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## “Chula” - Elbow Dysplasia, Scintigraphy, Ulnar Osteotomy

"Chula", a 1-1/2 year old spayed female black Labrador Retriever, came to us with a history of intermittent right foreleg lameness for over 6 months. The lameness worsened with exercise. The initial examination revealed some resistance and objection to manipulation of the right shoulder but no objection to manipulation of the right elbow.

Radiographs of the right elbow joint indicated some reactivity of the front part of the joint, however (Figure 1), and there was a "stairstep" between the level of the radial head and ulnar coronoid surface (Figure 2).



**Figure 1**  
**Radiograph showing early bone spur formation.**



**Figure 2**  
**“Stairstep” in right elbow.**

The stairstepping is a result of growth incongruity between the radius and ulna and is a condition strongly conducive to fragmentation of the coronoid process (a bone/cartilage free-floating chip in the elbow joint) and development of arthritis. This is what is commonly known as elbow dysplasia. The left elbow did not have the stairstepping (Figure 3).



**Figure 3** Normal left elbow.

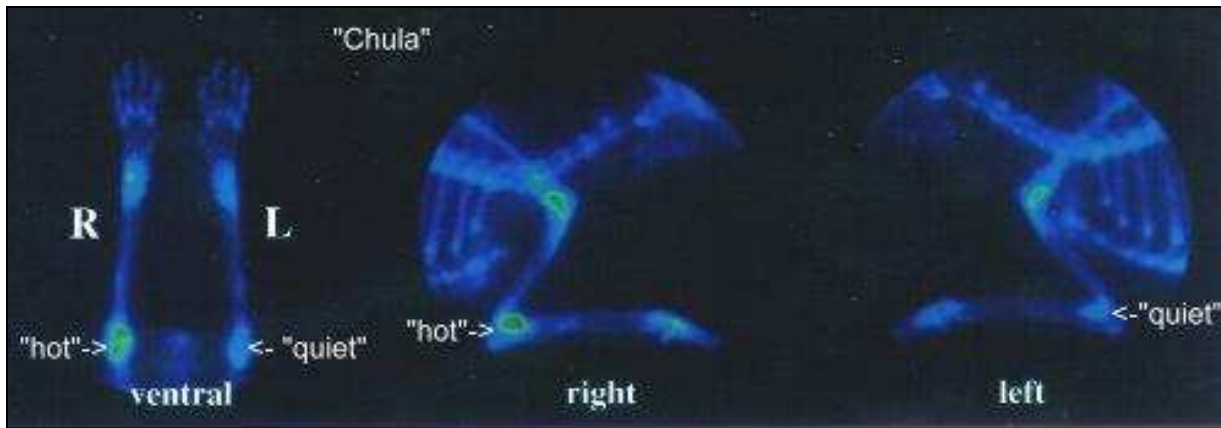
Elbow dysplasia is a developmental condition that should be looked for in young dogs, before arthritis develops and becomes a problem. If caught early, surgery can be VERY helpful!

Because the physical exam suggested resistance in the shoulder while the radiographs suggested a problem in the right elbow, we suggested that a bone scan be done to help localize the primary source of pain and lameness (Figures 4 - 6).

The bone scan, called scintigraphy, is a process whereby a radioisotope, Technesium99, is injected into the patient. Dynamic flow images are taken with a special camera. Both soft tissue and bone are elucidated.



# "Chula" cont.



Figures 4 - 6 . Scintigrams of right and left elbows

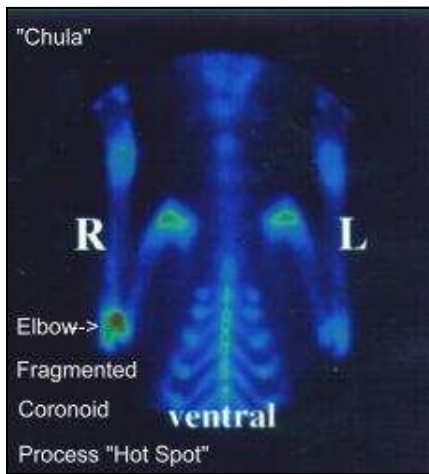


Figure 5

Chula's bone scan (scintigrams) indicated increased radionuclide distribution in the right elbow, especially the medial aspect of the elbow joint in the region of the coronoid process. Surgery was recommended.

Surgical exploration of the right elbow joint revealed some early bone spurs and a loose bone/cartilage fragment (fragmented coronoid process). The loose fragments were removed. A proximal ulnar osteotomy was performed (Figure 7).

This eliminated the "stairstep" between the radial head and the coronoid process, thus eliminating the abnormal wear of the joint surfaces of the coronoid process and humeral condyle that was occurring because of excessive contact (Figure 8).

Chula should have a good long term prognosis, with little to no significant progression of degenerative joint disease.

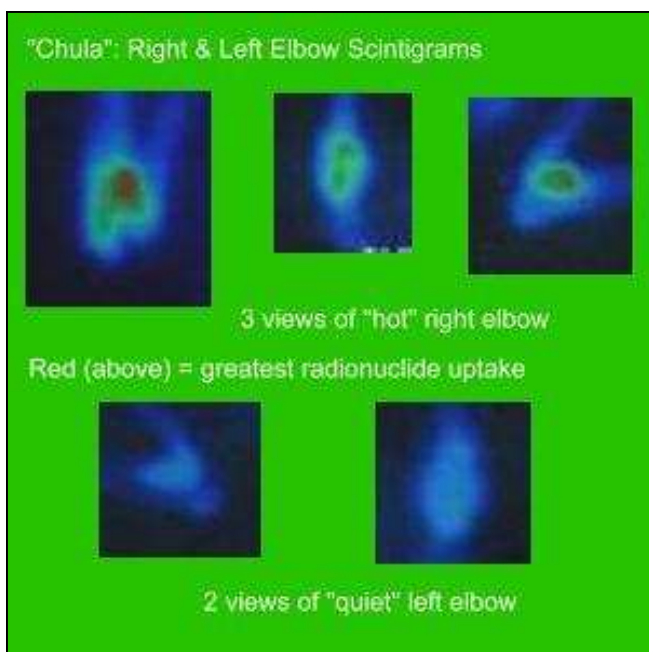


Figure 6



Figure 7 Right elbow, post-op.



Figure 8. No more stairstep.