Inconsistent identification of pit bull-type dogs by shelter staff

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Shelter staff and veterinarians routinely make subjective dog breed identification based on appearance, but their accuracy regarding pit bull-type breeds is unknown. The purpose of this study was to measure agreement among shelter staff in assigning pit bull-type breed designations to shelter dogs and to compare breed assignments with DNA breed signatures. In this prospective cross-sectional study, four staff members at each of four different shelters recorded their suspected breed(s) for 30 dogs; there was a total of 16 breed assessors and 120 dogs. The terms American pit bull terrier, American Staffordshire terrier, Staffordshire bull terrier, pit bull, and their mixes were included in the study definition of ‘pit bull-type breeds.’

Using visual identification only, the median inter-observer agreements and kappa values in pairwise comparisons of each of the staff breed assignments for pit bull-type breed vs. not pit bull-type breed ranged from 76% to 83% and from 0.44 to 0.52 (moderate agreement), respectively. Whole blood was submitted to a commercial DNA testing laboratory for breed identification. Whereas DNA breed signatures identified only 25 dogs (21%) as pit bull-type, shelter staff collectively identified 62 (52%) dogs as pit bull-type. Agreement between visual and DNA-based breed assignments varied among individuals, with sensitivity for pit bull-type identification ranging from 33% to 75% and specificity ranging from 52% to 100%. The median kappa value for inter-observer agreement with DNA results at each shelter ranged from 0.1 to 0.48 (poor to moderate). Lack of consistency among shelter staff indicated that visual identification of pit bull-type dogs was unreliable.