Male or Female?

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The sex of a sample can be very important during the investigation of a case. This is especially important when there is no body for sample comparison.

Evidence from a 1987 homicide case involving two crime scenes was examined for DNA. At the first scene a van with numerous bloodstains was found in Douglas County, NV. The second scene, 30 miles North in Storey County, NV a victim's body was discovered near the Truckee River.

STR and Y-STR DNA analysis were conducted on samples from the van and the victim's body. The STR genotypes showed the samples were from a female. Y-STR analysis, though not conclusive, showed that the sample could be a male. The autopsy report phenotypically showed the victim is a male.

Implications of whether a sample is male or female could have a tremendous effect on investigations. In this particular case we were able to conclude that the DNA profile from the body was the same as in the van. What if the body was not discovered? What would have been the conclusion? This type of evidence might have investigators looking for a female victim.

Implications in database searching for a missing person could also be a concern. Although database searching is performed on the STR loci and not amelogenin the indication of a sample being female could affect the overall investigation. For example a missing person case in which a male is missing. The search has shown a good match at the STR loci with a biological parent but results at amelogenin show a female.

The findings from this 1987 case brings to the forefront the question analysts should ask… Is the sample from a Male or Female?