Propuesta de una plantilla de informe estándar para la identificación mediante Superposición Craneofacial

Autor: Dr. Rubén Martos Fernández

Departamento de Medicina Legal, Toxicología y Antropología Física.

Universidad de Granada

1. Introducción

La redacción de informes representa una tarea esencial y demandante en diversas disciplinas. En el caso de la Antropología Forense, la elaboración de informes de identificación desempeña un papel crucial, ya que constituyen un documento fundamental dentro del proceso legal.

De acuerdo con la Asociación Española de Antropología y Odontología Forense (AEAOF), el **Informe Antropológico Forense Integrado (IAFI)**[1] es un documento que recoge de manera estructurada todas las actuaciones científicas y técnicas realizadas por los especialistas involucrados en un proceso de identificación. Este informe puede contener un documento final de síntesis en el que se presentan los resultados de forma integrada, facilitando una visión global del caso.

El IAFI se configura como un informe pericial y, al mismo tiempo, como una herramienta que permite una comprensión unificada de todas las investigaciones desarrolladas. Puede componerse de varios informes parciales o de un único informe integrador que responda de manera consensuada a los cinco aspectos esenciales en cualquier peritaje forense:

1. Identificación.
2. Origen de la muerte.
3. Data de la muerte.
4. Causas de la muerte.
5. Circunstancias de la muerte.

Además del análisis directo de los restos óseos, el IAFI puede incluir otros documentos de relevancia, tales como el atestado policial, investigaciones históricas, fichas AM, informes arqueológicos, de levantamiento de restos, de cadena de custodia, odontológicos-forenses y otros informes periciales derivados de técnicas complementarias como estudios radiológicos, genéticos y criminalísticos.

Pese a la importancia y utilización de la **Superposición Craneofacial (SCF)** como técnica de identificación de imágenes en escenarios en los que otros métodos principales no pueden ser empleados (huellas dactilares, ADN, etc.), hasta el momento no existe una plantilla estandarizada para la redacción de informes que puedan ser incorporados dentro del IAFI. Actualmente, los formatos, terminología, tablas e imágenes utilizados por los especialistas varían significativamente.

---

[1] Serrulla F. *Recomendaciones en antropología forense*. Asociación Española de Antropología y Odontología Forense, 2013.

El propósito de esta propuesta es desarrollar un modelo estructurado y estandarizado de informe pericial en SCF, facilitando su aplicación en el ámbito forense.

2. Material y métodos

Para diseñar esta plantilla, se ha contado con la colaboración de cuatro expertos en identificación craneofacial: la Dra. Inmaculada Alemán (Laboratorio de Antropología Física, Universidad de Granada), el Dr. Paul Thomas Jayaprakash (Departamento de Ciencias de la Salud, Universidad de Sains Malasia), el Dr. Horacio Solla (Instituto Técnico Forense, Montevideo) y el Dr. Alexey Abramov (Centro Médico Irving, Universidad de Columbia).

Estos especialistas proporcionaron sus propios modelos de informes, además de compartir un conjunto de cuarenta informes de casos anonimizados. Se realizó un análisis detallado de estos documentos para identificar elementos comunes y divergencias, así como para evaluar la terminología utilizada.

Otra fuente de referencia fundamental ha sido la documentación producida en el marco del proyecto europeo MEPROCS (New Methodologies and Protocols of Forensic Identification by Craniofacial Superimposition)[2], especialmente en lo que respecta a la categorización de los grados de coincidencia/confianza en los resultados. Asimismo, se ha tenido en cuenta la literatura científica más relevante en el campo de la evaluación morfológica craneofacial.

3. Resultados

A partir del análisis realizado, se ha diseñado una plantilla estructurada para la redacción de informes de SCF, organizada en las siguientes secciones:

1. **Materiales**: Descripción de los elementos utilizados en el análisis.
2. **Descripción de los materiales**: Incluye el perfil biológico del individuo, descripción morfométrica y morfológica, asimetrías faciales y características distintivas.
3. **Metodología empleada**: Explicación detallada del procedimiento de Superposición Craneofacial aplicado.
4. **Decisión de identificación**: Presentación de los resultados en tres niveles:
    - Nivel de experto.
    - Nivel de todos los solapamientos cráneo-cara.
    - Nivel de un solapamiento cráneo-cara.
5. **Evaluación de criterios de consistencia anatómica**: Revisión de la correspondencia anatómica entre la imagen en vida y el cráneo analizado.
6. **Apéndice de tablas**: Incorporación de datos complementarios estructurados en tablas.

---

[2] Arroyo SD, Cordón O, Ibáñez O. *Handbook on Craniofacial Superimposition: The MEPROCS Project*. Springer International Publishing 2020. DOI: 10.1007/978-3-319-11137-7.

7. **Apéndice de imágenes**: Integración de figuras y esquemas que respalden la evaluación realizada.

Esta estructura pretende garantizar la estandarización de los informes en SCF, promoviendo la claridad y la uniformidad en la comunicación de resultados dentro del ámbito forense.

STANDARDIZED CRANIOFACIAL SUPERIMPOSITION (CFS) IDENTIFICATION REPORT TEMPLATE

Glossary

1. The text that goes in parentheses and in bold is data to introduce referring to the case:

1.1. (PM CASE): reference of the subject (skeletal remains) whose skull will be used for comparison.
1.2. (AM CASE): reference of the subject of the photographs used for comparison.
1.3. (AM CASE-Photo-id): reference of the number of the photograph used.
1.4. (Number of photographs): indicate the number of photographs of the AM CASE.
1.5. (AGE): indicate the number of years (age) of the subject of the photo AM CASE-Photo-id and the subject of the PM CASE.

2. Everything in brackets and in bold is not part of the report, they are actions according to input data:

2.1. [In case of negative decision] the text that precedes only appears if the decision is negative.
2.2. [In case of positive decision] the text that precedes only appears if the decision is positive.
2.3. [In case of undetermined decision] the text that precedes only appears if the decision is indeterminate.

3. Everything that goes in bold and between separators are variables to be selected by the forensic expert:

1. **complete/sufficient/incomplete**
2. ***All/most/the majority/a few***
3. ***male/female***
4. ***etc***

1. MATERIAL

For the realization of the present craniofacial comparison identification study, the following material was received:

1. A **complete/sufficient/incomplete** unknown skull **with/without** mandible corresponding to **(PM CASE).**

2. A total number of **(Nº photographs)** in different views corresponding to **(AM CASE)**.

    a. **(AM CASE-Photo-id)** presents a **frontal/lateral/oblique** view and with **high/sufficient/poor** quality.

