Ovulation Timing Protocol for Breeding Management

Dear Doctor:

This protocol is being forwarded to you as we have had recent contact from your client, ________________, regarding an interest in a canine assisted breeding and ovulation timing. Your client has expressed an interest in pursuing a portion of the ovulation timing at your practice and we are hoping that we can work together to accomplish the breeding goals of your client.

Ovulation timing is one of the most critical factors for successful pregnancies. Strict adherence to the following protocol will assist your clients and their breeding program by targeting accurate breeding dates thus increasing the overall odds of conception. **We recommend starting blood draws for serum progesterone levels between days 3-5 from the first onset of visual signs of estrous cycling.** If your client is unsure of when the heat cycle began, we find it is best to err on the side of caution and begin testing immediately. Typically, every other day blood progesterone testing should be performed. It is important that the blood tests document a low (baseline) level of progesterone (<1ng/mL), followed by an initial rise, and continued beyond ovulation (typically >5ng/mL). If a change from a low (<1 ng/mL) to higher level of progesterone (>5ng/mL) is not seen, time of ovulation is an educated guess at best and can dramatically decrease accuracy. We also strongly recommend that vaginal cytology be performed to confirm the stage of the estrous cycle at least once during their visits, and preferably more regularly if possible. In addition, it is important to perform a digital vaginal exam to check for possible strictures or other structural abnormalities prior to breeding.

For many planned breedings, particularly frozen semen inseminations and planned C-sections, we also incorporate LH testing to improve accuracy of ovulation timing. Due to the very short peak of LH in the bitch, daily blood sampling is often required. We generally recommend saving a small amount of serum (0.5cc) each time blood is drawn for progesterone sampling and freezing the sample immediately after collection. When the blood progesterone level is generally between 1-3ng/mL, we recommend daily blood draws with immediate freezing of the resultant serum for transport to our hospital for LH testing in order to optimize our chance of properly identifying the LH peak.

As quantitative progesterone assays are necessary for accuracy, we recommend Idexx laboratory. The lab can send a copy of the results directly to our office (contact our reproductive liaisons to set this up) in order for us work closely with you in recommending appropriate breeding management for your client. If you prefer that your client calls us directly with a result and for advice, we are happy to talk with them directly. Our office is available for consultations for progesterone results until 8 pm EST on weekdays, 5pm EST on Saturday, and 2pm EST on Sunday. If you typically send laboratory samples to another laboratory, please discuss this with our reproductive staff as there can be significant variation between progesterone values based on the laboratory. In addition, it is imperative for the laboratory to be able to process the samples with accurate results within 12-24 hours. As a result, we generally do not accept results for laboratories other than Idexx.
Protocol for blood hormone (progesterone and LH) sampling:

1) We recommend that the timing of the blood draw be performed as close to the same time of day as possible for improved accuracy.

2) Please use a larger bore needle such as a 20 gauge needle and a 3-6 cc syringe, drawing a minimum of 3 cc of venous blood from the jugular vein. Cephalic or saphenous vein puncture are not recommended due to an increased potential for hemolysis which will make the test result inaccurate. After the blood draw, it is important to minimize hemolysis and so we recommend removing the needle from the syringe and gently transferring the blood into a plain, red top tube after removal of the stopper, allowing the blood to clot for 10 minutes. We strongly advise the use of a timer for this as a delay in any part of this process can adversely affect the results, due to progesterone’s ability to bind to the red blood cells.

3) After 10 minutes, when clotted, the sample should be centrifuged with the serum immediately transferred into a polypropylene tube or plain red top tube with NO additives and NO serum separator. (We also recommend freezing a portion of the serum (0.5cc) immediately for potential future hormone (LH testing). Please label each tube with the dog’s name and the date of the blood draw. Place in the freezer immediately after processing. LH samples need to be transported to Slade Veterinary Hospital on an icepack, keeping them frozen until arrival here.

4) Again, it is extremely important that the sample is not hemolyzed. Please redraw any hemolyzed sample. A moderate level of lipemia is acceptable for this test. Please also be sure that you have a minimum of 0.5cc of serum, preferably more, available to submit to the lab for progesterone assays.

Thank you for your assistance with this planned breeding. If you have any question, concerns, or need clarification regarding this requested protocol, please contact us. The proper collection, timing, and processing of these samples will insure accuracy of the ovulation timing and a successful pregnancy for your client.

Sincerely,

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