

BASIC OF CRANIOMETRY and CEPHALOMETRY



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

The background of the slide features several sets of concentric circles in a lighter shade of blue, resembling ripples in water. These circles are scattered across the lower half of the slide, with some overlapping.

A **landmark** on the skull from which craniometric/cephalometric measurements can be taken are **craniometric / cephalometric points**



Cephalometre

I. Cranimetry

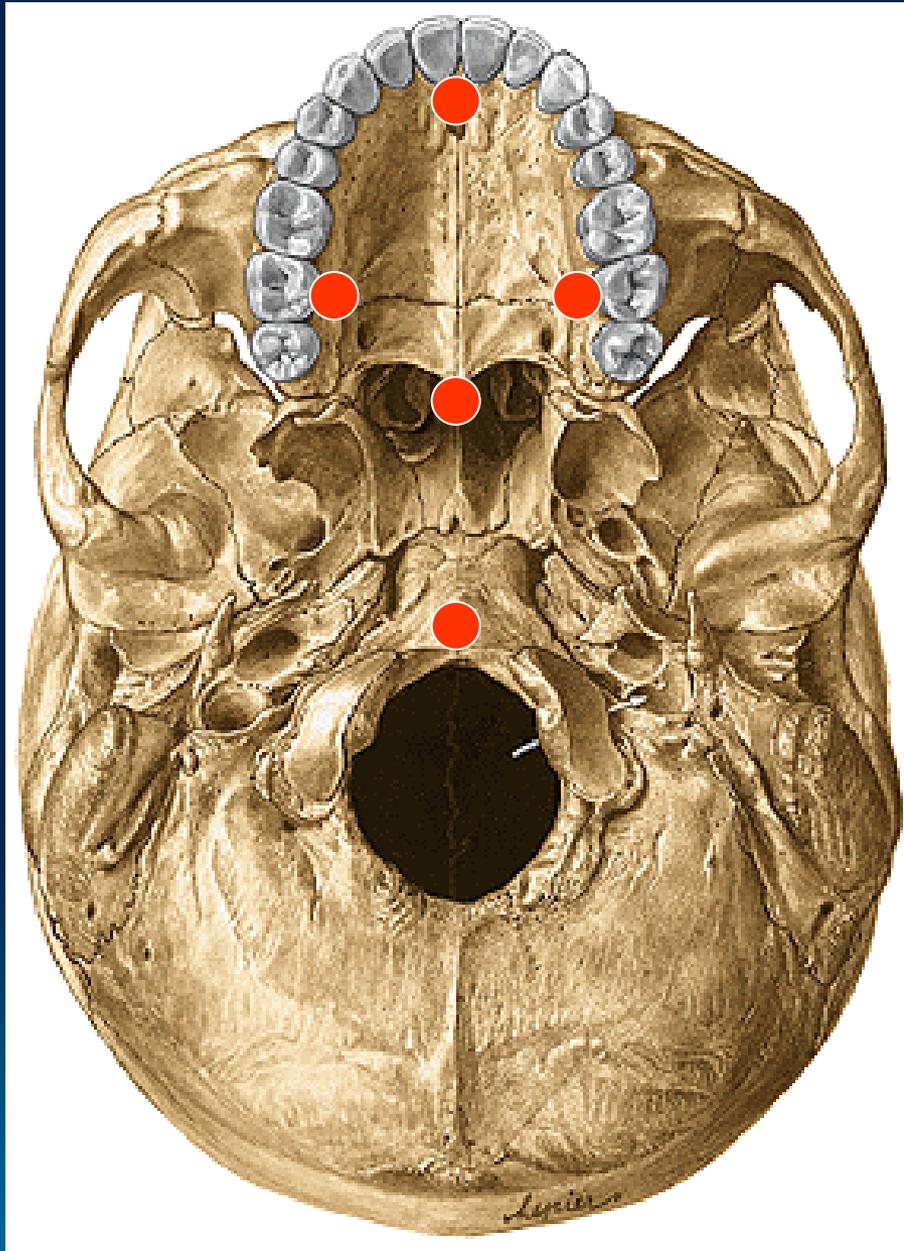
Points

- **Unpaired:**

nasion, glabella, bregma, akanthion, lambda, orale, opisthocranion, basion, staphylion

