I often field queries about the use of products in blood transfusions as this is something that many practices may not do very often and almost always in a situation of stress.

Blood bags are available with and without anticoagulant. Those with anticoagulant (Shoof Code 200 445) contain CPDA-1. Blood collected into these can be stored for up to 35 days, or can be separated into plasma and red blood cell fractions. Plasma can be frozen for up to 6 months and used to replace coagulation factors in dogs where blood-loss is not severe, or given to dogs with von Willebrand's disease prior to surgery. Packed red cells will store for up to 3 weeks in the fridge and resuspended in 0.9% NaCl before transfusion in cases of severe blood loss.

Blood bags without anticoagulant are available in 150ml (Shoof Code 200 443) and 250ml sizes (Shoof Code 200 444). For large animals we now offer a 4-litre bag (Shoof Code 212 835). You will need to add anticoagulant to these before collection. One option is to take some of the anticoagulant from the other bag. You need 1 part CPDA-1 for every 9 parts of blood. Anticoagulant can be purchased on its own but is quite expensive. Blood for immediate use can have heparin added, but you need to be very careful with the dilution. The recommended rate is 5-10iu per kg. As heparin is generally supplied in 5,000 and 10,000 iu vials, then serial dilutions and the use of an insulin syringe is needed to ensure accuracy for small animals. Heparin has to be used with care in dogs as it has a longer half life and may increase risk of bleeding.

Blood donors should be less than 6 years old and in good health. Dogs should be at least 25kgs and can donate up to 450mls. Cats should be 5kg and can give up to 55mls. For an immediate transfusion between cats it is easy to use the Blood Collection Kit (Shoof Code 200 448) and add the appropriate amount of anticoagulant.

It is a good idea to blood-type your donor to avoid reactions. DEA 1.1 negative is considered to be the universal donor in dogs. DEA 1.1 positive (most common in labs and retrievers) can cause acute reactions in a negative dog. Typing is most important in cats where reactions can be severe. While Type A cats will usually only react mildly to Type B Blood, less than 1ml of Type A blood may cause a fatal response in a Type B recipient as Type B cats have a natural antibody to Type A blood. Type B is more commonly found in the pedigree breeds with most domestic moggies being Type A.

When giving blood it is important that a filter of at least 200 microns is used. We have the larger in-line filter (Shoof Code 203 969) and small Haemo Nate (Shoof Code 200 448) that can be used in-line or put on a syringe if you are doing a direct transfusion in a small dog or cat.

And if it all gets too complicated then call Neill Marshall at the blood bank in Fielding.