

# PREANESTHETIC EVALUATION

## PROCEDURE

1. Review complete patient history
2. Perform complete physical examination
3. Evaluate preanesthetic clinical pathology data
4. Assign ASA status and communicate with owner as needed
5. Determine most appropriate anesthetic protocol based on patient evaluation
6. Assess and anticipate patient analgesic requirements
7. Assign/identify dedicated monitoring associate
8. Complete *Anesthesia Machine Checklist*
9. Administer premedication drugs
10. Perform pre-induction physical examination and proceed to induction if clinically indicated

## CLINICAL ESSENTIAL

Address and resolve physical examination abnormalities that may negatively impact anesthesia (e.g., dehydration, obesity) prior to anesthesia when possible, especially with elective procedures



| Status            | ASA Classification  | Examples   |
|-------------------|---|--|
| <b>I</b>          | Healthy pet, no disease   | Elective OVH or castration   |
| <b>II</b>         | Mild systemic disease or localized disease  | Healthy geriatric pet, mild anemia or obesity                                  |
| <b>III (fair)</b> | Moderate systemic disease limiting activity but not life-threatening                            | Mitral valve insufficiency, collapsing trachea, poorly controlled diabetes     |
| <b>IV (poor)</b>  | Severe systemic disease; incapacitating; life-threatening; not expected to live without surgery | Hemoabdomen from splenic rupture, severe traumatic pneumothorax, organ failure |
| <b>V (grave)</b>  | Moribund; not expected to live >24 hours, with or without surgery                               | Multi-organ failure, severe shock, terminal malignancy                         |

## GENERAL ANESTHESIA: PATIENT STABILITY AND TIMING

Is immediate anesthesia required to address a life-threatening situation?

(Immediate anesthesia within 10-15 minutes)

Examples:

- Airway obstruction
- Severe acute hemorrhage

**YES**

Proceed using *Emergency protocol*

See *Emergency protocol* for details

**NO**

Unstable pet:

Diagnostic intervention, medical stabilization

Stable pet:

Proceed with most appropriate protocol

After/upon stabilization

## DETERMINE ASA STATUS

- History
- Clinical Pathology Data
- Physical Exam

I - II

- There is little to no increase in risk

III - V

- Discuss increased risk with the client
- Maximize preanesthetic medical management
- Cancel or refer procedure as clinically indicated



## CLINICAL ESSENTIAL

Assign an ASA status to each pet undergoing general anesthesia and address status appropriately as part of the preanesthetic evaluation



For additional information see the *Medical Quality Standards* chapter

# PREANESTHETIC CLINICAL PATHOLOGY EVALUATION



- › Perform further diagnostics to look for underlying causes
- › Postpone elective procedures if possible



## CRITICAL STOP

- › DO NOT PROCEED WITH GENERAL ANESTHESIA
- › Institute medical management of underlying disorder or consider referral

