Trouble Shooting PW Analysis

- High presystolic amplitudes, low CO (10 %) in a giant Schnauzer with DCM
- Low presystolic amplitudes due to vasodilation (e.g. septicemic shock)
- A hypertensive dog with CKD; Gain too high >100%
- Distance between amplitudes = rhythm
- Dog with respiratory sinus arrhythmia
- Height of amplitude: stroke volume
- Stroke Volume Variances (SVV) and arrhythmia due to extra beats (frayed pattern)
- High presystolic amplitudes and arrhythmia during anesthesia with Ketamine, Rompun and Isoflurane
- Trembling artefacts only (no pulse amplitudes)
- Severe breathing pattern due to stress
- Cuff too tight
- Cuff too loose
- Movement artefacts
- Artefact due to change in position

measurement results:
- Sys, Dia, MAP, Pulse

parameters:
- P-Max / P-Min
- mm/s
- Gain
- Cuff

Normal distribution of pulse wave in a healthy dog

linearity line (red):
linear deflation

bell shape curve:
arterial opening behaviour

base line

**EQUIPMENT**

- VET HDO MD PRO/USB
- VET HDO MD PRO/USB/BT (Bluetooth)
- VET HDO MD Equine/USB/BT
- VET HDO Tablet

*Includes:*
- 3 cuffs: C1 D1 D2
- USB 2.0 cable
- Manuals HDO/ MDSWIN
- MDSWIN Analyse Software (windows)

**HDO - Evidence based!**

1. First and only NIBP Gold Standard
2. Real time analysis
3. The only true pulse wave representation
4. BP and cardio-vascular parameters

<table>
<thead>
<tr>
<th>Typ of Hypertension</th>
<th>SAP</th>
<th>DAP</th>
<th>Risk of Target Organ Damage</th>
</tr>
</thead>
<tbody>
<tr>
<td>mildly elevated BP</td>
<td>&gt; 150 mmHg</td>
<td>&gt; 95 mmHg</td>
<td>mild</td>
</tr>
<tr>
<td>medium</td>
<td>&gt; 160 mmHg</td>
<td>&gt; 100 mmHg</td>
<td>medium</td>
</tr>
<tr>
<td>severe</td>
<td>&gt; 180 mmHg</td>
<td>&gt; 120 mmHg</td>
<td>severe</td>
</tr>
</tbody>
</table>

ACVIM Consensus Statement 2007

**Therapy YES / NO?**

ACVIM Consensus Statement 2007  
www.vbps-online.org

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**Moderate and high risk of TOD**

- BP < 150/95 mmHg
  - Re-measure BP in 1-3 months
- BP 150-159/95-99 mmHg
  - Evidence of TOD?
- BP ≥150/95 mmHg
  - Ocular/CNS TOD present
  - Candidate for initiation or escalation of anti-hypertensive therapy
  - Re-measure BP within 7 days
  - No ocular/CNS TOD present
  - Measure BP Identify TOD & concurrent diseases
- BP ≥180/120 mmHg
  - Evidence of TOD or cause of secondary hypertension?
  - YES: Candidate for initiation or escalation of anti-hypertensive therapy
  - NO: Clinical judgement: Candidate for anti-hypertensive therapy - or - re-measure BP in 1 month