Appendix A: Calculation of formulae from Bolsin and Colson (32)

Symbols used in formulae

\( P_0 = \) acceptable failure rate
\( P_1 = \) unacceptable failure rate
\( \alpha = \) type 1 failure rate (the probability of wrongly accusing a trainee of unacceptable performance)
\( \beta = \) type 2 failure rate (the probability of wrongly certifying a trainee's performance to be acceptable)

Intermediate values

\( a = \ln \left( \frac{1-\beta}{\alpha} \right) \)
\( b = \ln \left( \frac{1-\alpha}{\beta} \right) \)
\( P = \ln \left( \frac{p_1}{p_0} \right) \)
\( Q = \ln \left( \frac{1-p_0}{1-p_1} \right) \)

Where \( \ln \) is the natural logarithm of the function denoted.

\( S = \frac{Q}{P+Q} \)

\( s \) is the downward decrement with each success on a CUSUM plot while the upward increment with each failure is \( 1-s \)

CUSUM graph formulae

\( h_0 = \frac{b}{P+Q} \)
\( h_0 \) defines the spacing between the acceptable and unacceptable boundary lines on a CUSUM graph

\( h_1 = \frac{a}{P+Q} \)
\( h_1 \) defines the spacing between acceptable boundary lines on a CUSUM graph.
\[
\begin{array}{|c|c|c|}
\hline
 & P_0 = 0.15 \text{ and } p_1 = 0.25 & P_0 = 0.1 \text{ and } p_2 = 0.2 \\[-0.5ex] & \left(\alpha = \beta = 0.1\right) & \left(\alpha = \beta = 0.1\right) \\
\hline
a & 2.2 & 2.2 \\
b & 2.2 & 2.2 \\
P & 0.51 & 0.69 \\
Q & 0.13 & 0.12 \\
s \text{ and } 1-s & 0.2 \text{ and } 0.8 & 0.15 \text{ and } 0.85 \\
h_0 & 3.4 & 2.5 \\
h_1 & -3.4 & -2.5 \\
\hline
\end{array}
\]

Appendix B: Signalment and operative findings of 167 stifles (122 dogs) treated with TTA procedure

<table>
<thead>
<tr>
<th>Weight</th>
<th>mean 31.2 kg (range 7.8 kg – 77 kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>mean 6.2 years (range 11 months – 12.3 years)</td>
</tr>
<tr>
<td>Complete cranial cruciate ligament rupture</td>
<td>138 / 167 stifles</td>
</tr>
<tr>
<td>Partial cranial cruciate ligament rupture</td>
<td>29 / 167</td>
</tr>
<tr>
<td>Meniscal pathology</td>
<td>71/167</td>
</tr>
</tbody>
</table>

**Affected breeds:**

- Crossbreed 37
- Labrador 35
- Boxer 16
- German Shepherd Dog 20
- Akita 8
- Springer Spaniel 9
- Staffordshire Bull Terrier 8
- American Bulldog 4
- Golden Retriever 6
- Dogue de Bordeaux 4
- Bullmastiff 4
- Patterdale Terrier 2
- Yorkshire Terrier 1
- Dobermann 1
- Pyrrenian Mountain Dog 2
- Unknown 10