2. MATERIAL DESCRIPTION (BIOLOGICAL PROFILE, MORPHOMETRIC AND MORPHOLOGICAL OBSERVATIONS)

2.1. Biological Profile

Sex and age estimation of the material received:

1. The unknown skull **(PM CASE)** presents morphological characteristics of a **male/female/undetermined** individual. The skull corresponds to a **subadult/adult/senile** of approximately **(AGE)** years.

    a. The photograph **(AM CASE-Photo-id)** corresponds to a **male/female** individual of **(AGE)** years.

2.2. Morphometric description

Craniometric and cephalometric landmarks were located on the skull **(PM CASE)** and the facial photograph **(AM CASE-Photo-id)** and the following DPIs (Distance Proportional Indexes) were obtained:

Skull **(PM CASE)** measured DPIs				
Nº	**DPI NAME**	**DPI FORMULAE**	**PROPORTION (%)**	**DESCRIPTOR**
19	**Total facial index**	n-gn / zy-zy x 100		**Broad/Medium/Narrow**
20	**Relative facial breadth**	zy-zy / mso-gn x 100		**Small/Medium/Large**
21	**Size of malar bones**	zy-zy / ft-ft x 100		**Large/Medium/Small**
22	**Chin height**	sm-gn / mso-gn x 100		**Large/Medium/Small**
23	**Interorbital index**	d-d / ec-ec x100		**Broad/Medium/Narrow**
24	**Length of palpebral fissure**	d-ec /fmt-fmt x 100		**Large/Medium/Small**
25	**Nasal breadth Index**	al-al / n-ss x 100		**Broad/Medium/Narrow**
26	**Nasal length index**	n-ss / n-gn x 100		**Large/Medium/Small**
27	**Endocanthal-alar index**	d-d / al-al x 100		**Broad/Medium/Narrow**
28	**Gonio-zygomatic index**	go-go / zy-zy x 100		**Broad/Medium/Narrow**
29	**Length-total height index**	v-tr / g-op x 100		**Large/Medium/Small**
30	**Upper facial index**	n-pr / n-ss x 100		**Large/Medium/Smaal**
31	**Frontal height**	tr-mso / mso-gn x 100		**Large/Medium/Small**

(AM CASE-Photo-Id) measured DPIs				
Nº	**DPI NAME**	**DPI FORMULAE**	**PROPORTION (%)**	**DESCRIPTOR**
19	**Total facial index**	n-gn / zy-zy x 100		**Broad/Medium/Narrow**
20	**Relative facial breadth**	zy-zy / mso-gn x 100		**Small/Medium/Large**
21	**Size of malar bones**	zy-zy / ft-ft x 100		**Large/Medium/Small**
22	**Chin height**	sm-gn / mso-gn x 100		**Large/Medium/Small**
23	**Interorbital index**	en-en / ec-ec x100		**Broad/Medium/Narrow**
24	**Length of palpebral fissure**	en-ec /fz-fz x 100		**Large/Medium/Small**
25	**Nasal breadth Index**	al-al / n-sn x 100		**Broad/Medium/Narrow**
26	**Nasal length index**	n-sn / n-gn x 100		**Large/Medium/Small**
27	**Endocanthal-alar index**	en-en / al-al x 100		**Broad/Medium/Narrow**
28	**Gonio-zygomatic index**	go-go / zy-zy x 100		**Broad/Medium/Narrow**
29	**Length-total height index**	v-tr / g-op x 100		**Large/Medium/Small**
30	**Upper facial index**	n-pr / n-sn x 100		**Large/Medium/Small**
31	**Frontal height**	tr-mso / mso-gn x 100		**Large/Medium/Small**

2.3. Morphological description

The morphological characteristics in the skull **(PM CASE)** were visually assessed in comparison with the morphological manifestations in the facial photographs of the **male/female** individual. The morphological description of the subject **(AM CASE)** is based on the average observation of all available photographs.

1. The **round/oval/rectangular/triangular** contour of the head seen in the facial photograph in frontal view is **strongly/moderately/limitedly/not** correlated with the **round/oval/rectangular/triangular** contour of the skull in frontal view.
2. The **sloping/steep/curved** run of the forehead seen in the facial photograph in lateral view is **strongly/moderately/limitedly/not** correlated with the **sloping/steep/curved** run of the forehead seen in the skull in lateral view.
3. The **low/average/high** degree of protrusion of the brow ridge seen in the facial photograph in lateral view is **strongly/moderately/limitedly/not** correlated with the **low/average/high** degree of protrusion of the brow ridge seen in the skull in lateral view.
4. The **curved/angular/straight** eyebrows shape seen in the facial photograph in frontal view is very **strongly/moderately/limitedly/not** correlated with the **curved/angular/straight** course of the brow ridges seen in the skull in frontal view.
5. The **downward/horizontal/upward** orientation of the palpebral fissure axes seen the facial photograph in frontal view is **strongly/moderately/limitedly/not** correlated with the downward**/horizontal/upward** ectoconchion-dacryon axes seen in the skull in frontal view.
6. The **deep/average/shallow** root of the nose seen in the facial photograph in lateral view is **strongly/moderately/limitedly/not** correlated with the **deep/average/shallow** nasal bone root seen in the skull in lateral view.

7. The **narrow/average/broad** nasal bridge breadth seen in the facial photograph in frontal view is **strongly/moderately/limitedly/not** correlated with the **narrow/average/broad** nasal ridge seen in the skull in frontal view.
8. The **left deviated/symmetrical/right deviated** nasal bridge seen in the facial photograph in frontal view is **strongly/moderately/limitedly/not** correlated with the **left deviated/symmetrical/right deviated** nasal ridge seen in the skull in frontal view.
9. The **concave/straight/convex** run of the nasal bridge seen in the facial photograph in lateral view is **strongly/moderately/limitedly/not** correlated with the **concave/straight/convex** nasal ridge seen in the skull in lateral view.
10. The **narrow/average/broad** alae of nose seen in the facial photograph in frontal view are **very well/well/bad/very bad** correlated with the **narrow/average/broad** piriform aperture seen in the skull in frontal view.
11. The **ascending/horizontal/descending** orientation of the nasal base seen in the facial photograph in lateral view is **strongly/moderately/limitedly/not** correlated with the **ascending/horizontal/descending** nasal spine in the skull in lateral view.
12. The **pointed/round/bulbous** nasal tip shape seen in the facial photograph in lateral view is **strongly/moderately/limitedly/not** correlated with the **pointed/round/bulbous** nasal spine tip shape seen in the skull in lateral view.
13. The **low/average/high** chin seen in the facial photograph in frontal view is **strongly/moderately/limitedly/not** correlated with the **low/average/high** mental triangle seen in the skull in frontal view.

