## G13     Utilizing Custom Spreadsheets for Age Estimation Cases

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After attending this presentation, attendees will possess a basic knowledge of how to utilize Excel® spreadsheets to aid forensic odontologists in the calculation of estimated age for their cases.

This presentation will impact the forensic science community by teaching the forensic odontologist the basic principles of a spreadsheet, which will allow him/her to precisely and accurately calculate the estimated age of an unknown individual utilizing established data and methods from prior published studies.

Forensic odontologists are often enlisted by agencies to estimate the age of living and deceased individuals. Forensic odontologists can calculate age estimations by utilizing published age estimation protocols and typically apply a mathematical formula and/or reference data table. The formulas and data can be easily incorporated into custom spreadsheets. A spreadsheet can be built for each age estimation protocol and each case under investigation. For example, a spreadsheet can be built utilizing data and an appropriate protocol for age estimation of adults, and separate spreadsheets can be built utilizing data and appropriate protocols for age estimation of adolescents or children.

This presentation will teach attendees some common spreadsheet formulas that can be utilized to build a custom spreadsheet. Custom spreadsheets will be presented to educate attendees on how to utilize published formulas so attendees can create their own spreadsheets. Proper methods to input measured variables will be reviewed. The customized spreadsheet then utilizes the formulas, variables, and input data to compute the estimated age, associated standard deviation, and age range. The main goal of utilizing custom spreadsheets is to increase calculation speed and accuracy for the forensic odontologist and reduce the repetitive need to access and reference the original study. Spreadsheets reduce common mathematical errors and increase the accuracy of age estimation calculations. The results of the spreadsheet calculations can be utilized in forensic odontology reports by importing the appropriate fields into the report.

In conclusion, this presentation will review and provide examples of commonly published formulas, variables, and data that can be utilized to create custom spreadsheets. Attendees will receive instructions on how to access specific variables and input data within the spreadsheet. Copies of pre-built custom spreadsheets will be provided via email to all interested forensic odontologists.

**Spreadsheet, Age Estimation, Database**

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