Upper GI positive-contrast study submission guidelines

Indications for an upper gastrointestinal (GI) positive-contrast study in dogs and cats:

- Identifiy gastric or intestinal foreign body
- Confirm gastric outflow or intestinal obstruction
- Identifiy mural mass lesion

Study technique

Prepare patient and obtain initial survey radiographs

- Fast the patient for at least 12–24 hours to empty the stomach and intestines. The colon does not need to be empty.
- Obtain survey abdominal radiographs (right and left lateral and ventrodorsal) to document appropriate preparation and baseline appearance of the GI tract.
- Avoid sedation, as this may impact GI motility, gastric emptying times, and intestinal transit times. If sedation is necessary, avoid drugs that affect emptying and transit times (e.g., butorphanol, xylazine, atropine, or glycopyrrolate).

Administer contrast medium

- Use a 30% weight-per-volume (w/v) barium preparation. If the barium preparation is 60% w/v, dilute appropriately with water. Do not mix barium with food. If stomach or intestinal perforation is suspected, use a water soluble organic iodide preparation instead, and refer to appropriate resources for dosing recommendations.
- When using barium in dogs and cats, 6 mL/lb (13 mL/kg) is recommended.
- Administer carefully into the stomach using an orogastric tube and mouth gag, or administer slowly into the buccal pouch, allowing your patient time to swallow. Note when administration started and finished.

Acquire radiographs after contrast administration

- Obtain immediate radiographs of the abdomen, including both right and left lateral, ventrodorsal, and dorsoventral projections.
- Repeat right lateral and ventrodorsal projections of the abdomen at appropriate time intervals for dog or cat (see the chart below for an image summary by species) until the stomach is empty and barium is in the colon.
- A full study typically requires 8–12 hours to complete in dogs and 4–6 hours in cats, unless an obvious lesion is identified earlier or the patient's clinical condition deteriorates before the study has finished.

Submit study

- All radiographs must be labelled with appropriate laterality markers and the date/time of postcontrast administration, as appropriate for the species (see the chart below for recommended time intervals).
- The DICOM* file format is required to ensure appropriate image resolution and an accurate date/time stamp on each image.
- Submit your study under the appropriate contrast study service type for Radiology. All images must be submitted as one case.
- Include a case summary (e.g., patient history, relevant physical examination abnormalities, diagnostic test results, treatments administered, and reason for performing this study), fasting status, and details of contrast administration (e.g., type, volume, route, time, and duration).

Image summary by species

When—canine	When—feline	Views	
Before	Before	Right and left lateral	Ventrodorsal
Immediate	Immediate	Right and left lateral	Ventrodorsal and dorsoventral
At 30 and 60 minutes	At 15, 30, and 60 minutes	Right lateral	Ventrodorsal
At 2, 3, 5 hours, and every 2 hours thereafter, until barium is out of the stomach and in the colon	Every 30–60 minutes until barium is out of the stomach and in the colon	Right lateral	Ventrodorsal

Reference

Thrall DE. *Textbook of Veterinary Diagnostic Radiology*. 7th ed. Elsevier; 2018.

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