14. The **round/square/pointed** chin shape seen in the facial photograph in frontal view is **strongly/moderately/limitedly/not** correlated with the **round/square/pointed** chin contour seen in the skull in frontal view.
15. The **clefted/not clefted** chin seen in the facial photograph in frontal view is **strongly/moderately/limitedly/not** correlated with the **clefted/not clefted** chin seen in the skull in frontal view.
16. The **receding/normal/prominent** chin protrusion seen in the facial photograph in lateral view is **strongly/moderately/limitedly/not** correlated with the **receding/normal/prominent** chin protrusion seen in the skull in lateral view.
17. The **maxillary/normal/mandibular** prognathism seen in the facial photograph in lateral view is **strongly/moderately/limitedly/not** correlated with the **maxillary/normal/mandibular** prognathism seen in the skull in lateral view.
18. The **free/attached** earlobe seen in the facial photograph in lateral view is **strongly/moderately/limitedly/not** correlated with the **forwardly/downwardly** pointing tip of mastoid process seen in the skull in lateral view.
19. The **close-fitting/slightly/strongly** protrusion of the ears seen in the facial photograph in frontal view is **strongly/moderately/limitedly/not** correlated with the **not/slightly/strongly** prominence of the supramastoid crest seen in the skull.
20. The **slightly/strongly** prominent cheeks seen in the facial photograph in frontal view are **strongly/moderately/limitedly/not** correlated with the **slightly/strongly** prominent malar bones seen in the skull in frontal view.

2.4 Facial organs asymmetries observations

The asymmetries in the facial organs reveal consistency with the asymmetries in the organs of the skull. These include:

1. Asymmetries in the nasal area include the nasal bone, piriform aperture and nasal spine.

Observations:

2. Asymmetries in the zygomatic area, especially the extent of protrusion of the arch.

Observations:

3. Asymmetries in the occlusal line caused by protruding or overriding anterior dentition as asymmetries in the corresponding part of the lip closure line.

Observations:

4. Asymmetries in the gonia.

Observations:

5. Asymmetries in other areas.

Observations:

3. CFS METHODOLOGY

Description of the methodology and tools used by the forensic expert to carry out the identification study (software used, superimposition system, studies of soft tissue thickness).

4. IDENTIFICATION DECISION

4.1. Expert Level Decision

As a result of the present identification study:

[In case of positive decision]

Taking into account the **complete/sufficient parts/incomplete** cranium **with/without** corresponding mandible, **sufficient/insufficient** dentition to evaluate occlusion and **at least two photos in different poses of sufficient quality/one photo of sufficient quality/one poor quality photo**, the skull and the facial photographs have carefully examined, and the following decision was made:

Due to the absence of incompatible inconsistencies, there is a **strong/moderate/limited support** that the unknown skull **(PM CASE)** has belonged to the **male/female** individual seen in the photographs **(AM CASE)** used for comparison**.**

[In case of undetermined]

Due to the insufficient dentition to evaluate occlusion, incomplete skull and poor-quality photographs there is not enough support to make a positive or negative decision.

[In case of negative decision]

Taking into account the **complete/sufficient parts/incomplete** cranium **with/without** corresponding mandible, **sufficient/insufficient** dentition to evaluate occlusion and **at least two photos in different poses of sufficient quality/one photo of sufficient quality/one poor quality photo**, the skull and the facial photographs have carefully examined, and the following decision was made:

Due to the presence of incompatible inconsistencies, there is a **strong/moderate/limited support** that the unknown skull **(PM CASE)** has not belonged to the **male/female** individual seen in the photographs **(AM CASE)** used for comparison**.**

Presence of incompatible inconsistencies that can be explained:

Changes in the general shape of the skull because of traumatic injuries, surgery or post-mortem destruction.	
Difference in the age of the person depicted in the photograph with the age of the deceased (old photographs).	X
Position of the head (turns, slopes) or the state of facial expression.	
Inaccuracies in marking a face.	
Others (explain):	

4.2. CFS Level Decision

As a result of the evaluation of the skull-face overlays of the 3D skull model of (**PM case)** over all the photographs of (**AM case)** and considering the morphometric and morphological/anatomical consistency analysis:

[In case of positive decision]

The craniofacial matching/compatibility in ***all/most of/the majority of/a few* of** the skull-face overlays analyzed were found to be ***strongly /moderately/ limitedly*** consistent.

[In case of undetermined decision]

The craniofacial matching/compatibility in ***all/most of/the majority of/a few* of** the skull-face overlays analyzed can't be determined.

[In case of negative decision]

The craniofacial matching/compatibility in ***all/most of/the majority of/a few* of** the skull-face overlays analyzed were found to be ***strongly /moderately/ limitedly*** inconsistent.

4.3 SFO_id Level Decision

[In case of positive decision]

The unknown skull **(PM CASE)** was superimposed on the image of the facial photograph of the **male/female** individual **(AM CASE-Photo-id)** using the **(system name)** for demonstrating the anatomical relationship of the former in the latter.

During superimposition the following observations were made:

a) ***All/most of/the majority of/a few* of** the anatomical consistency criteria of the face-image **(AM CASE-Photo-id)** and the skull **(PM CASE)** were found to be ***strongly /moderately/ limitedly/ undetermined/*** consistent.

b) ***All/most of/the majority of/a few* of** the visually assessable asymmetries in the face-image **(AM CASE-photo-id)** and those in the skull **(PM CASE)** that are corresponding indicated ***strongly /moderately/ limitedly/ undetermined*** consistency in mix and wipe.

As a result of the observation of the previous criteria, there is a ***strong/moderate/limited*** support that the unknown skull **(PM CASE)** has belonged to the ***male/female*** individual seen in the photograph **(AM CASE-photo-id).**

[In case of negative decision]

The skull **(PM CASE)** was superimposed on the image of the facial photographs of the **male/female** individual **(AM CASE-Photo-id)** using the **(system name)** for demonstrating the anatomical relationship of the former in the latter.

