***Clinical Attachment Loss Classification Analysis***

Definitions:

Interproximal is defined as the sites that are adjacent to other teeth. So all sites that are not B, P, or L

Clinical Attachment Loss is defined as (per one tooth, per one site):

* CAL = Pocket + Recession

The classification of periodontitis disease per patient, per exam, is therefore defined as follows:

* Severe/High
  + If two teeth have at least one interproximal site such that CAL ≥ 6, AND
  + If one tooth has at least one interproximal site such that Pocket ≥ 5
* Moderate
  + If two teeth have at least one interproximal site such that CAL ≥ 4, OR
  + If two teeth have at least one interproximal site such that Pocket ≥ 5
* Low
  + (If two teeth have at least one interproximal site such that CAL ≥ 3, AND
  + If two teeth have at least one interproximal site such that Pocket ≥ 5) OR
  + If one site (anywhere) has Pocket ≥ 5.
* None
  + All other conditions

Note:

* There were 37060 exams from the dataset
* 1009 of these were omitted because there were 1009 patients who did not have a single examination
* This gives a total of 35997 exams

CAL Classification vs. Periodontal Disease Risk From Dataset

We compare the classification by the above system to the periodontal disease risk from the dataset.

![A green and red graph

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We compare the distribution of periodontal disease risk from the dataset against the cal classification.

* Note that “None” from the periodontal disease risk classification indicates that the datapoint was missing. This contrasts with “None” form the cal classification, which indicates that the patient did not have any form of periodontal risk disease.

![A graph of a number of classes

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* The “High to None” should say 14.3% but it is cut off.

Finally, we want to see the distribution of “how much” the CAL classifications differs from the dataset PDR classification. We apply this sort of “leveling” to the classifications”

* High = Level 4
* Moderate = Level 3
* Low = Level 2
* None = Level 1

![A blue bar graph with numbers and text

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