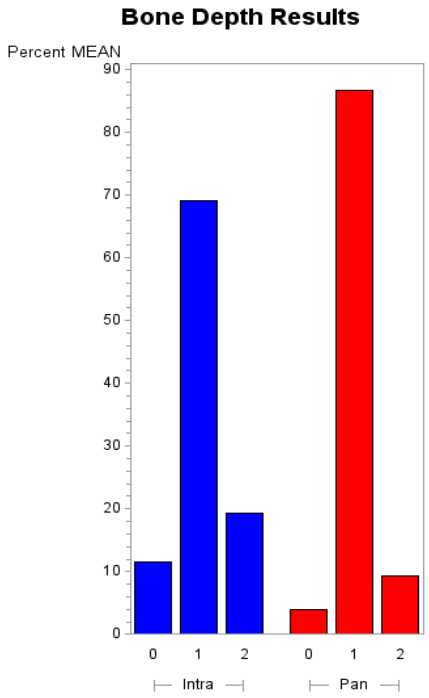
# University of Minnesota Study

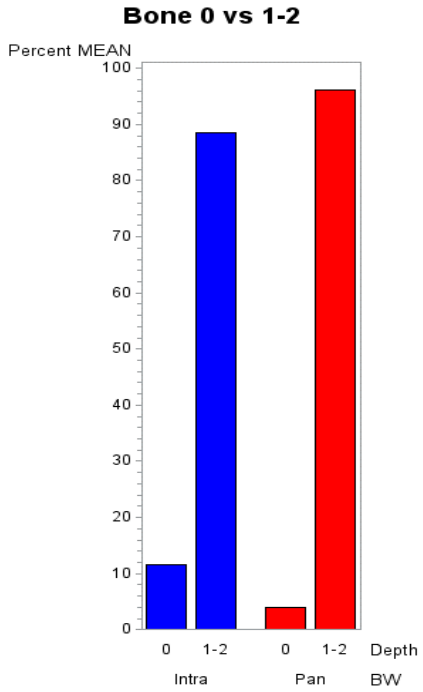
## Intra BW vs Pan BW

## By Panel of 4

Robert Langlais BA, DDS, MS, PhD, FRCD(C)
Thomas Prihoda PhD

# Bone Loss (Intra BW vs. Pan BW)




**For bone loss measurements:**

**0 = Bone not visible on image**

**1 = Presence of bone loss evident**

**2 = Normal bone level**

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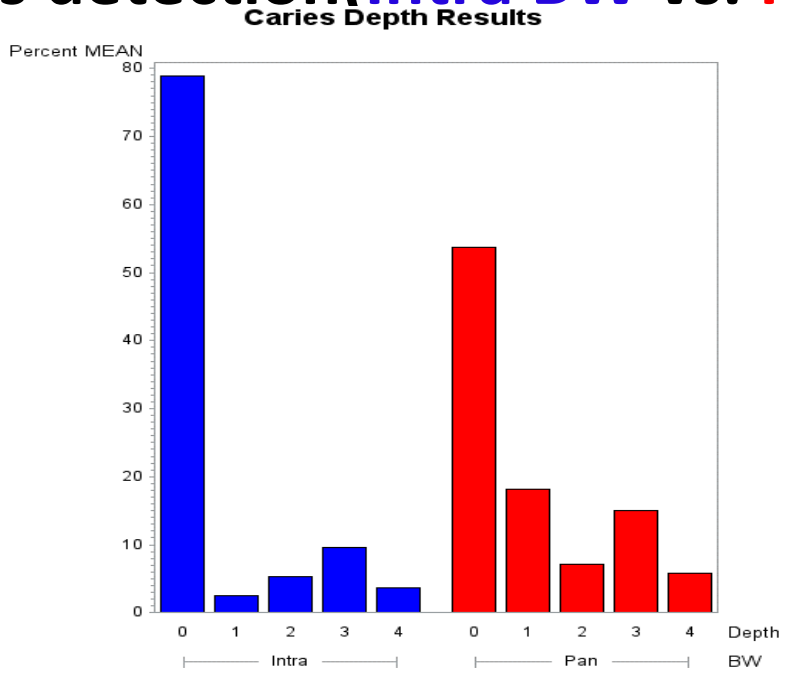
The **Pan BW** method had a greater percentage of 1s and less 0s and 2s for the same surfaces as read on the **Intra BWs.**