During superimposition the following observations were made:

a) ***All/most of/the majority of/a few* of** the anatomical consistency criterion of the face-image **(AM CASE-Photo-id)** and the skull **(PM CASE)** were found to be ***strongly /moderately/ limitedly/ undetermined*** inconsistent.

b) ***All/most of/the majority of/a few* of** the visually assessable asymmetries in the face-image **(AM CASE-photo-id)** and those in the skull **(PM CASE)** that are corresponding indicated ***strongly /moderately/ limitedly/ undetermined*** inconsistency in mix and wipe.

As a result of the observation of the previous criteria, there is a ***strong/moderate/limited*** support that the unknown skull **(PM CASE)** has not belonged to the ***male/female*** individual seen in the photograph **(AM CASE-photo-id).**

5. SFO Anatomical consistency criterion evaluation

The anatomical consistency between the skull **(PM CASE)** and the facial photograph **(AM CASE-Photo-id)** of the **male/female** individual were studied and the following sets of common criteria were employed for assessing the skull-face correspondence:

5.1. Group 1. Anatomical consistency by line location and comparison

Evaluation of a set of marking lines, obtained by joining some reference landmarks on the face and on the skull, to assess anatomical consistency.

[In case of positive decision]

All/most of/the majority of/a few* of** the set of marking lines of facial image **(AM CASE-photo-id)** and skull **(PM CASE)** are ***strongly /moderately/ limitedly *anatomically* consistent in frontal view**.**

[In case of undetermined decision]

All/most of/the majority of/a few* of** the set of marking lines of facial image **(AM CASE-photo-id)** and skull **(PM CASE)** are *undetermined.**

[In case of negative decision]

All/most of/the majority of/a few* of** the set of marking lines of facial image **(AM CASE-photo-id)** and skull **(PM CASE)** are ***strongly /moderately/ limitedly *anatomically* inconsistent in frontal view**.**

Criteria:

1. **Gnathion line:** The horizontal line at gnathion of the skull has ***strongly /moderately/ limitedly/ undetermined/ not*** congruence with the horizontal line at gnathion of the facial photograph in frontal view.

2. **Cheilion line:** The cheilion-cheilion – occlusal line/horizontal line at stomion of the skull has ***strongly /moderately/ limitedly/ undetermined/ not*** congruence with the cheilion-cheilion – occlusal line/horizontal line at stomion of the facial photograph in frontal view.

3. **Overlap of inter-dental lines**: The lines between the dental pieces of the facial photograph have ***strongly /moderately/ limitedly/ undetermined/ not*** congruence with the lines between the dental pieces of the skull in frontal view.

4. **Subnasal line:** The subnasal-nasospinal horizontal line of the skull has ***strongly /moderately/ limitedly/ undetermined/ not*** congruence with the subnasal-nasospinal horizontal line of the facial photograph in frontal view.

5. **Nose width length parallelism:** The line over the maximum width of the nose of the facial photograph is ***strongly /moderately/ limitedly/ undetermined/ not*** the maximum width of the nasal aperture line on the skull plus two-thirds of it in frontal view.

6. **Left Endocanthion vertical line:** The dacryon-caninion (left) vertical line of the skull has ***strongly /moderately/ limitedly/ undetermined/ not*** congruence with the endocanthion-cheilion vertical line of the facial photograph in frontal view.

7. **Right Endocanthion vertical line**: The dacryon-caninion (right) vertical line of the skull has ***strongly /moderately/ limitedly/ undetermined/ not*** congruence with the endocanthion-cheilion vertical line of the facial photograph in frontal view.

8. **Ectoconchion line**: The ectoconchion-ectoconchion line of the skull has ***strongly /moderately/ limitedly/ undetermined/ not*** congruence with the exocanthion-exocanthion line of the facial photograph in frontal view.

9. **Superciliary line:** The superciliary-superciliary line of the skull has ***strongly /moderately/ limitedly/ undetermined/ not*** congruence with the superciliary-superciliary line of the facial photograph in frontal view.

10. **Glabella-gnathion Frontal Central line**: The glabella-gnathion line of the skull has ***strongly /moderately/ limitedly/ undetermined/ not***

congruence with the glabella-gnathion line of the facial photograph in frontal view.

5.2 Group 2. Consistency of the soft tissue thickness between corresponding cranial and facial landmarks.

Evaluation of the consistency of the facial soft tissue thickness considering distances between pairs of homologous landmarks located on the skull and the face.

[In case of positive decision]

All/most/the majority of/a few landmarks pairs of the facial image **(AM CASE-photo-Id)** and the skull **(PM CASE)** are ***within the mean/ within the mean +- deviation/ within the mean +- 3 times the deviation*** of existing studies relating to soft tissue thickness in human population.

[In case of undetermined decision]

All/most/the majority of/a few landmarks pairs of the facial image **(AM CASE-photo-Id)** and the skull **(PM CASE)** are not compared.

[In case of negative decision]

All/most/the majority of/a few landmarks pairs of the facial image **(AM CASE-photo-Id)** and the skull **(PM CASE)** are out of range of existing studies relating to soft tissue thickness in human population.

Landmarks pairs

1. *me´-me*
2. *gn´-gn*
3. *pg´-pg*
4. *sm´-sm*
5. *li´-id*
6. *ls´-pr*
7. *sn´-ss*
8. *rhi´-rhi*
9. *n´-n*
10. *g´-g*
11. *tr´-tr*
12. *v´-v*
13. *go´L-go L*
14. *go´R-go R*
15. *zy´L-zy L*
16. *zy´R-zy R*
17. *al´L-al L*
18. *al´R-al R*
19. *en´L-d L*
20. *en´R-d R*
21. *ec´L- ec L*
22. *ec´R-ec R*
23. *ft´L-ft L*
24. *ft´R-ft R*
25. *fz´L-fmt L*
26. *fz´R-fmt R*
27. *mso´L-mso L*
28. *mso´R-mso R*

5.3. Group 3. Consistency analysis of the facial and bony morphological curves or outlines

Evaluation if two facial outlines/curves of skull and face are anatomically consistent.

[In case of positive decision]

All/most/the majority of the/a few facial outlines/morphological curves of facial image **(AM CASE-Photo-id)** and skull **(PM CASE)** are ***strongly /moderately/ limitedly*** *anatomically* consistent.

