

# NVS UPDATE

From the Surgery Service

## Platelet Rich Plasma Therapy Now Available at NVS!

Speak with one of our Surgeons today to find out if your patient would benefit from this minimally invasive procedure: **02 9452 2933**

- **Minimally invasive procedure**
- **Indicated for osteoarthritis and tendon or ligament injury**
- **Autologous treatment - minimal risks**
- **Home the same day of treatment**

### What is Platelet Rich Plasma (PRP)?

Platelet rich plasma is a portion of the blood that has been processed, usually by centrifuge or filtration, to contain a higher concentration of platelets than in the whole blood. Platelet rich plasma can be injected at a site of injury, such as osteoarthritic joints, injured tendons or ligaments.

### PRP Injections

Platelets are a cell component of blood and are primarily responsible for the development of clots. Platelets also contain a remarkable array of growth factors involved in healing. The list includes platelet-derived growth factors (PDGF), fibroblast growth factor, insulin-like growth factor 1, epidermal growth factor, and vascular endothelial growth factor.

These growth factors are primarily responsible for the recruitment and differentiation of progenitor cells; promoting angiogenesis, new tissue growth, and replenishing the extracellular matrix.

### Resources

Fahie MA, et al. A randomized controlled trial of the efficacy of autologous platelet therapy for the treatment of osteoarthritis in dogs. *J Am Vet Med Ass.* 2013 Nov; 243(9): 1291-1297.

Franklin SA and Cook JL. Prospective trial of autologous conditioned plasma versus hyaluronan plus corticosteroid for elbow osteoarthritis in dogs. *Can Vet J.* 2013 Sep; 54(9): 881-884

Upchurch AR et al. Effects of administration of adipose-derived stromal vascular fraction and platelet-rich plasma to dogs with osteoarthritis of the hip joints. *Am J Vet Research.* 2016 Sep; 77(9): 940-951

### Why Use PRP?

The rationale for using PRP is that platelets contain many growth factors and signaling molecules in their granules. The most important of these are considered to be transforming growth factor beta (TGF- $\beta$ 1) and platelet derived growth factor (PDGF). These growth factors reduce the expression of inflammatory cytokines, such as IL-1 and TNF- $\alpha$ , which dampens the neutrophil response and the production of destructive matrix metalloproteinases (MMPs), which is a major component of osteoarthritis. Additionally, they encourage proliferation and differentiation of healing cells.

The goal is that the body's natural healing response is enhanced by delivering a high concentration of growth factors directly to the site of injury. Clinical studies in dogs with osteoarthritis treated with platelet rich plasma showed promising results, with improvement of lameness and pain score, as well as improved force plate gait analysis. (Fahie JAVMA 2013, Franklin CVJ 2013, Upchurch AJVR 2016).

We are offering PRP regenerative treatment at Northside Veterinary Specialists. If you have a patient that you think may benefit from this treatment option, feel free to contact us.

