



## What We Have Learned of Surgical Diagnostic Tests on Cattle Digestive System Disorders

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Every clinical encounter begins with an initial clinical impression, a subjective pretest probability of disease. The ultimate goal of all diagnostic testing is to refine this pretest probability to the point where the clinician can confidently make a treat or no-treat decision. Each diagnostic test whether it is a symptom, clinical signs, history, laboratory tests, imagine examinations, lecture notes, textbooks, case reports, randomized clinical trials, opinions and so on results in a change in the clinician's probability of disease, the posttest probability. The degree to which a diagnostic test increases or decreases the probability of disease from pretest to posttest represents the clinical utility of the test as measured by the operating characteristics.

Recently, there has been a move to use Evidence-based Medicine "EBM" and Evidence-based Veterinary Medicine "EBVM" to assist clinicians with the decision-making process for a variety of clinical problems. Evidence-based medicine is the enhancement of clinician's traditional skills in diagnosis, treatment, prevention and related areas though the systematic framing of relevant and answerable questions and the use of mathematical estimates of probability and risk. The best evidence is derived from clinically relevant research, especially patient-centered clinical research into diagnostic tests (including clinical examination), the predictive value of prognostic makers, and the efficacy and safety of therapeutic and preventive regimes. New evidence from clinical research may invalidate previously accepted tests and treatments and identify more powerful, more accurate, more efficacious and safer procedures as replacements. However skills such as understanding of statistical terms and the ability to translate practical information needs into questions that can be answered.

Evidence-based Veterinary Medicine promotes the systematic evaluation of research evidence, clinical expertise, and patient values in an effort to improve medical and surgical therapies. Recognition and integration of all of these elements should help clinicians from a diagnostic and therapeutic alliance that optimizes clinical outcomes and quality of practice. The roots of Evidence-based Medicine are as old as medicine itself.

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However the concept of evidence-based medicine was introduced in the early 1990s by a group of clinical epidemiologists at McMaster university in Canada led by David Sackett. They used the term " Clinical appraisal " to describe the application of basic rules of evidence-based when reading articles in clinical journals or reviewing recorded information in everyday practice. This method of evaluating the current evidence and treatment (Medical or Surgical) decision making starkly contrasts the presiding paradigm of the attending clinician's clinical experience driving treatment decision making for any given patient. In the existing paradigm decisions are based on the clinician educative background, intuition and clinical experience, which often times is supported by external advice or recommendation from colleagues.

To appraise the evidence, the accuracy of the test against its criterion standard should be measured and the presence or absence of the target disorder is confirmed with a reliable and accurate " gold standard" test. In this preliminary report, the surgical diagnostic tests pertaining to digestive disorders in dairy cows were evaluated using an Evidence -based Veterinary Medicine paradigm. One hundred eighty seven resources of information were identified through an on-line bibliographic search. Studies were compared with regard to study design and evidence classification was made. Proposed results ranged from a variety of subjective findings including clinical impression, imagine tests and laboratory analysis. Objective results were included all digestive disorders. In this study an EBVM paradigm did provide sufficient evidence favoring one diagnostic test for surgical management at least in left displacement of abomasums.

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