[In case of undetermined decision]

All/most/the majority of the/a few facial outlines/morphological curves of facial image **(AM CASE-Photo-id)** and skull **(PM CASE)** are ***undetermined***.

[In case of negative decision]

All/most/the majority of the/a few facial outlines/morphological curves of facial image **(AM CASE-Photo-id)** and skull **(PM CASE)** are ***strongly /moderately/ limitedly*** *anatomically* inconsistent.

Criteria:

1. The head outline is ***strongly /moderately/ limitedly/ undetermined/ not*** consistent with the cranial outline in **frontal** view
2. The width of the cranium ***strongly /moderately/ limitedly/ undetermined/ not*** fills forehead area of the face in **frontal** view.
3. The width of the skull from menton to bregma ***strongly /moderately/ limitedly/ undetermined/ not*** fits within the face in **frontal** view.
4. The outline of the face and the outline of the skull all along the contour follow each other maintaining symmetrical flow by side in **frontal** view.
5. Oblique line of the mandible in **frontal** view.
6. The chin outline is ***strongly /moderately/ limitedly/ undetermined/ not*** consistent with the mental outline in frontal view.
7. The lateral line of the zygomatic bone ***strongly /moderately/ limitedly/ undetermined/ not*** matches the outline of cheek in **frontal** view.
8. The outline of the nose in the face represented by shade distribution ***strongly /moderately/ limitedly/ undetermined/ not*** follows outline of the nasal bone in the skull maintaining symmetrical flow by side in **frontal** view.
9. The arcus supraciliary ***strongly /moderately/ limitedly/ undetermined/ not*** follows supraorbital margin in **frontal** view.
10. The temporal line is ***strongly /moderately/ limitedly/ undetermined/ not*** consistent with the outline of the forehead in **frontal** view.
11. The outline of the nasal bones ***strongly /moderately/ limitedly/ undetermined/ not*** follows the outline of the nose in the skull with minimal tissue thickness allowance in **lateral** view.
12. The skull height is ***strongly /moderately/ limitedly/ undetermined/ not*** similar to the head height in **lateral/oblique** view.

13. The chin outline is ***strongly /moderately/ limitedly/ undetermined/ not*** consistent with the mental outline in **lateral/oblique** view.
14. The gonial outline ***strongly /moderately/ limitedly/ undetermined/ not*** follows the outline of jaw angle in **lateral/oblique** view.
15. Dental information (bony to bony) is ***strongly /moderately/ limitedly/ undetermined/ not*** consistet in **frontal/lateral/oblique** view.
16. The outline of the zygomatic arch can be ***strongly /moderately/ limitedly/ undetermined/ not*** fitted between the skull and the face in **lateral/oblique** view.
17. The arcus supraciliary ***strongly /moderately/ limitedly/ undetermined/ not*** follows supraorbital margin in **lateral/oblique** view.
18. The outline of the frontal bone of the skull ***strongly /moderately/ limitedly/ undetermined/ not*** follows the forehead outline of the facial photograph in **lateral/oblique** view.
19. The sagittal outline of the nasal cartilage is ***strongly /moderately/ limitedly/ undetermined/ not*** the mirror image of the contour of the pyriform aperture

*See appendix Table 12

5.4 Group 4. Anatomical consistency assessment by positional relationship

Evaluation of the positional relationship of a skull region against a facial region in order to assess anatomical consistency.

[In case of positive decision]

Positional relationship between ***all/most/the majority of the/a few*** facial regions of facial image **(AM CASE-Photo-id)** and their corresponding skull regions of skull **(PM CASE)** is ***strongly /moderately/ limitedly*** correlated in respect to anatomical reference in frontal/lateral/oblique view.

[In case of undetermined decision]

Positional relationship between ***all/most/the majority of the/a few*** facial regions of facial image **(AM CASE-Photo-id)** and their corresponding skull regions of skull **(PM CASE)** is undetermined in respect to anatomical reference in frontal/lateral/oblique view.

[In case of negative decision]

Positional relationship between ***all/most/the majority of the/a few*** facial regions of facial image **(AM CASE-Photo-id)** and their corresponding skull regions of skull **(PM CASE)** is ***strongly /moderately/ limitedly*** not correlated in respect to anatomical reference in frontal/lateral/oblique view.

Criteria:

1. Gonial flare in the skull and the postero-lateral jaw prominence in the face are ***strongly /moderately/ limitedly/ undetermined/ not*** consistent in **frontal** view.
2. The stomion ***strongly /moderately/ limitedly/ undetermined/ not*** lies at the central incisors (at the occlusal line) in frontal view.
3. The prosthion lies posterior to the anterior edge of the upper lip. The occlusal and the lip closure line are ***strongly /moderately/ limitedly/ undetermined/ not*** consistent in **frontal** view.
4. The cheilion ***strongly /moderately/ limitedly/ undetermined/ not*** lies between the canine and the first premolar (at the occlusal line) in **frontal** view.
5. The mouth corners are ***strongly /moderately/ limitedly/ undetermined/ not*** positioned on radiating lines from the first premolar-canine junction in **frontal** view.
6. The piriform aperture width and height ***strongly /moderately/ limitedly/ undetermined/ not*** lies within the borders of the nose in **frontal** view.
7. The external auditory meatus opening ***strongly /moderately/ limitedly/ undetermined/ not*** lies medial to the tragus of the ear (place a projecting marker at the ear canal to assess this criterion more easily) in **frontal** view.
8. The Whitnall´s tubercle aligns with the ectocanthus on the horizontal plane and vertically the ectocanthus lies medial to the tubercle. The orbital width is ***strongly /moderately/ limitedly/ undetermined/ not*** consistent with the eye-slit width in **frontal** view. QUITAR DISIMULADAMENTE
9. The medial margin of orbit ***strongly /moderately/ limitedly/ undetermined/ not*** aligns and superimposes with the endocanthion in **frontal** view.
10. The line by joining the two ectoconchions landmarks in the skull is ***strongly /moderately/ limitedly/ undetermined/ not*** parallel with the line by joining the ectocanthions landmarks in the photograph in **frontal** view.
11. The position of the orbit and the centre of the eyeball is ***strongly /moderately/ limitedly/ undetermined/ not*** consistent in **frontal** view.
12. The eyebrow generally ***strongly /moderately/ limitedly/ undetermined/ not*** follows the upper edge of the orbit over medial two-thirds. At lateral superior one-third of the orbit the eyebrow continues horizontally as the orbital rim begins to curve inferiorly in **frontal** view.
13. Gonial flare in the skull and the postero-lateral jaw angle outline in the face are ***strongly /moderately/ limitedly/ undetermined/ not*** consistent in **lateral/oblique** view.
14. The stomion ***strongly /moderately/ limitedly/ undetermined/ not*** lies at the central incisors (at the occlusal line) in **lateral/oblique** view.
15. The prosthion ***strongly /moderately/ limitedly/ undetermined/ not*** lies posterior to the anterior edge of the upper lip. The occlusal and the lip closure line are consistent in **lateral/oblique** view.
16. The anterior nasal spine ***strongly /moderately/ limitedly/ undetermined/ not*** lies posterior to the base of the nose near the most posterior portion of the lateral septal cartilage in **lateral/oblique** view.
17. The lower margin of piriform aperture ***strongly /moderately/ limitedly/ undetermined/ not*** matches the subnasale in **lateral/oblique** view.

