryo surface
- Forms roof of yolk sac

》 Embryonic Development

- Brain vesicles growth leads to embryo curving into amniotic cavity
- Neural tube elongation causes embryo to curve into fetal position
- Head, tail regions move ventrally
- Lateral body wall folds formy, move ventrally to close ventral body wall
- Amnion pulled down, embryo within amniotic cavity
- Ventral body wall closes, except umbilical region

》 Formation of Gut Tube

- Cephalocaudal growth, closure of lateral body wall folds
- Larger portion of endodermal germ layer incorporated into embryo to form gut tube
- Divided into foregut, midgut, hindgut

》 Midgut Connection with Yolk Sac

- Communicates via vitelline (yolk sad) duct
- Duct initially wide, becomes narrow, longer with embryo growth

》 Foregut and Hindgut Boundaries

- Foregut bounded by oropharyngeal membrane
- Hindgut bounded by cloacal membrane

》 Incorporation of Allantois

- Partial incorporation into embryo, forming cloaca
- Distal portion remains in connecting stalk
- By frfth week restricted to umbilical region

》 Role of Yolk Sac

- Nutritive organ in early development
- Contributes initial blood cells
- Provides germ cells migrating to gonads

》 Endodermal Germ Layer Development

- Forms epithelial lining of:

• Respiratory tract
• Urinary bladder
• Urethra
• Tympanic cavity
• Auditory tube

- Forms parenchyma of:

• Thyroid
• Parathyroid
• Liver
• Pancreas