| Parameter  | Stop  | Considerations   | Critical Stop  |
|--|---|--|--|
| Blood Glucose (BG) (mg/dL)   | <b>Canine: &gt;175</b><br><b>Feline: &gt;250</b><br>OR<br><b>&lt;70</b>               | <ul style="list-style-type: none"> <li>■ If high, recheck in a few hours                             <ul style="list-style-type: none"> <li>● If non-elective proceed with most appropriate protocol</li> </ul> </li> <li>■ If low, recheck to ensure accuracy</li> <li>■ If non-elective proceed with IV dextrose and recheck frequently</li> </ul> | <b>&lt;50 OR &gt;600</b>   |
| Total Protein (TP) (g/dL)  | <b>&lt;4.5</b>  | <ul style="list-style-type: none"> <li>■ If nonelective procedure, provide colloid support</li> </ul>  | <b>&lt;3</b>   |
| Albumin (g/dL)   | <b>&lt;2</b>  | <ul style="list-style-type: none"> <li>■ If nonelective procedure, provide colloid support</li> </ul>  | <b>&lt;1</b>   |
| Calcium (Ca <sup>2+</sup> ) (mg/dL)                                      | <b>&lt;8 OR &gt;12</b>  | <ul style="list-style-type: none"> <li>■ Check albumin levels</li> <li>■ If nonelective procedure, proceed with <i>Cardiac</i> protocol</li> </ul>   | <b>&lt;7 OR &gt;16</b>   |
| Sodium (Na <sup>+</sup> ) (mEq/L)  | <b>&lt;135 OR &gt;170</b>   | <ul style="list-style-type: none"> <li>■ Recheck to ensure accuracy, assess hydration and neurologic status</li> </ul>   | <b>&lt;125 OR &gt;180</b>  |
| Chloride (Cl <sup>-</sup> ) (mEq/L)                                      | <b>&lt;100 OR &gt;135</b>   | <ul style="list-style-type: none"> <li>■ If hyperchloremic ensure pet is not receiving KBr</li> </ul>  | <b>&lt;90 OR &gt;145</b>   |
| Potassium (K <sup>+</sup> ) (mEq/L)                                      | <b>&lt;3.5 OR &gt;6</b>   | <ul style="list-style-type: none"> <li>■ Obtain ECG tracing</li> <li>■ If nonelective procedure, provide appropriate fluid support and recheck K<sup>+</sup> before proceeding to anesthesia</li> <li>■ If K<sup>+</sup> improves, proceed with appropriate protocol and recheck frequently</li> </ul>   | <b>&lt;2.5 OR &gt;6</b>  |
| Hematocrit % (HCT)<br>Packed Cell Volume % (PCV)                         | <b>Canine: &lt;25 or &gt;55</b><br>OR<br><b>Feline: &lt;20 or &gt;45</b>              | <ul style="list-style-type: none"> <li>■ If nonelective procedure, provide transfusion support for anemia</li> <li>■ Assess volume status for hemoconcentration</li> </ul>   | <b>Feline: &lt;15</b><br><b>Canine: &lt;20</b><br>OR<br><b>&gt;60%</b> |
| Platelets (/ul)  | <b>&lt;200,000</b>  | <ul style="list-style-type: none"> <li>■ Confirm with peripheral blood smear and manual count</li> <li>■ Confirm as above and perform appropriate diagnostic testing for thrombocytopenia</li> </ul>   | <b>&lt;60,000</b>  |
| White Blood Cells (WBC) (/ul)<br>Neutrophils (/ul)                       | <b>WBC &lt;4000</b><br><b>Neutrophils &lt;2000</b><br>OR<br><b>WBC &gt;30,000</b>     | <ul style="list-style-type: none"> <li>■ Confirm with blood smear and manual differential count</li> <li>■ Perform additional diagnostics to assess</li> <li>■ If nonelective procedure, use disease appropriate protocol</li> </ul>   | <b>WBC &lt;2000</b><br>OR<br><b>Neutrophils &lt;1000</b>               |
| Blood Urea Nitrogen (BUN) (mg/dL)  | <b>&lt;normal range</b><br>OR<br><b>Canine: &gt;27</b><br><b>Feline: &gt;35</b>       | <ul style="list-style-type: none"> <li>■ Perform additional diagnostics to assess</li> <li>■ Check urine specific gravity (USG)</li> </ul>   | N/A  |
| Creatinine (mg/dL)   | <b>&lt;normal range</b><br>OR<br><b>Canine: &gt;1.8</b><br><b>Feline: &gt;2.2</b>     | <ul style="list-style-type: none"> <li>■ Perform additional diagnostics to assess</li> <li>■ Check urine specific gravity (USG)</li> </ul>   | N/A  |
| Alanine Aminotransferase (ALT) (U/L)<br>Alkaline Phosphatase (ALP) (U/L) | <b>Canine: &gt;2 x upper limit of normal range</b><br><b>Feline: &gt;normal range</b> | <ul style="list-style-type: none"> <li>■ Postpone procedure if appropriate</li> <li>■ Hepatic evaluation if medically indicated</li> <li>■ If nonelective procedure, use <i>Abdominal/Hepatic</i> protocol</li> </ul>  | N/A  |
| Bilirubin (mg/dL)  | <b>&gt;2.0</b>  | <ul style="list-style-type: none"> <li>■ Recheck to assess for iatrogenic hemolysis</li> <li>■ Check PCV/HCT/blood smear/slide autoagglutination to evaluate for hemolysis</li> <li>■ If nonelective procedure, use <i>Abdominal/Hepatic</i> protocol</li> </ul>   | N/A  |

## CLINICAL ESSENTIAL

Obtain and review clinical pathology data prior to general anesthesia. Verify, document and address all clinically significant abnormalities prior to premedication, communicate to the team, and discuss with the client. Dismissal of abnormal results is not permitted.