- **Binate:**

pteryon, porion, euryon, zygion, gonion, endomolare



orale

endomolare

staphylion

basion

bregma



glabella



nasion



lambda



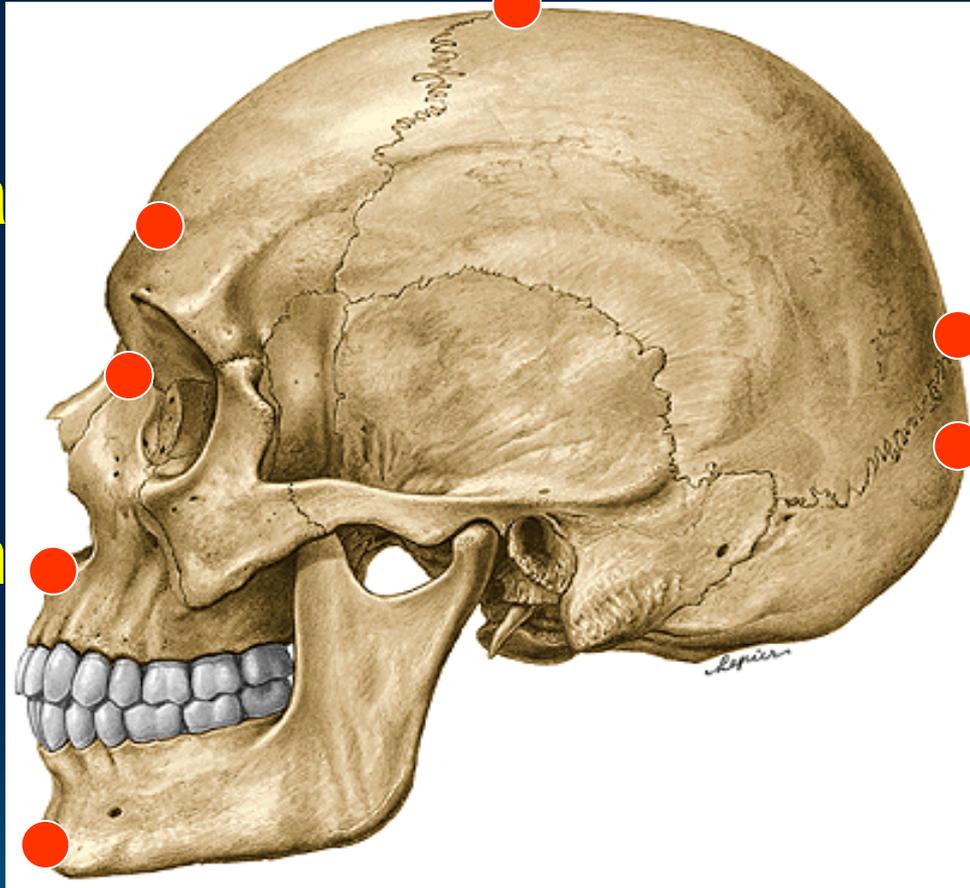
opistocranium



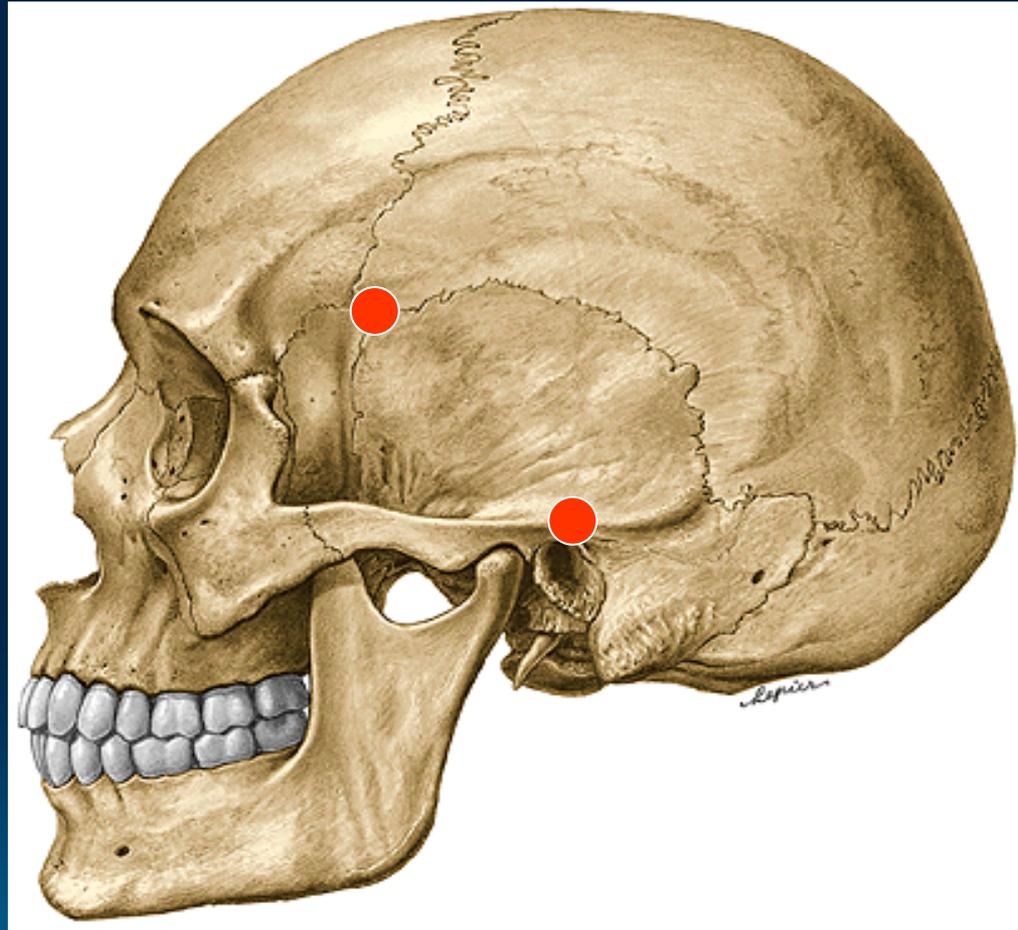
akanthion



gnathion



pteryon



porion

