**Table S1.** Anatomical definitions of all 135 landmarks digitized.

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| **Landmark** | **Anatomical Definition** | **Cranial region1** |
| ***Unilateral*** |  |  |
| Alveolon | The point where the interpalatal suture intersects the line joining the posterior margins of the alveolar process | C,F |
| Basion | The point where the anterior margin of the foramen magnum intersects the midsagittal plane | C,B |
| Bregma | The point where the coronal and sagittal sutures intersect | C,V |
| Glabella | The most anterior midline point on the frontal bone | C,F,V |
| Hormion | The point of attachment of the vomer and sphenoid bones | C,B |
| Incisivon | The most posterior inferior point on the incisive fossa | C,F |
| Inion | The point where the superior nuchal lines merge in the external occipital protuberance | C,V,B |
| Lambda | The point where the sagittal and lambdoid sutures intersect. | C,V |
| Metopion | The point where the frontal elevation above the chord from Nasion-Bregma is greatest | C,V |
| Nasion | The point of intersection of the nasofrontal suture and the midsagittal plane. | C,F |
| Opisthion | The point where the posterior margin of the foramen magnum intersects the midsagittal plane | C,B |
| Opisthocranion | The most posterior midline point, which lies at the farthest chord length from Glabella | C,V |
| Orale | The point of intersection with a line tangent to the posterior margins of the central incisor alveoli | C,F |
| Palatomaxillare | The point of intersection of the palatine and the maxillary bones | C,F |
| Parietal subtense | The point where the sagittal elevation above the chord from Bregma-Lambda is greatest | C,V |
| Prosthion | The most anterior point on the maxillary alveolar process between the two central incisors | C,F |
| Sphenobasion | The midline point on the sphenooccipital suture | C,B |
| Staphylion | The point where the interpalatal suture intersects a line joining the deepest indentation of the posterior palate | C,F |
| Subspinale | The point at which the inferior edge of the nasal spine becomes the anterior edge of the maxilla | C,F |
| ***Bilateral*** |  |  |
| Alare | The most lateral point on the nasal aperture taken perpendicular to the nasal height | C,F |
| Alveolare | The most anterior point on the alveolus of the first molar | C,F |
| Asterion | The point where the lambdoid, parietomastoid and occipitomastoid sutures meet | C,V,B |
| C/P3 | The most inferior external point between the maxillary canine and the first pre-molar | C,F |
| Carotid canal (lat) | The most lateral point on the carotid canal | C,B |
| Carotid canal (med) | The most medial point on the carotid canal | C,B |
| Coronale | The most lateral point on the coronal suture | C,V |
| Dacryon | The point of intersection of the frontolacrimal and lacrimomaxillary suture | C,F |
| Ectoconchion | The most lateral point on the orbital margin | C,F |
| Ext aud meatus (ant) | The most anterior point on the margins of the external auditory meatus | C,V |
| Ext aud meatus (inf) | The most inferior point on the margins of the external auditory meatus | C,V |
| Ext aud meatus (pos) | The most posterior point on the margins of the external auditory meatus | C,V |
| External palate length | The point on the inferior surface of the maxilla that denotes the most posterior point of the alveolar process | C,F |
| Foramen magnum (lat) | The most lateral point on the margin of the foramen magnum | C,B |
| Foramen ovale (ant) | The most anterior point on the foramen ovale | C,V |
| Foramen ovale (pos) | The most posterior point on the foramen ovale | C,V |
| FRED | The point of intersection of the frontozygomatic, zygomaticosphenoid and sphenofrontal sutures | C,F,V |
| Frontomalare orbitale | The point where the zygomaticofrontal suture crosses the orbital margin | C,F |
| Frontomalare temp | The most lateral point on the zygomaticofrontal suture | C,F,V |
| Frontotemporale | The point on the frontal bone where the temporal line reaches its most anteromedial position. | C,F,V |
| Hormion (lat) | The most posterior point on the ala of the vomer | C,B |
| Hypoglossal foramen | The most superior, anterior point on the edge of the hypoglossal canal | C,B |
| Infranasion | The point of intersection of the nasofrontal, nasomaxillary and maxillofrontal sutures | C,F |
| Jugale | The point in the notch between the temporal and frontal process of the zygomatic bone | C,F |
| Jugular (lat) | The most inferior, lateral point on the margin of the jugular foramen | C,B |
| Jugular (med) | The most inferior, medial point on the margin of the jugular foramen | C,B |
| Krotaphion | The most posterior extent of the sphenoparietal suture | C,V |
| Mandibular fossa (lat) | The most lateral point on the mandibular fossa | C,V |
| Mastoideale | The most inferior, lateral point on the mastoid process | C,B |
| Mastoideale (ant) | The anterior point of intersection of the mastoid process and the external tympanic plate | C,B |
| Mastoideale (pos) | The posterior point of intersection of the mastoid process and the digastric groove | C,B |
| Mastoideale (sup) | The most superior, lateral point on the mastoid process (on the FH) | C,B |
| Max maxillary curve | The point in the depth of the notch between the zygomaxillary suture and the alveolar process | C,F |
| Molars (pos) | The most inferior, posterior point on the external maxillary alveolus (pos to 3rd molars) | C,F |
| Nariale | The most inferior point on the lower rim of the nasal aperture | C,F |
| Nasomaxillare | The most inferior point on the naso-maxillary suture | C,F |
| Occipitocondyle (ant) | The most anterior, inferior point on the occipital condyle | C,B |
| Occipitocondyle (lat) | The most lateral, inferior point on the occipital condyle | C,B |
| Orbitale | The most inferior midpoint on the orbital margin | C,F |
| Orbitale (sup) | The most superior midpoint of the orbital margin | C,F |
| Palatomaxillare (lat) | The most lateral point on the palate-maxillary suture | C,F |
| Petrosal | The most anterior point of the petrous element of the temporal bone | C,B |
| Porion | The most superior point on the margin of the external auditory meatus | C,V |
| Radiculare | The point of maximum inflection of the zygomatic processes | C,V |
| Sphenion | The most anterior extent of the sphenoparietal suture | C,V |
| Sphenobasion (lat) | The most lateral, inferior point on the sphenooccipital synchondrosis | C,B |
| Sphenomaxillare (sup) | The most superior, lateral point of contact between the maxilla and the lateral pterygoid plate of the sphenoid | C,F,V |
| Sphenosquamosal | The point of intersection of the infratemporal crest and sphenosquamosal suture | C,V |
| Sphenozygomatic (pos) | The most posterior, inferior point on the sphenozygomatic suture | C,F,V |
| Stenion | The most medial point on the sphenosquamosal sutures | C,V |
| Stephanion | The point where the coronal suture crosses the (inferior) temporal line | C,V |
| Styloid foramen | The most anterior, inferior point on the styloid foramen | C,B |
| Temporal fossa (ant) | The most anterior, inferior point on the temporal fossa | C |
| Temporal fossa (pos) | The most posterior, inferior point on the temporal fossa | C |
| Zygomaxillare | The most inferior, anterior point on the zygomaticomaxillary suture | C,F |
| Zygoorbitale | The point where the zygomaticomaxillary suture intersects with the inferior orbital margin | C,F |
| Zygotemporale (inf) | The most inferior point on the zygomaticotemporal suture | C,F,V |
| Zygotemporale (sup) | The most superior point on the zygomaticotemporal suture | C,F,V |

FH: Frankfurt horizon. 1 Cranial region code: C = Cranium, F = Face, V = Vault, B = Basicranium