

## Ununited Anconeal Process (UAP)

### What is an ununited anconeal process?

Ununited Anconeal Process (UAP) is a developmental abnormality in which the anconeal process does not fuse with the ulna. The anconeal process is a portion of the ulna that helps to stabilize the elbow by interdigitating with the humerus. This portion of the ulna develops as a separate island of bone becoming visible on x-rays when a puppy is 12 to 13 weeks of age and normally fuses with the ulna at about 16-20 weeks. If the anconeal process does not fuse with the ulna the elbow becomes irritated from the loose anconeal process, which causes inflammation, pain and forelimb lameness. The anconeal process typically does not properly fuse because of a poor fit between the bones making up the elbow. The development of permanent osteoarthritis will occur over months to years with the continued presence of the UAP free within the joint. Overrepresented breeds diagnosed with UAP include the German Shepherd Dog, Bassett Hound and Saint Bernard, but any medium to large breed dog can be affected. It is also not uncommon for UAP to be diagnosed concurrently in both elbows.

### Diagnosis

Most dogs present with forelimb lameness beginning at 4-5 months of age. During physical exam, the most common findings are forelimb lameness, elbow swelling and pain during palpation of the elbow. X-rays reveal a detached (ununited) anconeal process most easily seen with the elbow positioned in full flexion. Arthroscopy is sometimes employed to inspect the entire joint for other potential problems prior to surgical correction of the UAP.

### Treatment

Complete removal of the ununited anconeal process is typically the treatment of choice. After UAP removal, elbow function usually returns to normal over the short-term. Most dogs do well long-term with mild arthritic progression over time. In select cases, cutting the ulna (ulnar osteotomy) may be performed to release abnormal pressure that had been placed on the anconeal process because of a poor fit between the bones that make up the elbow. By releasing the abnormal pressure, the UAP is allowed to attach or “unite” with the ulna. Best results are obtained if the UAP is diagnosed early, prior to the development of degenerative changes and / or osteoarthritis. Appropriate case selection (age related) is critical to the success of this procedure, which can be performed with and without screw fixation of the UAP. The presence of other cartilage abnormalities and / or arthritic change usually results in a recommendation of complete UAP removal.

