

The role of dentistry in the determination of human identity

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DENTISTRY

Branch of the medicine whose objective is the diagnostic, treatment and prevention of stomatognathic system diseases (teeth, gums, tongue, palate, oral mucosa, salivary glands, tonsils, lips, oropharynx and temporomandibular joint)

IDENTIFICATION

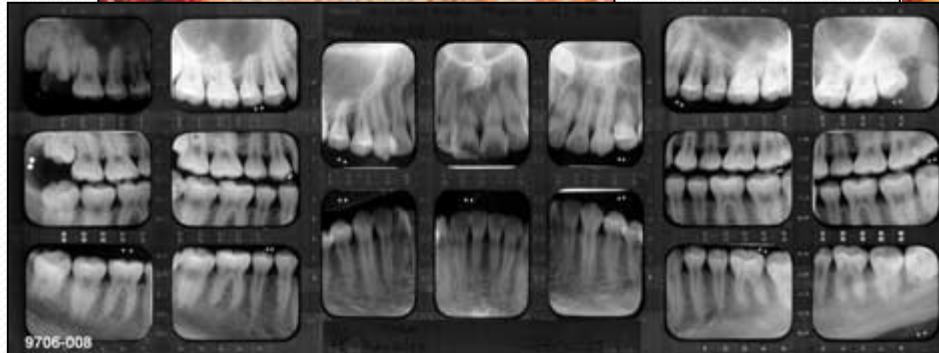
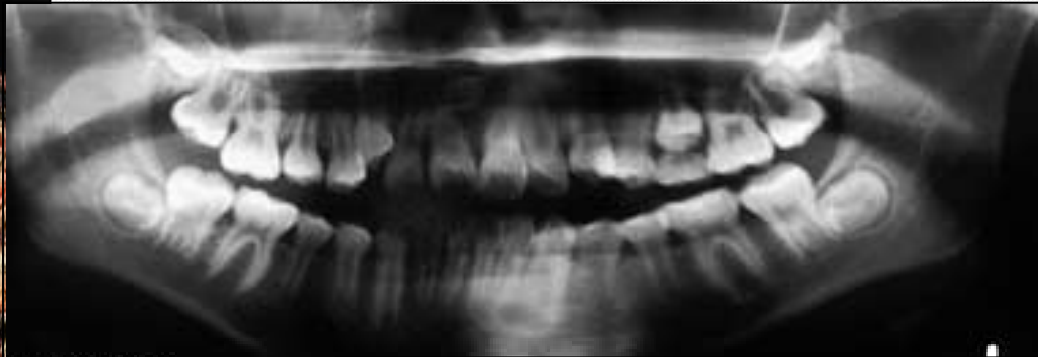
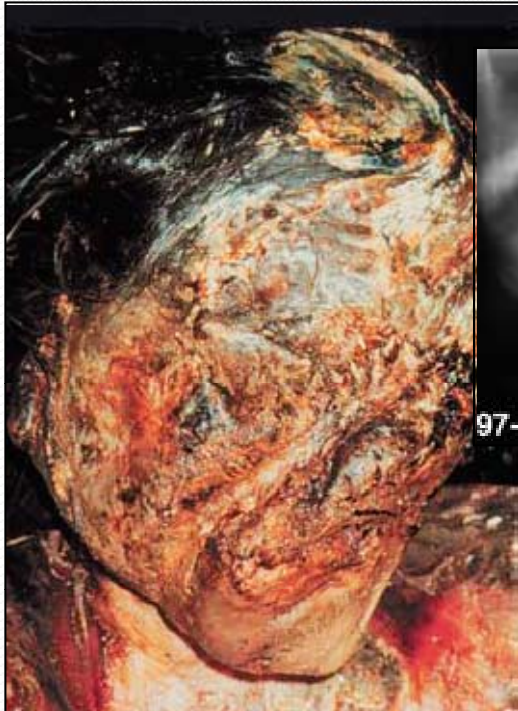
The use of a system or group of scientific knowledge, technical procedures or practical operations to find the existence, know, recognize and with certainty link indubitably acts, conduct and behavior of a person .



TEETH

- ✓ The hardest tissues of the human body.
- ✓ Protected from mechanical, physical and chemical aggressions .
- ✓ They have a great degree of individuality and precision .

