



Pharmaceutical Recommendations for Optimal Ultrasound Studies

Disclaimer: These protocols are for reference only, and the primary veterinarian should determine the safest protocol for each patient. Consider both the emotional and physical well-being of the patient when formulating a plan.

BOTH Pre-Visit Pharmaceuticals AND Sedation are highly encouraged, *including ECHOs (Ideally ketamine, telazol, and alpha-2 agonists should be avoided).*

Pre-Visit Pharmaceuticals:

Administered by mouth the night before and 1-2 hours prior to ultrasound.

1. Gabapentin

- Action:
 - Neuropathic pain/analgesia
 - Calming/sedation at higher doses
 - Decreased anxiety
- Dosage:
 - Canine: 10-40 mg/kg/dose PO
 - Feline: 10-20 mg/kg/dose or 50-100 mg/CAT (NOT /kg)
- Notes:
 - May intensify sedation from other drugs
 - Combines well with other drugs
 - For maximum sedation, give a loading dose the night before

2. Trazodone

- Action:
 - Anxiolytic, sedation
- Dosage:
 - Canine: 3-10 mg/kg/dose PO (not to exceed 300mg)
 - Feline: 50 mg/CAT (NOT /kg); administer 1-2 hours before desired effect
- Notes:
 - Sleepiness, paradoxical excitation
 - Variable mild GI effects
 - Use caution when combining with other drugs that may increase serotonin

Feline Procedural Sedation:

1. Cardioprotective Protocol (*ECHOs*):

- Midazolam (0.2 mg/kg IV) PLUS Butorphanol (0.2-0.4 mg/kg IV)
- Alfaxalone (1-2 mg/kg IV) PLUS Butorphanol (0.2 mg/kg IV)

2. Abdominal Ultrasounds:

- *If patient has diagnosed or suspected cardiomyopathy, refer to cardioprotective protocol*
- **PREFERRED:** Butorphanol (0.2-0.4mg/kg) PLUS dexmedetomidine IM or IV
- Ketamine (2-4mg/kg IV) PLUS diazepam (0.2-0.3mg/kg IV) OR midazolam (0.3mg/kg IV)
- "Kitty Magic": 0.1 OR 0.2ml ketamine + 0.1 OR 0.2ml dexmedetomidine + 0.1 OR 0.2ml buprenorphine IM

Canine Procedural Sedation:

1. Cardioprotective Protocol (*ECHOs*):

- Butorphanol (0.2-0.4mg/kg IV) PLUS Diazepam (0.3mg/kg IV) OR Midazolam (0.15mg/kg IV)

2. Abdominal Ultrasounds:

- *If patient has diagnosed or suspected cardiomyopathy, refer to cardioprotective protocol*
- **PREFERRED:** Butorphanol (0.2-0.4mg/kg) PLUS dexmedetomidine IM or IV

Resources:

- Lindquist, E. Frank, J. Molder, P. Lobetti, R. (2015). *The Curbside Guide: Diagnosis & Treatment of Common Sonographically Detected Disease: Canine & Feline*. SonoPath, LLC.
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