



### F40 Odonto-Listics

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After attending this presentation, the attendees will become familiar with the similarities between victim identification and criminalistics.

This presentation will impact the forensic science community by drawing attention to the fact that many of the steps taken by the forensic odontologist in the process of making a dental ID are the same as those taken by a crime scene investigator.

During the 2011 proceedings of the American Society of Forensic Odontology, AAFS President Joe Bono commented that an elementary program in dental identification would be a good thing. He indicated that there is interest, by the other members of the Academy, in the subject.

There is a level of research and innovation that defines the odontology section presentations. The goal of this research is to provide new information, support previous research, and explore current initiatives. These presentations are wonderful for the members of the section and those who choose to follow new developments. However, they do not educate the members of other sections on the most basic responsibilities.

Last year one presentation, quantified the various duties of the forensic odontologist. By far, the most frequent task performed is the identification of unknown human remains. This being the case, it seems incumbent to provide meaningful information for the non-dental professionals who are attendees and Academy members.

Of all the sections in the American Academy of Forensic Sciences, the one which has the most in common with Odontology is Criminalistics. The sequence and rationale behind the procedural steps is actually identical, in general terms. Both sets of professionals are expected to recognize material of evidentiary value. They preserve and collect that evidence, taking care that in transport it is protected and remains in the condition in which it was found. They document that evidence with photography, radiography, and other means. The material is analyzed for significant findings. The findings are compared with known samples.

For example, a bullet is removed from a murder victim. The bullet is carefully collected, with attention being paid to the entrance and exit wounds and the position and damage to any clothing the victim may have been wearing. The forensic pathologist will have dictated, or in some other way, recorded these findings. The suspected murder weapon will be test fired in such a way as to protect the projectile from damage. The two bullets can then be examined side by side with a comparison microscope. In a best case scenario, the striations on the outside of the bullets will match, confirming the identification of the murder weapon.

The scene in which the forensic odontologist is called might involve the collision and subsequent explosion of a motor vehicle. The driver is burned beyond recognition and a dental identification is necessary. The dentist must recognize what is of evidentiary value, as the impact and explosive forces may have dislodged dental material. All dental structures will be carefully examined and radiographed after being collected and transported. Please note, in most cases of this type, the dentition will usually be preserved within the oral cavity.

The dental findings will be analyzed for characteristics that have particular significance. The findings will then be compared to known records provided by the dentist who rendered treatment. This can actually be a difficult or impossible step if there is no information available regarding the name of the treating dentist.

Members of both the odontology and criminalistics sections should expect to come away with a greater appreciation for the challenges that face their colleagues across the hall.

#### **Odontology, Criminalistics, Comparison**