18. The lateral margin of the piriform aperture ***strongly /moderately/ limitedly/ undetermined/ not*** matches or approximates the alare in **lateral/oblique** view.
19. The nasion is ***strongly /moderately/ limitedly/ undetermined/ not*** higher than the nasal root in **lateral/oblique** view.
20. The porion ***strongly /moderately/ limitedly/ undetermined/ not*** aligns just posterior to the tragus, slightly inferior to the crus of helix in **lateral/oblique** view.
21. The lateral orbital margin at the Whitnall´s tubercle ***strongly /moderately/ limitedly/ undetermined/ not*** matches or approximate the position of the ectocanthion in **lateral/oblique** view.
22. The lateral angle of the eye ***strongly /moderately/ limitedly/ undetermined/ not*** lies within the lateral wall of the orbit in **lateral/oblique** view.

APPENDIX TABLES

1. MATERIAL

Table 1. Skull inventory

Nº	SKULL INVENTORY	
1	PM Case	Reference
2	Cranium conservation	Complete/ sufficient/ incomplete
3	Mandible conservation	Present/ Absent
4	Teeth conservation	Complete/ incomplete
5	Weathering stage	From 0 to 6
6	Sex estimation	Male/ female/Undetermined
7	Age estimation	Estimated value

Table 2. AM-Picture inventory

Nº	AM-PICTURE INVENTORY (PER PHOTO)	
1	AM Case	Reference
2	Photo Nº	Photograph number
3	Sex	Male/female
4	Age (approximated)	Estimated value
5	BMI (approximated)	thin/healthy/overweight/obesity/morbid obesity
6	Teeth visibility	Visible/Partially visible/Not visible
7	View (posture)	Frontal/Oblique/Lateral
8	Scaled	Original/resized
9	DPI (dots per inch)	
10	PPI (pixels per inch)	
11	PBP (pixels between the pupils)	Good quality (>=90 pixels)/medium (90-60)/poor (<60 pixels)
12	Camera model	
13	Estimated pose	Roll-Pitch-Yaw
14	Estimated subject to camera distance	(estimated or measured)
15	Focal distance	(estimated or measured)
16	CCD size	

Table 3. AM-Picture dental pieces inventory

[In case of adult/senile]

AM-Picture Dental Pieces (per photo)															
Right-Superior								**Left-Superior**							
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
Right-Inferior								**Left-Inferior**							
Legend		Not visible			Partially visible			/		Completely visible					X

[In case of sub adult]

AM-Picture Dental Pieces (per photo)															
Right-Superior								**Left-Superior**							
			55	54	53	52	51	61	62	63	64	65			
			85	84	83	82	81	71	72	73	74	75			
Right-Inferior								**Left-Inferior**							
Legend		Not visible			Partially visible			/		Completely visible					X

Table 4. Skull dental pieces inventory

[In case of adult/senile]

Skull Dental Pieces															
Right-Superior								**Left-Superior**							
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
Right-Inferior								**Left-Inferior**							

[In case of sub adults]

Skull Dental Pieces															
Right-Superior								**Left-Superior**							
			55	54	53	52	51	61	62	63	64	65			
			85	84	83	82	81	71	72	73	74	75			
Right-Inferior								**Left-Inferior**							

2. MATERIAL DESCRIPTION (BIOLOGICAL PROFILE, MORPHOMETRIC AND MORPHOLOGICAL OBSERVATIONS)

2.2. Morphometric description

Table 5. Estimated distances between landmarks on the skull

	On the Skull (PM CASE)				
Nº	**DPI**	**Estimated Distance (mm)**	**Nº**	**DPI**	**Estimated Distance (mm)**
1	ft-ft		10	d-d	
2	n-gn		11	ec-ec	
3	go-go		12	n-ss	
4	zy-zy		13	al-al	
5	sm-gn		14	v-tr	
6	mso-gn		15	g-op	
7	fmt-fmt		16	n-pr	
8	ss-gn		17	tr-mso	
9	d-ec		18	tr-gn	

Table 6. Estimated DPIs on the skull

Skull **(PM CASE)** measured DPIs				
Nº	**DPI NAME**	**DPI FORMULAE**	**PROPORTION (%)**	**DESCRIPTOR**
19	**Total facial index**	n-gn / zy-zy x 100		**Broad/Medium/Narrow**
20	**Relative facial breadth**	zy-zy / mso-gn x 100		**Small/Medium/Large**
21	**Size of malar bones**	zy-zy / ft-ft x 100		**Large/Medium/Small**
22	**Chin height**	sm-gn / mso-gn x 100		**Large/Medium/Small**
23	**Interorbital index**	d-d / ec-ec x100		**Broad/Medium/Narrow**
24	**Length of palpebral fissure**	d-ec /fmt-fmt x 100		**Large/Medium/Small**
25	**Nasal breadth Index**	al-al / n-ss x 100		**Broad/Medium/Narrow**
26	**Nasal length index**	n-ss / n-gn x 100		**Large/Medium/Small**
27	**Endocanthal-alar index**	d-d / al-al x 100		**Broad/Medium/Narrow**
28	**Gonio-zygomatic index**	go-go / zy-zy x 100		**Broad/Medium/Narrow**
29	**Length-total height index**	v-tr / g-op x 100		**Large/Medium/Small**
30	**Upper facial index**	n-pr / n-ss x 100		**Large/Medium/Smaal**
31	**Frontal height**	tr-mso / mso-gn x 100		**Large/Medium/Small**

