

Marginal Bone loss around Implants Placed in Grafted Sinuses Compared to Other Sites: A Cohort Study with Longitudinal Outcomes

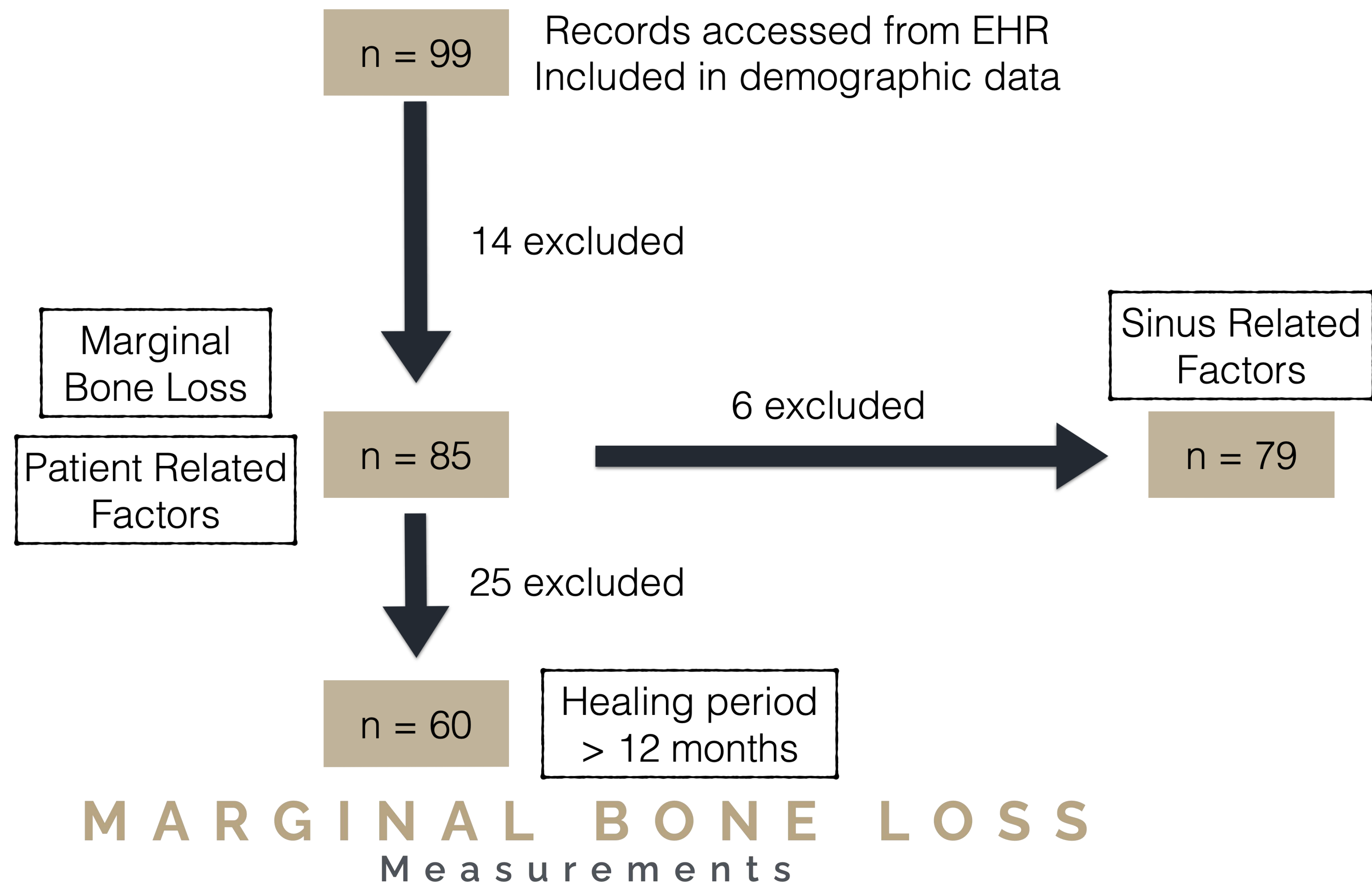
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HYPOTHESIS & AIMS