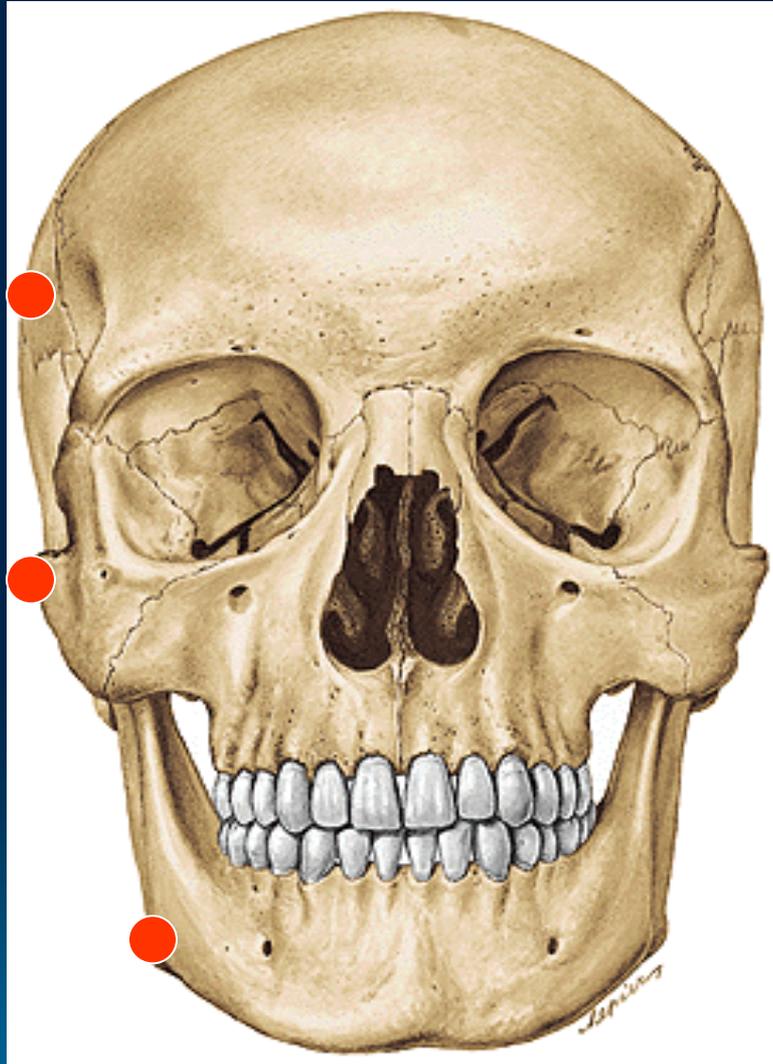
euryon



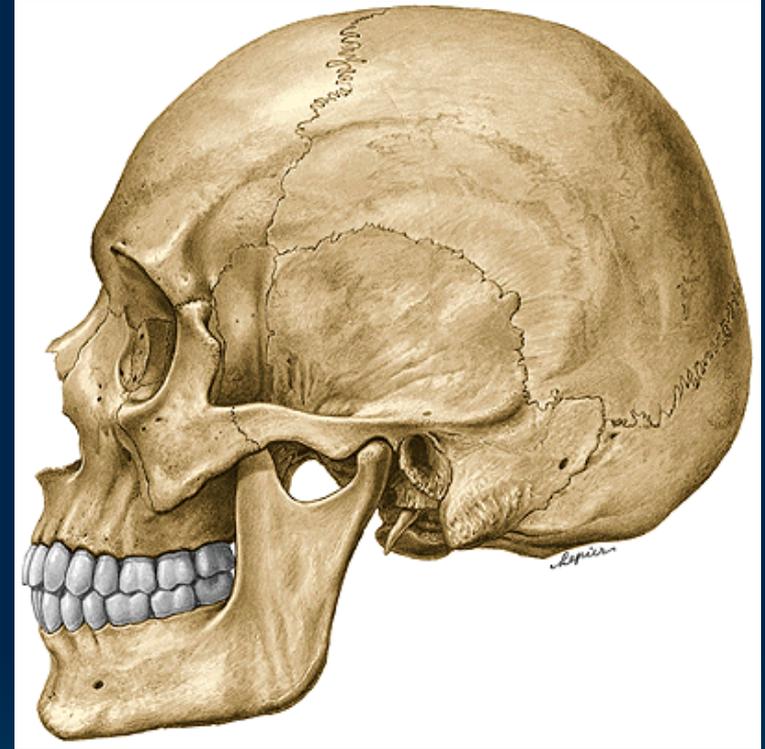
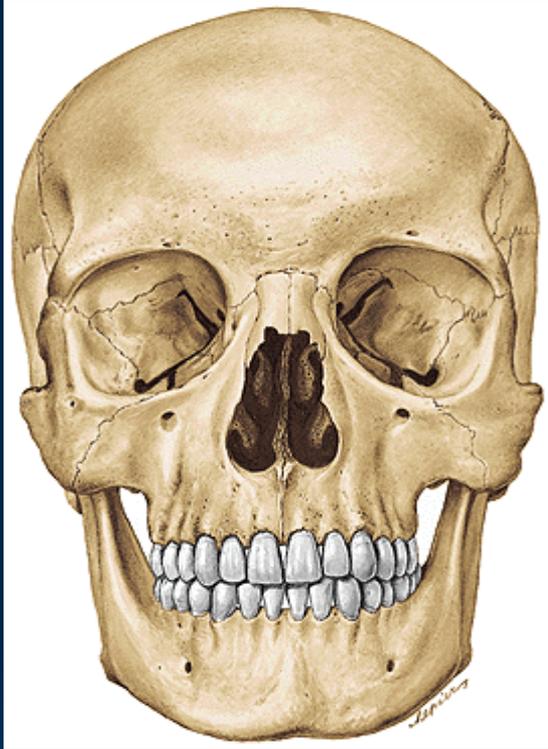
zygion