Table 7. Estimated distances between landmarks on the face

	On the Face **(AM CASE-Photo-id)**				
Nº	**DPI**	**Estimated Distance (mm)**	**Nº**	**DPI**	**Estimated Distance (mm)**
1	ft-ft		10	en-en	
2	n-gn		11	ec-ec	
3	go-go		12	n-sn	
4	zy-zy		13	al-al	
5	sm-gn		14	v-tr	
6	mso-gn		15	g-op	
7	fz-fz		16	n-pr	
8	sn-gn		17	tr-mso	
9	en-ec		18	tr-gn	

Table 8. Estimated DPIs on the face

(AM CASE-Photo-Id) measured DPIs				
Nº	**DPI NAME**	**DPI FORMULAE**	**PROPORTION (%)**	**DESCRIPTOR**
19	**Total facial index**	n-gn / zy-zy x 100		**Broad/Medium/Narrow**
20	**Relative facial breadth**	zy-zy / mso-gn x 100		**Small/Medium/Large**
21	**Size of malar bones**	zy-zy / ft-ft x 100		**Large/Medium/Small**
22	**Chin height**	sm-gn / mso-gn x 100		**Large/Medium/Small**
23	**Interorbital index**	en-en / ec-ec x100		**Broad/Medium/Narrow**
24	**Length of palpebral fissure**	en-ec /fz-fz x 100		**Large/Medium/Small**
25	**Nasal breadth Index**	al-al / n-sn x 100		**Broad/Medium/Narrow**
26	**Nasal length index**	n-sn / n-gn x 100		**Large/Medium/Small**
27	**Endocanthal-alar index**	en-en / al-al x 100		**Broad/Medium/Narrow**
28	**Gonio-zygomatic index**	go-go / zy-zy x 100		**Broad/Medium/Narrow**
29	**Length-total height index**	v-tr / g-op x 100		**Large/Medium/Small**
30	**Upper facial index**	n-pr / n-sn x 100		**Large/Medium/Small**
31	**Frontal height**	tr-mso / mso-gn x 100		**Large/Medium/Small**

2.3. Morphological description

Table 9. Morphological description of face and skull

Morphological description of face and skull				
Nº	**Facial picture**	**Descriptor**	**Skull**	**Descriptor**
1	General head shape	Round/oval/rectangular/triangular	General skull shape	Round/oval/rectangular/triangular
2	Forehead bias	Sloping/steep/curved	Forehead bias	Sloping/steep/curved
3	Brow ridge prominence	Low/Average/High	Brow ridge prominence	Low/Average/High
4	Eyebrows shape	Curved/Angular/Straight	Course of the brow ridges	Curved/Angular/Straight
5	Eyelid axis	Downward/Horizontal/Upward	Ectoconchion-dacryon axis	Downward/Horizontal/Upward
6	Nasal root depth	deep/average/shallow	Nasal bone root depth	deep/average/shallow
7	Nasal bridge breadth	narrow/average/broad	Nasal ridge breadth	narrow/average/broad
8	Nasal bridge deviation	left deviated/symmetrical/right deviated	Nasal ridge deviation	left deviated/symmetrical/right deviated
9	Nose profile	concave/straight/convex	Nasal ridge profile	concave/straight/convex
10	Nasal base breadth	narrow/average/broad	Piriform aperture breadth	narrow/average/broad
11	Nasal base inclination	ascending/horizontal/descending	Nasal spine inclination	ascending/horizontal/descending
12	Nasal tip shape	pointed/round/bulbous	Nasal spine shape	pointed/round/bulbous
13	Chin height	low/average/high	Chin height	low/average/high

14	Chin shape	round/square/pointed	Chin shape	round/square/pointed
15	Chin cleft	clefted/not clefted	Chin cleft	clefted/not clefted
16	Chin protrusion	receding/normal/prominent	Chin protrusion	receding/normal/prominent
17	Prognathism	receding/normal/prominent	Prognathism	receding/normal/prominent
18	Ear lobe attachment	free/attached	Tip of mastoid process	forwardly/downwardly
19	Ears protrusion	close-fitting/slightly/strongly	Ears protrusion	not/slightly/strongly prominence
20	Cheeks pronunciation	slightly/strongly	Malar bones pronunciation	slightly/strongly

Table 10. Group 1 Anatomical consistency by line location and comparison

Group 1	Anatomical consistency by line location and comparison	View	Consistent	Quantitative Value
1.1	Gnathion line	F		
1.2	Cheilion line	F		
1.3	Overlap of inter-dental lines	F		
1.4	Subnasal line	F		
1.5	Nose width length parallelism	F		
1.6	Left Endocanthion vertical line	F		
1.7	Right Endocanthion vertical line	F		
1.8	Ectoconchion line	F		
1.9	Superciliary line	F		
1.10	Glabella-gnathion Frontal Central line	F		
Consistency values		1	Strongly consistent	
		2	Moderately consistent	
		3	Limitedly consistent	
		4	Not consistent	
		5	Undetermined	

Table 11. Group 2 Landmarks used to evaluate soft tissue thickness

Group 2	Landmarks used to evaluate soft tissue thickness			
	Facial Landmarks	**Skull Landmarks**	**Abb**	**Estimation**
2.1	Menton	Menton	me´- me	
2.2	Gnathion	Gnathion	gn´- gn	
2.3	Pogonion	Pogonion	pg´- pg	
2.4	Supramentale	Supramentale	sm´- sm	
2.5	Labiale superius	Prosthion	ls´- pr	
2.6	Subnasale	Subespinale	sn´- ss	
2.7	Nasion	Nasion	n´- n	
2.8	Glabella	Glabella	g´- g	
2.9	Trichion	Trichion	tr´- tr	
2.10	Vertex	Vertex	v´- v	
2.11	Gonion left	Gonion left	go´ L - go L	
2.12	Gonion right	Gonion right	go´ R - go R	
2.13	Zygion left	Zygion left	zy´ L - zy L	
2.14	Zygion right	Zygion right	zy´ R – zy R	
2.15	Alare left	Alare left	al´ L – al L	
2.16	Alare right	Alare right	al´ R – al R	
2.17	Endocanthion left	Dacryon left	en´ L -d L	
2.18	Endocanthion right	Dacryon right	en´ R – en R	
2.19	Exocanthion left	Ectoconchion left	ec´ L – ec L	
2.20	Exocanthion right	Ectoconchion right	ec´ R – ec R	
2.21	Frontotemporale left	Frontotemporale left	ft´ L – ft L	
2.22	Frontotemporale right	Frontotemporale right	ft´ R – ft R	
2.23	Frontozygomaticus left	Frontomalare temporale left	fz´ L – fz L	
2.24	Frontozygomaticus right	Frontomalare temporale right	fz´ R – fz R	
2.25	Mid-supraorbitale left	Mid-supraorbitale left	mso´ L – mso L	
2.26	Mid-supraorbitale right	Mid-supraorbitale right	mso´R – mso R	

