



I.O.F.O.S. Recommendations for Quality Assurance:

DENTAL AGE ESTIMATION

Working Group on “Dental Age Estimation” - Background

- IOFOS recommendations reviewed July 2018 with advice from:
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- IOFOS recommendations edited (February 2008) with advice from Guy Willems (Belgium), K.Mesotten (Belgium), K. Gunst (Belgium), Bernard Knell (Switzerland), Anastasia Mitsea (Greece), Ouvehand (Netherlands), Birgitte Sejrsen (Denmark), Sigrid Kvaal (Norway).

IF YOU FOLLOW THE PROCEDURES AND STEPS

1. A procedure/step can be used when considered to be worthy of acceptance or trial.
2. A procedure/step is only appropriate if it conforms to the local legal and ethical requirements and if it is consistent with the evidence available.

PROCEDURES AND STEPS

1. The expert should be able to advise the appropriate instructing authority or appropriate person/s (assignor/s) regarding the limitations of age assessment and what is possible to achieve.
2. The expert will report (oral and/or written) the age estimation findings to the assigner. The report should contain a minimum age and/or

an estimated age plus a measure of its uncertainty, and (an) answer(s) to the request(s) in the age estimation assignment

3. The identity of the individual or the evidence in question should be established or verified and photographs taken. The nationality and given chronological age should be registered.

4. The following information should be obtained from the individual in question or from the evidence: (a) Financial circumstances of the family; (b) History of previous food and water supply; (c) Current or prior systemic diseases; (d) Previous dental problems and treatment; and (e) Dental hygiene. The possible influence of these issues on the obtained age estimation outcomes should be reported.

5. Use method(s) applicable to the examined individual or evidence(s).

6. The method(s) used should be checked against: (a) The number, origin, age and sex distribution of the subjects included in the reference sample used; (b) The reproducibility of the used parameter registration technique; (c) The scientific soundness of the statistics used; (d) Its/their reproducibility; and (e) The validation of its/their outcomes.

7. Use methods as originally described in peer reviewed literature.

8. Combine different methods.

9. The report should make reference to each method used. If procedures to combine the methods used (and related parameters) are not properly described in the scientific literature, they should be performed based on the experts experience and the result should be reported with a detailed explanation.

10. Take medical images appropriate to the method(s) used.

11. In the living, ionizing techniques should be performed according to the ALARA (As Low As Reasonably Achievable) principle.

12. Medical images should be checked for optimal image quality.

13. An age assessment solely upon the clinical dental findings should be included

14. The report should include: (a) Teeth clinically present; (b) Specific characteristics of certain teeth, according to referred reference scales: the degree of attrition, the occlusion, the colour of the teeth, the staining and calculus, the periodontal condition, the dental hygiene status;

and (c) Any pathology possibly influencing the age assessment. The possible influence of these issues on the obtained age estimation outcomes should be reported.

15. Each age estimation investigation should be performed by two independent investigators. In case of disagreement(s) a consensus between both investigators should be obtained. The report should be signed by both investigators.

16. On randomly selected cases and on a yearly basis (at least) previous age estimation investigation(s) should be re-examined, on a blind basis, by the same investigators. In case of disagreement with the first result(s) the procedure used should be checked and adjusted where necessary.

17. On randomly selected cases and on a yearly basis (at least) age estimation investigation(s) should be subject to external peer review on a blind basis. In case of disagreement the procedure used should be checked and adjusted where necessary.