

Action

COMPATIBILITY OF DOMESTIC CAT BLOOD WITH NON-DOMESTIC CAT BLOOD

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Transfusion medicine is an important component of high quality veterinary care. Approximately 55 ml of blood can be removed safely from a domestic cat. Because of this, it is common for one unit of red blood cells to be inadequate to effectively treat a patient. When units of blood products from more than one donor are administered to a single patient, there is an increased risk of a transfusion reaction; particularly in patients needing multiple transfusions.

Domestic and non-domestic cats share the A-B blood type system. If blood from non-domestic felids is found to be compatible in domestic cats, a feline patient could be administered a therapeutic dose of a blood from one donor, leading to a decreased risk of transfusion reactions.

Blood from 49 domestic and 25 non-domestic cats was typed. Of the former group, 43 typed A, 5 typed B and one could not be typed due to hemolysis; of the latter, 22 typed A and 3 typed B. Blood from each domestic cat was crossmatched with blood from 1-6 non-domestic cats. A total of 111 crossmatches were performed; 78 were compatible and 33 incompatible (tables 1 and 2). Flow cytometry documented no donor immunoglobulin bound to the surface of recipient RBC.

Results suggest that non-domestic cats may be compatible blood donors for domestic cats.

Table 1: Compatible crossmatches between blood type A and B domestic and non-domestic cats

	Type-A non-domestic cats	Type B non-domestic cats
Type-A domestic cats	69	5
Type-B domestic cats	3	1

Table 2: Incompatible crossmatches between blood type A and B domestic and non-domestic cats

	Type-A non-domestic cats	Type B non-domestic cats
Type-A domestic cats	20	4
Type-B domestic cats	9	0