**For Bone 0 measurements:** 93.2% of the **Intra BW** 0s were a 1 or 2 on the **Pan BWs** while only 80.0% of the **Pan BW** 0s were a 1 or a 2 on the **Intra BWs**

**Conclusion:** The study data shows the **Pan BWs** **detected more bone loss**.

# Caries detection(Intra BW vs. Pan BW)




**Caries Depth measurements:**

**0 = None**

**1 = Less than ½ way thru enamel**

**2 = More than ½ way thru enamel, not to DEJ**

**3 = Into DEJ, less than ½ way to pulp**

**4 = Over ½ way to pulp and further**

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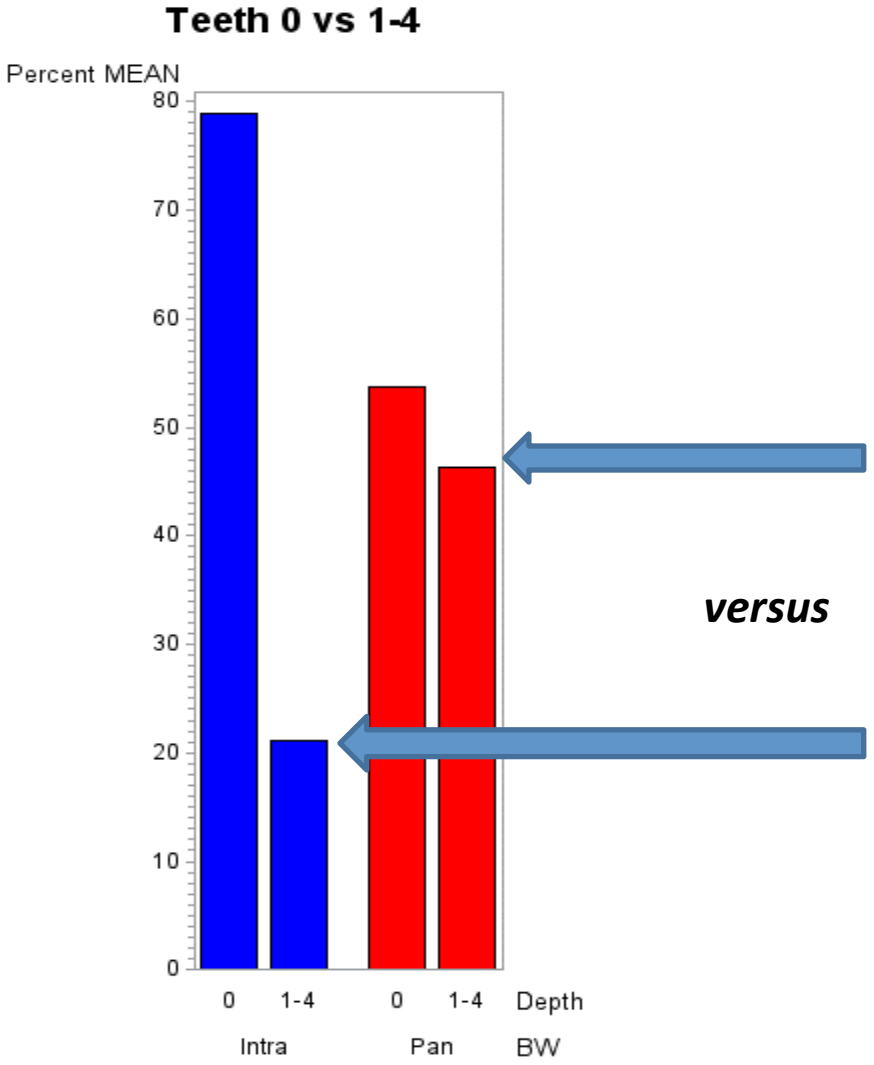
**The caries depth measurements:** (0, 1, 2, 3, 4) from n=1416 surfaces are displayed.