COMPARATIVE DENTAL IDENTIFICATION CASE

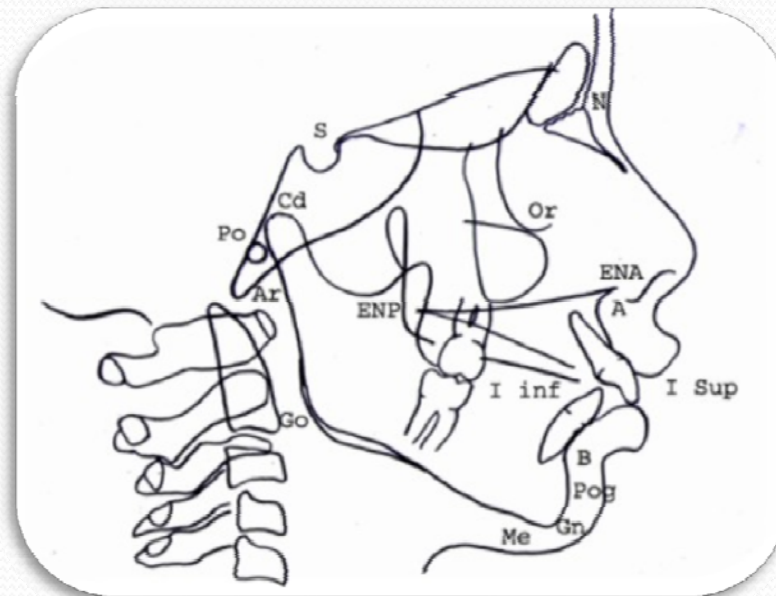


USING DENTAL COMPARATIVE

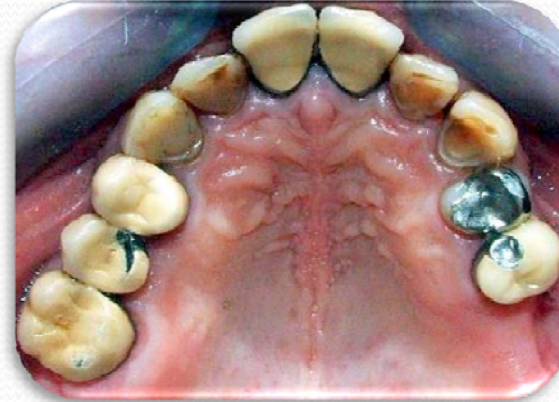
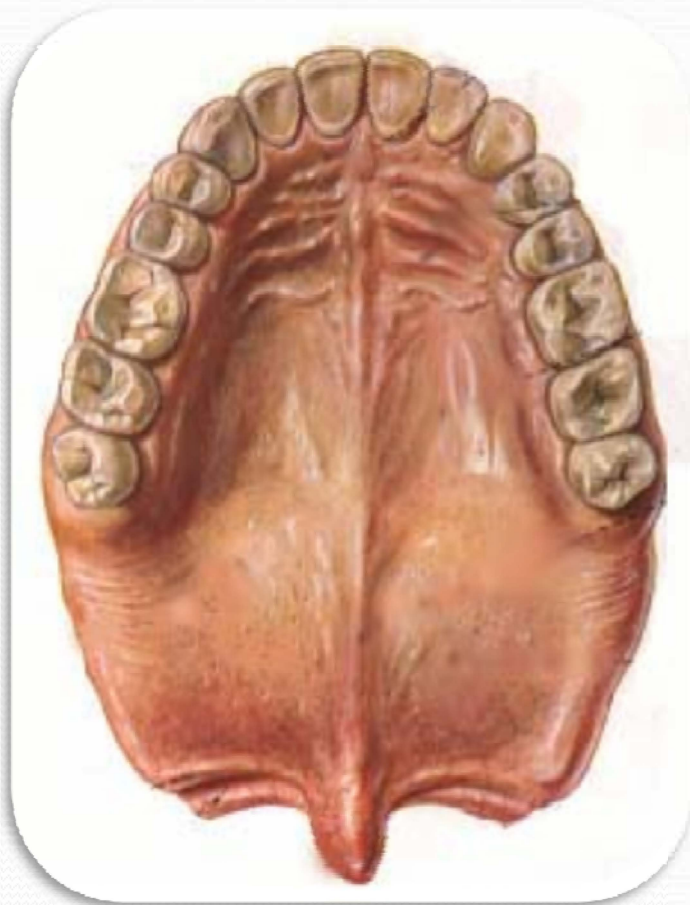


SKULL OSTEOLOGICAL FEATURES

Anthropologic study of the superior and inferior maxillary, together with teeth they allow us, through measurements and a series of formulas and indexes , to determine species race, gender, age and even individuality .



