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**DISCRIMINANT ANALYSES TECHNIQUES:  
APPLICATION ON SEXUAL DIMORPHISM**

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*In a forensic sciences context, it's necessary to differentiate males from females, and there are several techniques in this regard. One factor that has the potential to improve the techniques efficiency is the statistical analysis performed. The objective of the study is to verify if one of four types of discriminant analysis has higher capacity of differentiate sex in comparison with the others. Sixty-three skulls were used, and the frontal angle measurement was performed. They were taken using a skull stabilizer (IMECRAN). The discriminant analyses were: linear, logistic, quadratic (QDA) and kth-nearest-neighbor (KNN). Stata 12.0 program was used. In the linear analyses, it was observed 66.67% of female matches and 60.61% of male ones. Using logistic discriminant analysis, it was observed 63.33% of female matches and 66.67% of male matches. The QDA showed, respectively, 76.67% and 51.52% of female and male matches; finally, KNN presented better results: 100.00% and 96.97% of coincidences among females and males, respectively. In conclusion, KNN improves the technique precision of using the frontal angle in order to perform sex determination.*

**KEYWORDS:** Forensic Odontology, Identification, Sex determination

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