gonion



Size of the skull

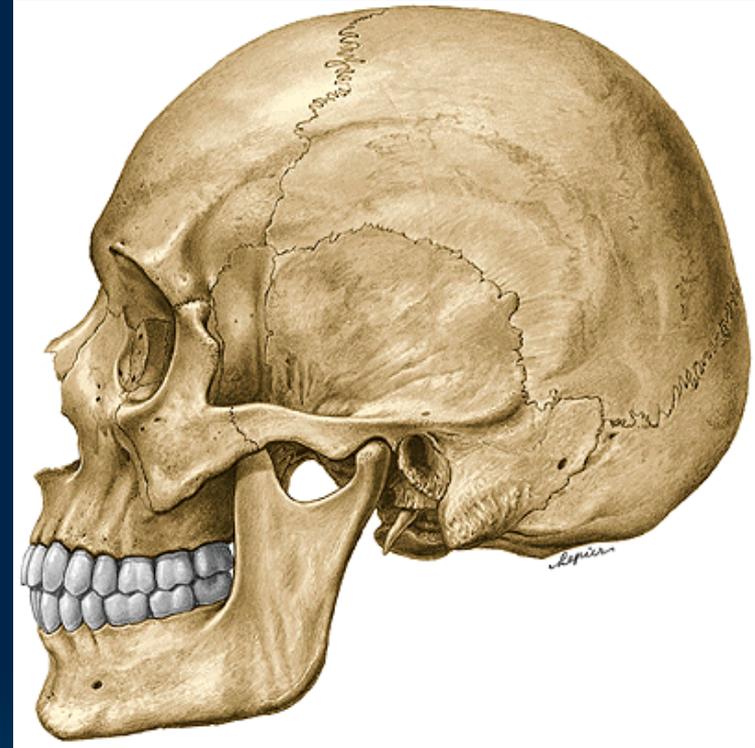
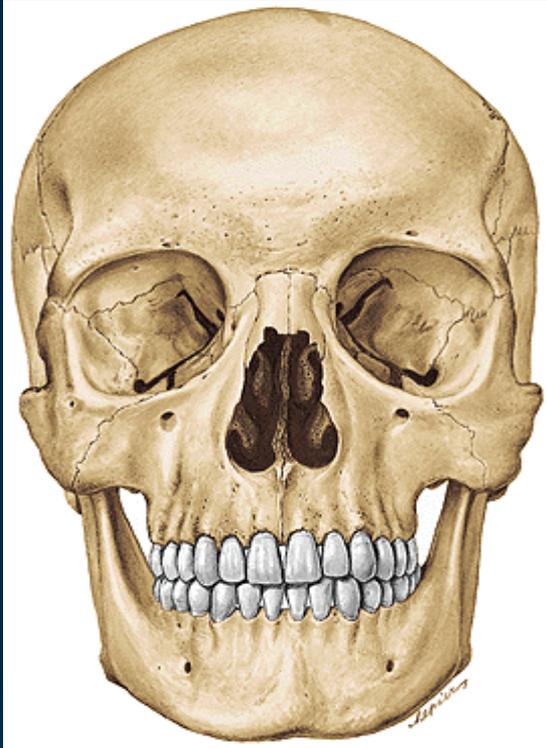


Length: glabella - opisthocranium

Width: euryon - euryon

High: bregma - basion

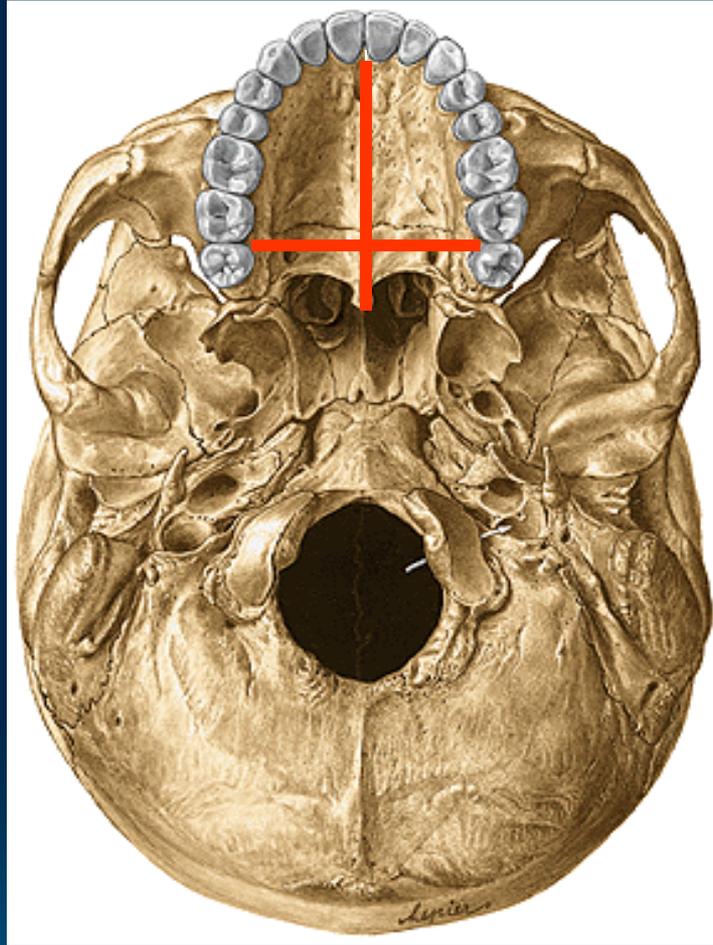
Size of the face



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)