PALATE: Rugae pattern



Cheiloscopy (Lip print)

- Term derived from Greek “cheilos” (lips) and “skopein” (examine) and is referred to the study, record and classification of lips configuration .
- Based on the disposition that is adopted by the folds, fissures and furrows of the face , superior and inferior lips mucosa.



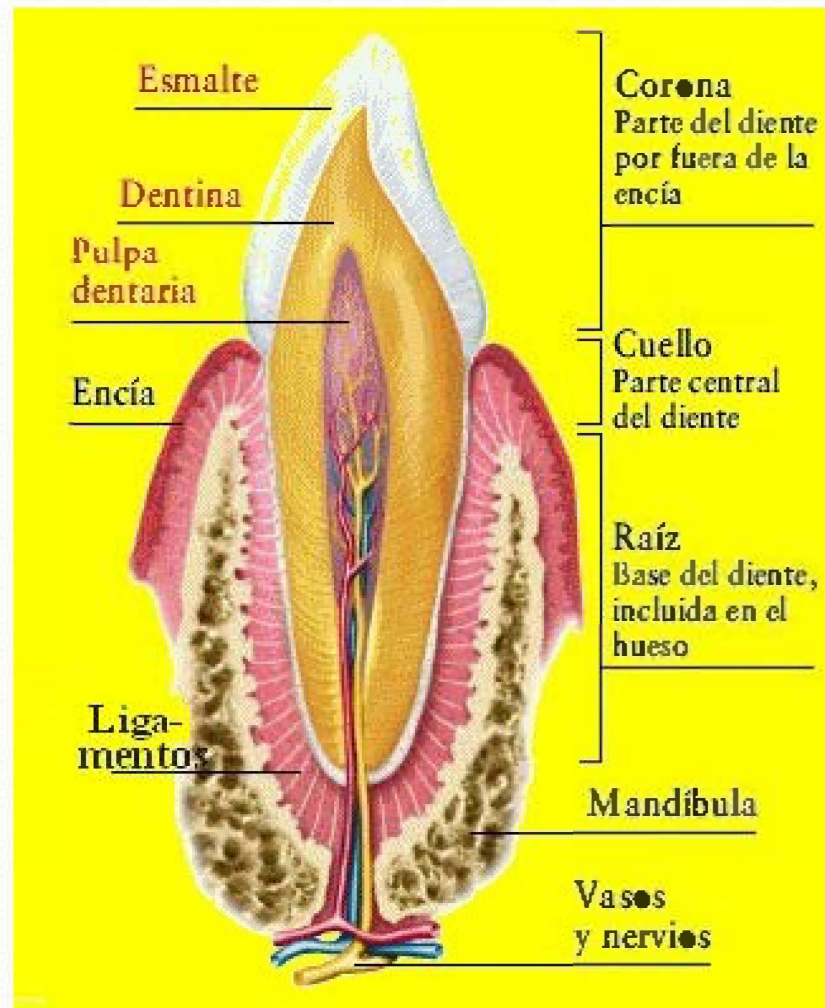
These structures are:

