I. Craniometry

technique used to measure dry skull after removal of its soft parts

II. Cephalometry

 technique used to measure the head

Both are the branches of physical anthropology
A landmark on the skull from which craniometric/cephalometric measurements can be taken are craniometric / cephalometric points.
I. Craniometry

**Points**

- **Unpaired:**
  - nasion, glabella, bregma, akanthion, lambda, orale, opisthocranion, basion, staphylion

- **Binate:**
  - pteryon, porion, euryon, zygion, gonion, endomolare
Size of the skull

Length: glabella - opisthocranion
Width: euryon - euryon
High: bregma - basion
Size of the face

Length: nasion - gnathion
Width: zygion - zygion
Size of the palatum

Width: endomolara - endomolare
Length: orale - staphylion
Cephalic index

the ratio of the maximum width of the head multiplied by 100 divided by its maximum length (i.e., in the horizontal plane, or front to back)

Dolichocephalic  \( x - 74.9 \) (long-headed)
Mesocephalic  \( 75.0 - 79.9 \) (medium-headed)
Brachycephalic  \( 80.0 - x \) (short-headed)
Facial index

the ratio multiplied by 100 of the breadth of the face to its length

Leptoprosopic  \[ 90,9 - x \] (long narrow face)
Mesoprosopnic  \[ 85,0 - 89,9 \] (average width)
Euryprosopic   \[ x - 84,9 \] (short broad)
Palatomaxillary index

the ratio of the length of the hard palate to its breadth multiplied by 100 called also palatomaxillary index

Leptostaphylic \( x \) - 79.9 (narrow palatum)
Mesostaphylic 80.0 - 84.9 (average width)
Brachystaphylic 85.0 - \( x \) (broad palatum)
II. Cephalometry

- Is used in dentistry, especially in orthodontics, to gauge the size and special relationships of the teeth, jaws and cranium.

- This analysis informs treatment planning, quantifies changes during treatment, and provides data for clinical research.
Clin. diagnosis of orofacial anomalies

1. Anamnesis

2. Examination of orofacial:
   - intraoral
   - functional
   - several different methods:
     * photographs (en face, profil)
     * impressions
     * analysis of models
     * X-rays (telerentgen) with cephalometric analysis
Telerentgen
Cephalometric point, plane, line and angles used in dentistry

S (Sella)
midpoint of sella turcica

N (Nasion)
most anterior point on fronto-nasal suture

Or (Orbitale)
most inferior anterior point on margin of orbit

Po (Porion)
upper most point on bony external auditory meatus

ANS (Anterior Nasal Spine)
PNS (Posterior Nasal Spine)
**Go (Gonion)**
most posterior inferior point on angle of mandible

**Me (Menton)**
lower most point on the mandibular symphysis

**A (A point)**
position of deepest concavity on anterior profile of maxilla

**B (B point)**
position of deepest concavity on anterior profile of mandibular symphysis
Frankfort Plane: Po - Or
Equivalent to the true horizontal when patient is standing upright

Maxillary Plane: PNS - ANS
Gives inclination of maxilla relative to other lines/planes

Mandibular Plane: Go - Me
Gives inclination of mandible relative to other lines/planes
Important lines:
- S - N line
- N - A line
- N - B line

Important angles:
- SNA
- SNB
- ANB

Indicates position of maxilla / mandible to each other and to the cranial base