Mesoprosopic $85,0 - 89,9$ (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

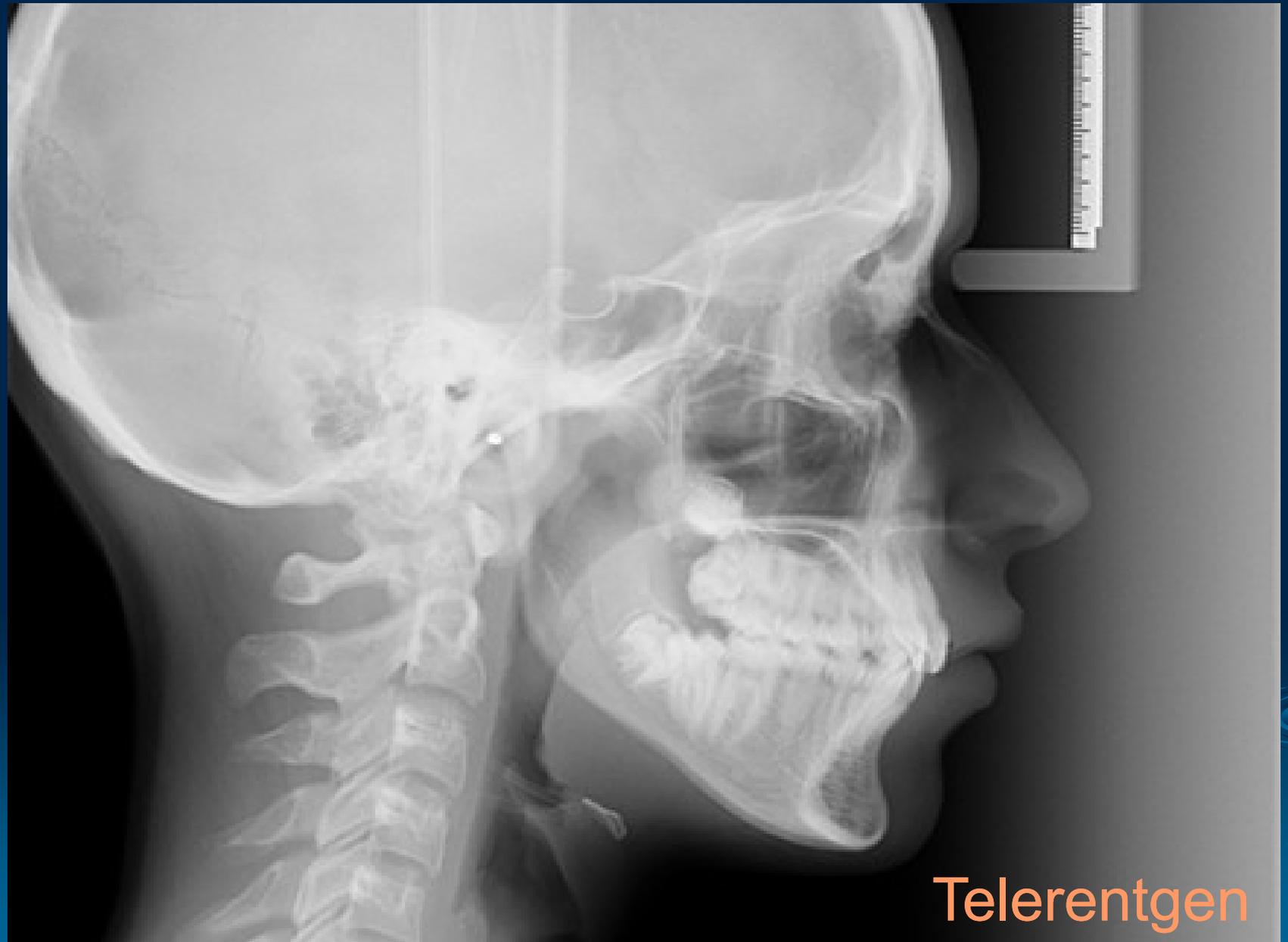
- Is used in dentistry, especially in orthodontics, to gauge the size and special relationships of the teeth, jaws and cranium
 - This analysis informs treatment planning, quantifies changes during treatment, and provides data for clinical research
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Clin. 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 (telorentgen) with **cephalometric analysis**



Telerecortgen

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