✓ **Unique**

✓ **Immutable and Invariable**

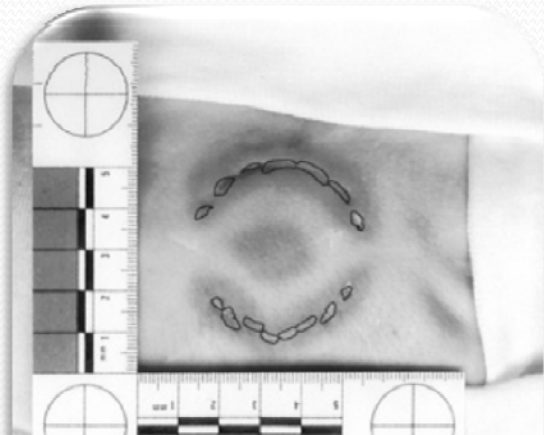
✓ **Perennial**

Dental pulp: DNA source

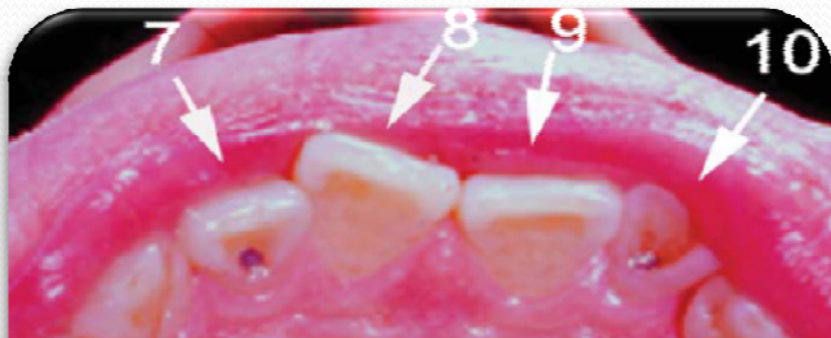
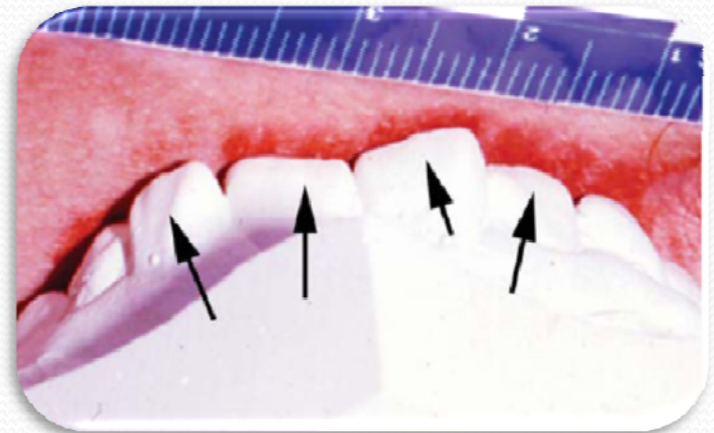


Human Bite marks

- The human bite marks are the impressions of the teeth on different kind of substrate capable of being deformed.
- Through this deformation, characteristics of the teeth are transferred to the surface.



Bite marks identification case



Argentinian Proposal to dental records

- **Type 12-dental record:**

12.001: Record Header

12.002: Information designation Character

12.003: Record Origin

0= Antemortem record 1= Postmortem record

0=Male

0=Male

1=Female

1= Female

2=Unknown

12.004: Panoramic x-ray: x-ray film according to ISO 3665:1996, ISO 4090:2004 and ANSI/ADA Specification N° 1058 for Radiographic image data set

Argentinian Proposal to dental records

12.005: Dental data set: according to ISO/ANSI/ADA Specification N° 3950/2010: Designation System for teeth and areas of the oral cavity and ANSI/ADA Specification N° 1058

12.006: Study models

Dental arch shape

0=ovoid

1=square

2= triangular

Palatine rugae ramifications

0= uniques

1= branches

Palatine rugae shape

0=straight

1= wavy

2= curves

3= circular

4=nonspecific

JGM



Argentinian Proposal to dental records

12.007: intermaxilar record

0=centric relation

1=intercondylar distance

2=maximum intercuspal

3=bite record

0=complete arch

1=anterior pieces

2=posterior pieces

JGM



Argentinian Proposal to dental records

- 12.008 Human bite marks

Anatomic localization

0=shoulder

1=neck

2=chest

3=thigh

4=forearm

5=cheek

6=crotch

8=other

Affected surface

0=curve

1=plane

2=irregular

Type of skin

0=fixed

1=mobile

Argentinian Proposal to dental records

Subjacent structure to the injured tissue

0=bone

1=cartilage

2=muscle

3=adipose tissue

4=other

Shape of the lesion

0=round

1=ovoid

2=semilunar

3=irregular

Quantity

0= unique

1=multiple

Argentinian Proposal to dental records

Include in **Field 18.010: Sample Type / STY** if the origin of the sample is a dental piece : cellular code 9: dental, 10: other, 11: unknown

Table 79 DNA Sample Cellular Types

Cellular code	Cellular type
0	Blood
1	Bone
2	Co-mingled Biological Material
3	Hair
4	Saliva
5	Semen
6	Skin
7	Sweat or Fingerprint
8	Tissue
9	Other
10	Unknown



Jefatura de
Gabinete de Ministros
Presidencia de la Nación

Thank you

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