Estimation values **(Soft Tissue)**	1	Not compared
	2	Within the mean
	3	Within the mean +- deviation
	4	Within the mean +- 3 times the deviation
	5	Out of range

Table 12. Group 3 Consistency analysis of the facial and bony morphological curves or outlines

Group 3	Consistency analysis of the facial and bony morphological curves or outlines	View	Congruence	Quantitative value
3.1	The head outline has to be consistent with the cranial outline	F		
3.2	The width of the cranium fills forehead area of the face	F		
3.3	The width of the skull from menton to bregma fits within the face	F		
3.4	The outline of the face and the outline of the skull all along the contour follow each other maintaining symmetrical flow by side	F		
3.5	Oblique line of the mandible	F		
3.6	The chin outline has to be consistent with the mental outline	F		
3.7	The lateral line of the zygomatic bone matches the outline of cheek	F		
3.8	The outline of the nose in the face represented by shade distribution follows outline of the nasal bone in the skull maintaining symmetrical flow by side	F		
3.9	The arcus supraciliary follows supraorbital margin	F		
3.10	The temporal line is consistent with the outline of the forehead	F		
3.11	The outline of the nasal bones follows the outline of the nose in the skull with minimal tissue thickness allowance	L		
3.12	The skull height is similar to the head height	L-O		
3.13	The chin outline is consistent with the mental outline	L-O		
3.14	The gonial outline follows the outline of jaw angle	L-O		
3.15	Dental information (bony to bony consistency)	L-O		

3.16	The outline of the zygomatic arch can be fitted between the skull and the face	L-O		
3.17	The arcus supraciliary follows supraorbital margin	L-O		
3.18	The outline of the frontal bone of the skull follows the forehead outline of the facial photograph	L-O		
3.19	The sagittal outline of the nasal cartilage is the mirror image of the contour of the pyriform aperture			
Consistency values		1	Strongly consistent	
		2	Moderately consistent	
		3	Limitedly consistent	
		4	Not consistent	
		5	Undetermined	

Table 13. Group 4 Anatomical consistency assessment by positional relationship

Group 4	Anatomical consistency assessment by positional relationship	View	Congruence	Quantitative value
4.1	Gonial flare in the skull and the postero-lateral jaw prominence in the face	F		
4.2	The stomion lies at the central incisors (at the occlusal line)	F		
4.3	The prosthion lies posterior to the anterior edge of the upper lip. The occlusal and the lip closure line are consistent	F		
4.4	The cheilion lies between the canine and the first premolar (at the occlusal line)	F		
4.5	The mouth corners are positioned on radiating lines from the first premolar-canine junction	F		
4.6	The piriform aperture width and height lies within the borders of the nose	F		
4.7	The external auditory meatus opening lies medial to the tragus of the ear (place a projecting marker at the ear canal to assess this criterion more easily)	F		
4.8	The Whitnall´s tubercle aligns with the ectocanthus on the horizontal plane and vertically the ectocanthus lies medial to the tubercle. The orbital width is consistent with the eye-slit width	F		
4.9	The medial margin of orbit aligns and superimpose with the endocanthion	F		
4.10	The line by joining the two ectoconchions landmarks in the skull should be parallel with the line by joining the ectocanthions landmarks in the photograph	F		
4.11	The position of the orbit and the centre of the eyeball is consistent	F		
4.12	The eyebrow generally follows the upper edge of the orbit over medial two-thirds. At lateral superior one-third of the orbit the eyebrow continues horizontally as the orbital rim begins to curve inferiorly	F		

4.13	Gonial flare in the skull and the postero-lateral jaw angle outline in the face	L-O		
4.14	The stomion lies at the central incisors (at the occlusal line)	L-O		
4.15	The prosthion lies posterior to the anterior edge of the upper lip. The occlusal and the lip closure line are consistent	L-O		
4.16	The anterior nasal spine lies posterior to the base of the nose near the most posterior portion of the lateral septal cartilage	L-O		
4.17	The lower margin of piriform aperture matches the subnasale	L-O		
4.18	The lateral margin of the piriform aperture matches or approximates the alare	L-O		
4.19	The nasion is higher than the nasal root	L-O		
4.20	The porion aligns just posterior to the tragus, slightly inferior to the crus of helix	L-O		
4.21	The lateral orbital margin at the Whitnall´s tubercle matches or approximate the position of the ectocanthion	L-O		
4.22	The lateral angle of the eye lies within the lateral wall of the orbit	L-O		
Consistency values		1	Strongly consistent	
		2	Moderately consistent	
		3	Limitedly consistent	
		4	Not consistent	
		5	Undetermined	

APPENDIX IMAGES

1. MATERIAL

PM CASE

1. Skull image in right lateral view (norma lateralis)
2. Skull image in frontal view (norma frontalis)
3. Skull image in left lateral view (norma lateralis)

AM CASE

1. AM CASE-Photo-id 1
2. AM CASE-Photo-id 2
3. AM CASE-Photo-id X

2. MATERIAL DESCRIPTION (LANDMARKS)

PM CASE

4. Skull image in right lateral view (norma lateralis) with landmarks
5. Skull image in frontal view (norma frontalis) with landmarks
6. Skull image in left lateral view (norma lateralis) with landmarks

AM CASE

4. AM CASE-Photo-id 1 with landmarks
5. AM CASE-Photo-id 2 with landmarks
6. AM CASE-Photo-id X with landmarks

4. IDENTIFICATION DECISION

4.2. CFS Level Decision

1. SFO Image 1
2. SFO Image 2
3. SFO Image X

4.3 SFO_id Level Decision

4 images per SFO :

1. Skull Image in same pose as AM CASE-Photo-id
2. AM CASE-Photo-Id
3. SFO Image
4. SFO Image with landmarks

5. SFO Anatomical consistency criterion evaluation

Detailed images of criteria that have been decisive when making decisions in each case of SFO (positive or negative). Include explanatory photo caption.