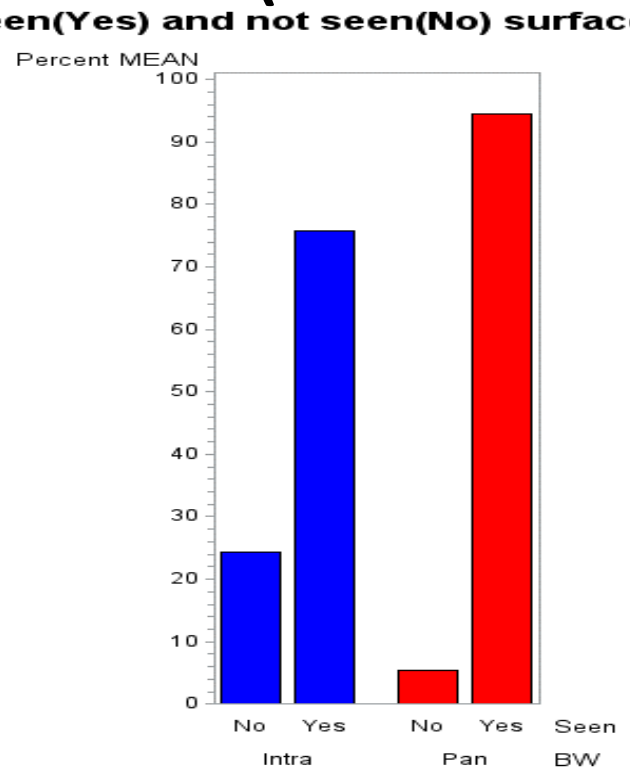
**Conclusion: The data clearly show more caries detected by the Pan BWs**. In fact, 43.8% of the **Intra BW** 0s were specifically read as caries levels (1-4) by the **Pan BWs** and only 4.1% of the **Pan BW** 0s were read as caries by the **Intra BWs**.

# Caries Detection (Intra BW vs. Pan BW)




- **Conclusion: Caries detected at all depths (1-4) by Pan BW was double the caries detected by the Intra BW at all depths.**

# Seen Surfaces (Intra BW vs. Pan BW)




Surfaces not seen were significantly different for the **Intra BWs** and **Pan BWs**

**The following two conclusions may be stated:**

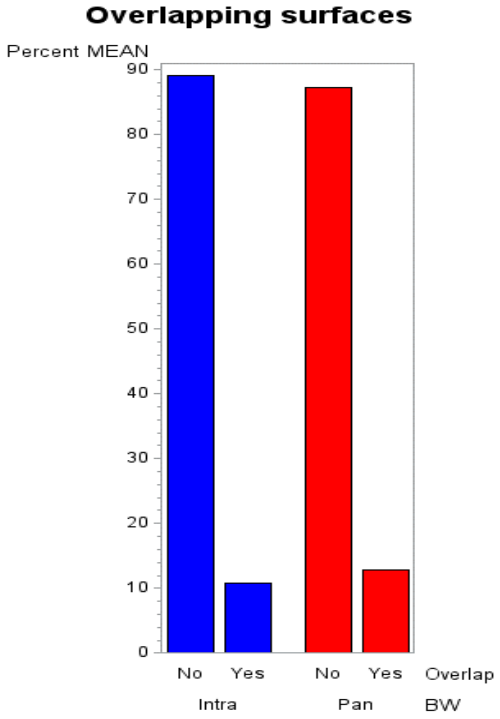
***EITHER:***

**Conclusion 1:** The **Pan BW** was able to show more surfaces, 94.6% vs 75.7%. Of all of the surfaces read by either the **Pan BW** or the **Intra BW** more surfaces were seen by the **Pan BW**

***OR:***

**Conclusion 2:** The **Pan BWs** missed 5.4% of all surfaces seen by either method while the **Intra BWs** missed 24.3% of all the surfaces seen by either method

# Overlapped surfaces (Contacts) (Intra BW vs. Pan BW)




**Overlapped contacts** were significantly different between **Intra BWs** and **Pan BWs.**
***The difference is small*** due to more surfaces seen on the **Pan BWs**.

- 65.3% of the overlapped **Intra BW** surfaces were read for caries (0-4) by the **Pan BWs**

**Conclusions:**

- The **Pan BWs** opened contacts equal to the **Intra BWs**
- The surfaces not seen by **Intra BWs** were read for caries on the **Pan BWs**

# Conclusions

- These data are overwhelmingly positive for the **Pan BW** in:
  - Detecting bone loss
  - Detecting interproximal caries
  - The number of surfaces to diagnose