1. Ph. Pouch
   Derivatives

   1. Tympanic (or) middle ear cavity
      Forms subtympanic recess
      1) Distal portion → primitive tympanic or middle ear cavity
      2) Prox. portion → auditot / eustachian tube
      3) Lining at base → int. lining of ear of tympanic cavity / drum

   2. Palatino tonsil

   3. Dorsal region → inferior parathyroid gland
      Ventral region → thymus
      Thymus forms part of heart gland

   4. 1) Superior parathyroid
       2) Ventral portion → ultimobrachial body
      Cells of ultimobrachial body incorporated into thyroid gland → para-follicular / C cells of thyroid gland

   5. Ph. Cleft
      Derivatives

      1. Dorsal pt → penetrates the underlying mesenchyme
         → ext. auditory meatus
         Epithel at the bottom of meatus → ext. lining of ear drum

2. ABNORMALITIES

   1) Lateral cervical cyst (unclosed cervical sinus)
      Swelling on lat. aspect of neck along ant. border of sternomastoid ms.

   2) Ext. branchial fistula
      Communicating channel connecting cervical cyst to lat. aspect of neck

   3) Int. branchial fistula
      Communicating channel connecting cervical cyst – lumen of pharynx

   4) Ectopic thymic and parathyroid ts
      Thymic/parathyroid ts persist along way of migration

   5) Craniofacial defects
      Eg: Treacher-Collins syndrome (mandibulofacial dysostosis)
      - malar hyperplasia
      - Under development of zygomatic bones,
      - mandibular hypoplasia
      - Dem-sizing palpebral tissues,
      - Lower eyelid colobomas
      - Malformed ext. ears
      Eg: Robin syn. syndrome – alter 1st arch st
      Usually hr a trend of micrognathia, cleft palate, glossophtosis