

Prevalence of DEA 1 canine blood group in Italy

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Background: DEA 1 canine group is the most immunogenic and it is considered the most clinically important to carry out blood transfusions.

Aims: To establish the prevalence of blood type DEA 1 in dogs belonging to several purebred and mongrel reared in Italy.

Methods: 7,414 pure-breed and mixed dogs retrieved from the database of the web site DogbloodDonors* recorded during the period October 2014-July 2016. DEA 1 blood type was identified mostly using the commercial in-clinic typing test RapidVetH Canine DEA 1.1, Agrolabo (Scarmagno, Turin, Italy).

Results: The DEA 1 frequency in all dogs studied is reported in figure 1. Mongrel dogs showed a distribution as depicted in figure 2.

In purebred dogs high prevalence for DEA 1 positive in Rottweiler (89.5%), Golden Retriever (75.2%), and Dachshund (74.2%) was observed. On the other hand German Shepherd, French Bulldog and West Highland White Terrier (WHWT) had a higher DEA 1 negative prevalence as found in previous studies.

There was a similar prevalence of DEA 1 in females and males as reported in table 1. Few exceptions were seen in Boxer female (DEA1+; 72.2%) and in Cavalier King Charles Spaniel and WHWT males (both with high DEA1-; 70.0%).

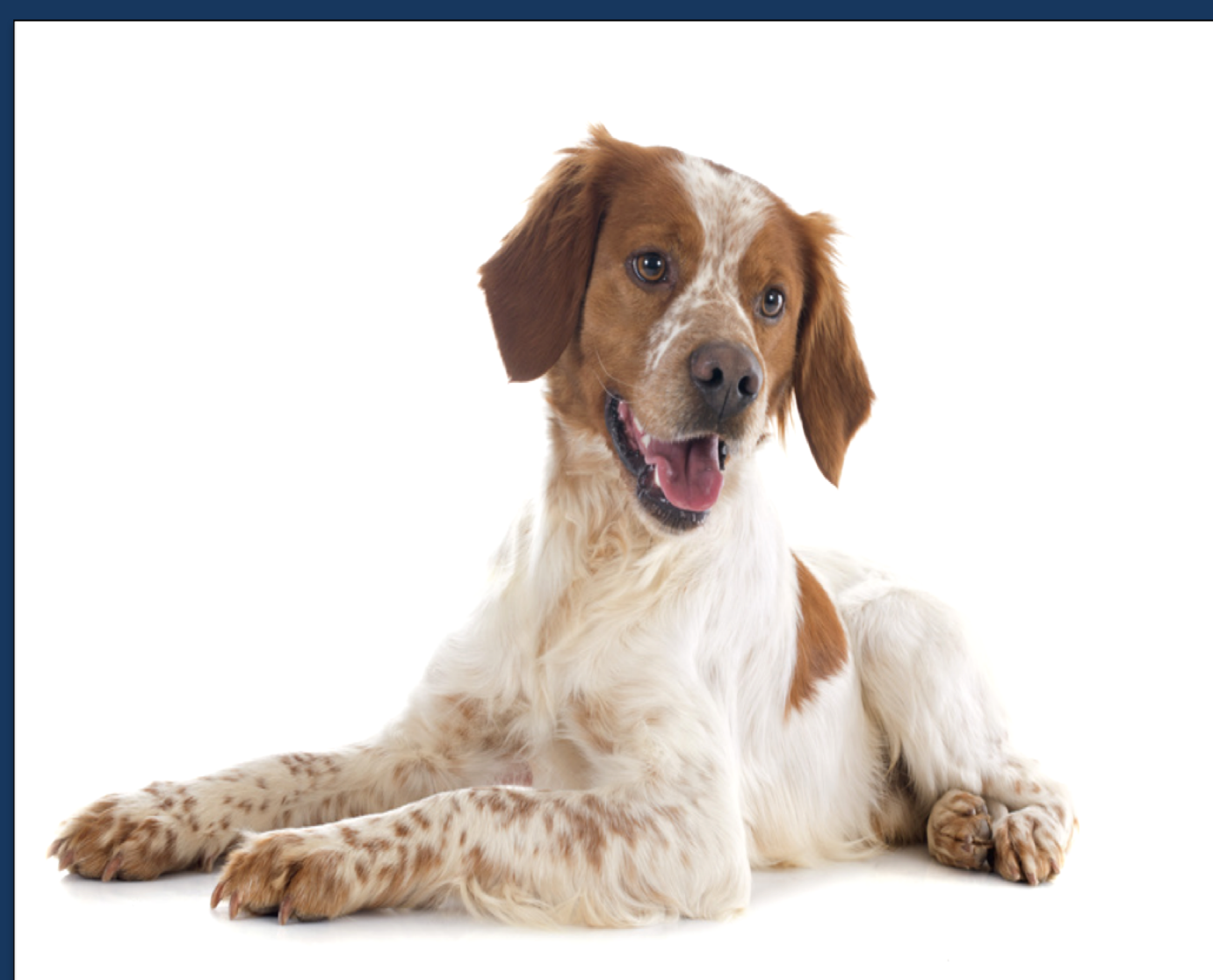
Breeds never reported before with a high DEA 1+ prevalence were:

77.1%

77.0%

74.1%

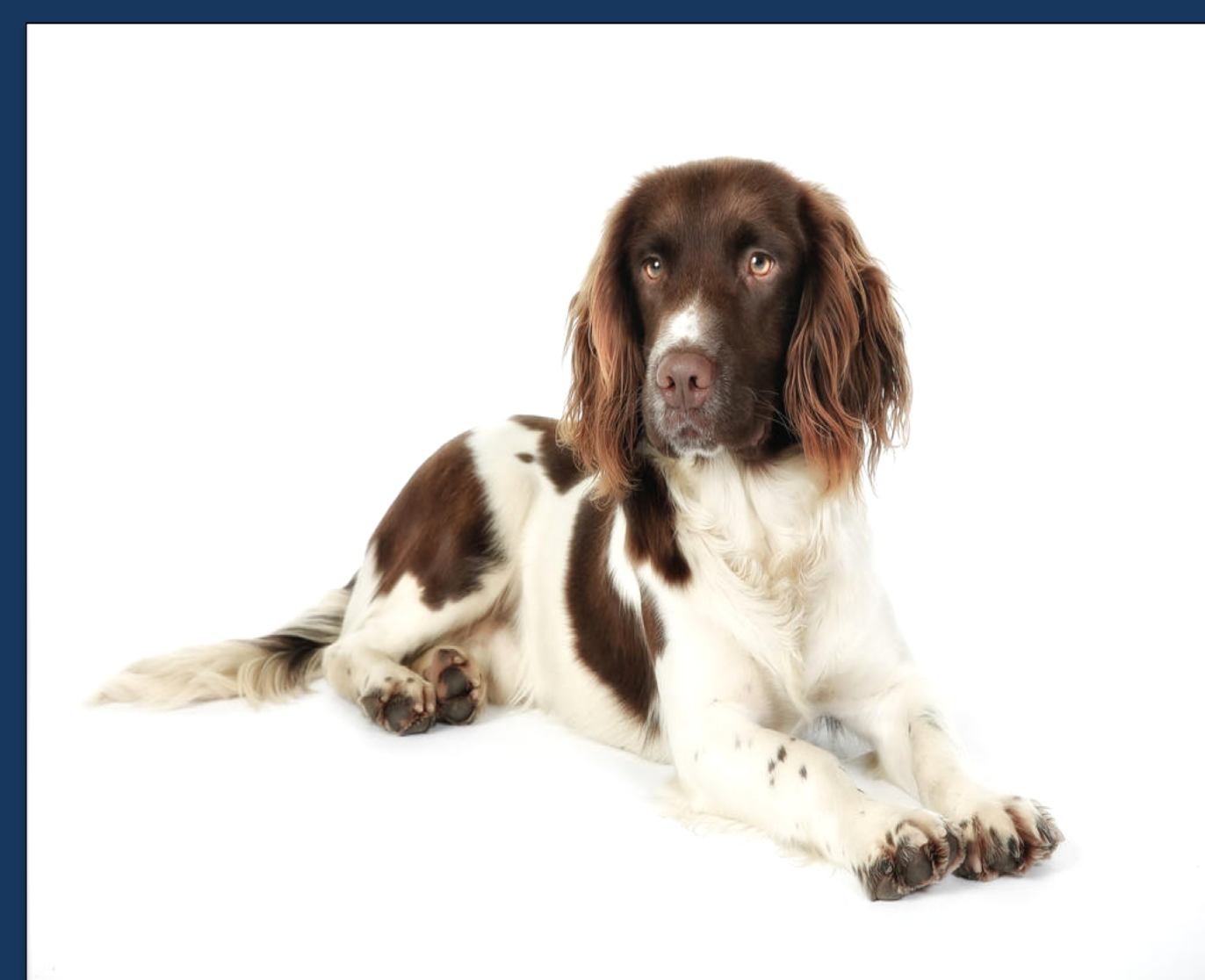
61.1%



Epagneul Breton



Pug



English Springer Spaniel



Chihuahua

Figure 1

Prevalence of DEA 1 in 7,414 dogs

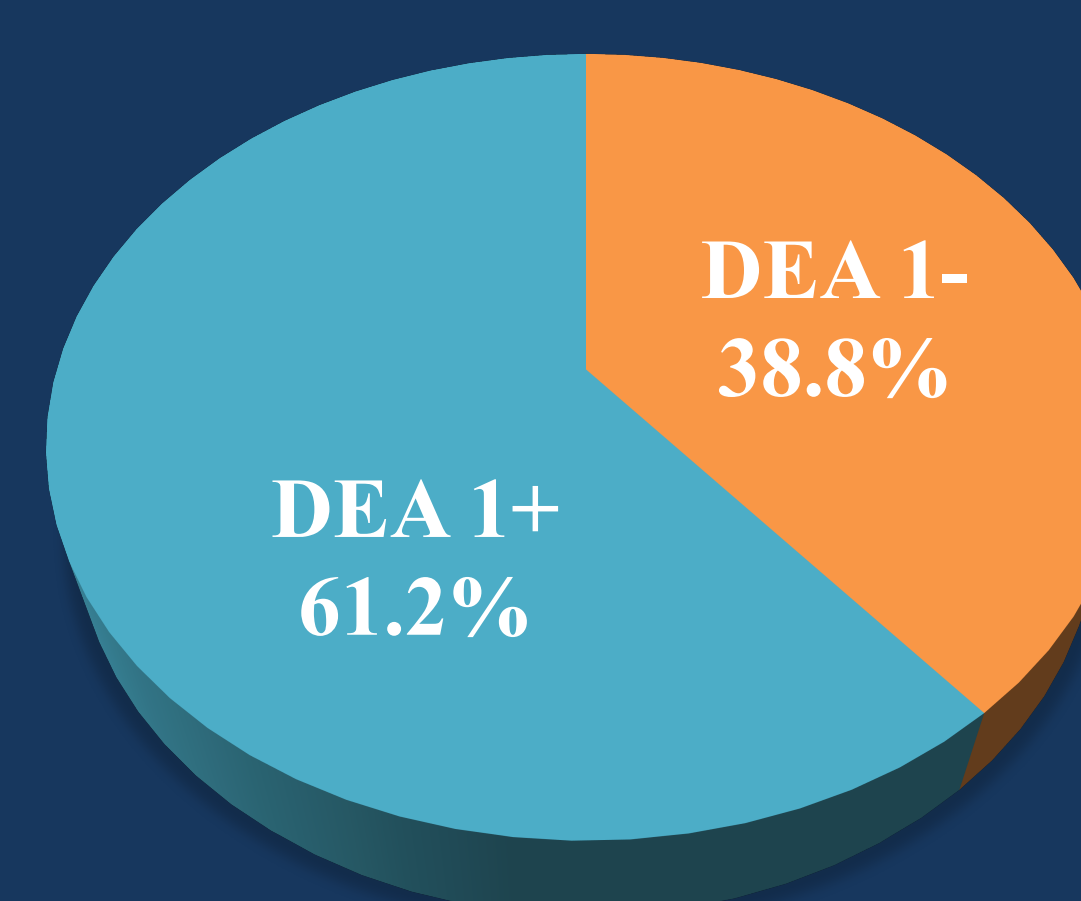


Figure 2

Prevalence of DEA 1 in mongrel dogs

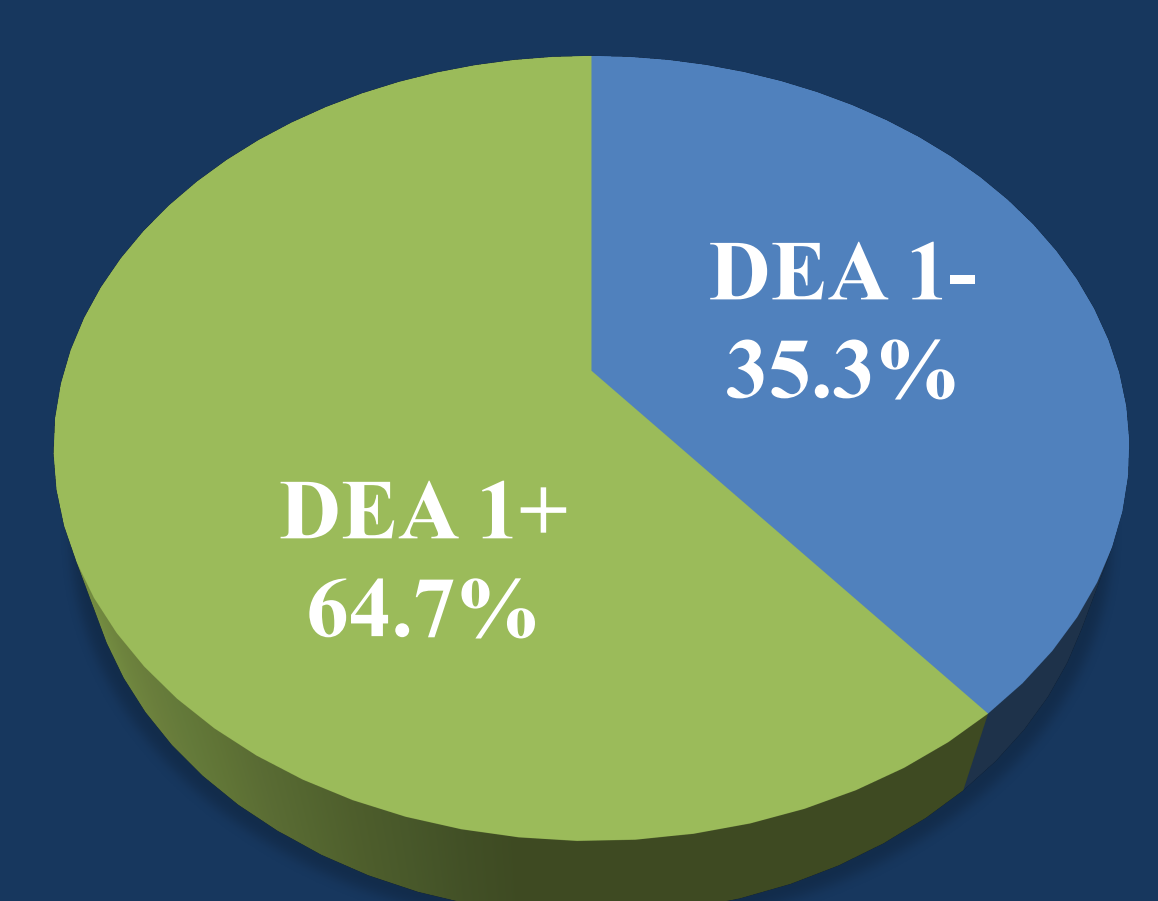


Table 1

Dogs tested	DEA 1 neg		DEA 1 pos	
	F	M	F	M
7,414	1,429 (49.7%)	1,449 (50.3%)	2,259 (49.8%)	2,277 (50.2%)

Conclusions: This study displays an overview of the prevalence of DEA 1 blood group in Italy that could be useful in transfusion medicine in order to look after breeds with low prevalence of DEA 1 positive dogs. The prevalence of DEA 1 positive and negative dogs agrees with most of the prevalence surveys reported in the literature.



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References

Available at: anyela.medina@vet.unipi.it