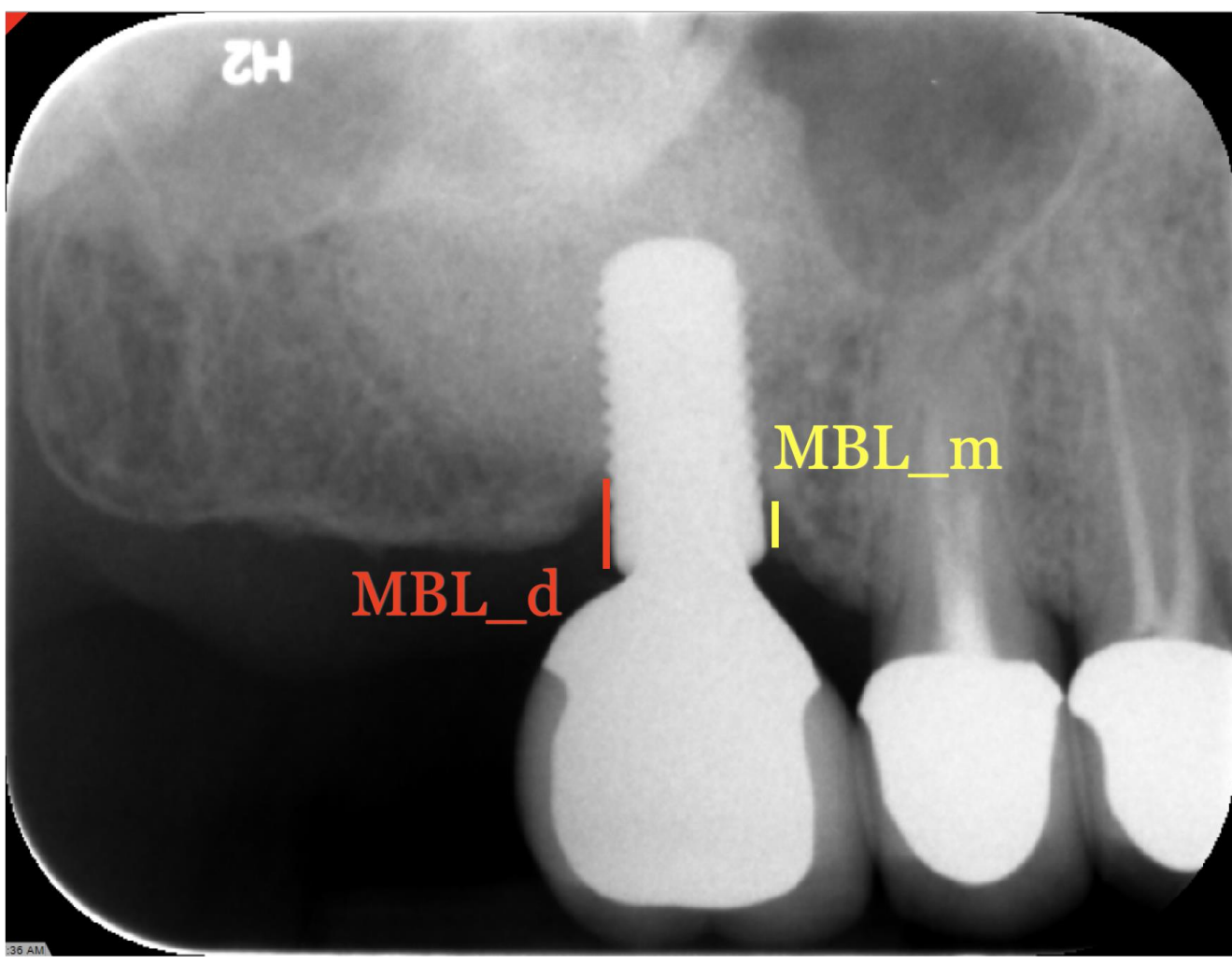
- AIMS:
- To investigate whether implants placed in Lateral Sinus Floor Elevation (LSFE) grafted sites have more bone loss compared to implants in other maxillary and mandibular sites in the same patient population
 - To investigate whether sinus membrane perforation (SMP) influenced marginal bone levels around implants in LSFE grafted sites

MATERIALS & METHODS

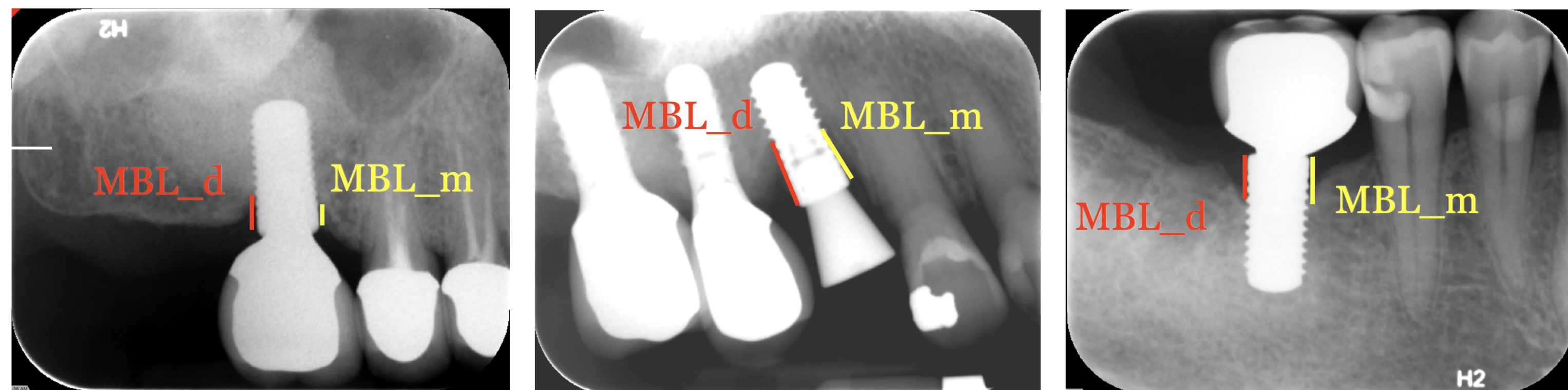


Marginal bone loss (MBL) was calculated from periapical radiographs by two calibrated examiners

- (MBL_m):** Mesial marginal bone loss
- (MBL_d):** Distal marginal bone loss
- Mean MBL** = a average of mesial + distal bone loss per implant



MARGINAL BONE LOSS & GROUPS



LSFE Grafted Sites

Other Maxillary Sites

Other Mandibular Sites

Group 1

142 implants
Sinus lifted sites

Group 2

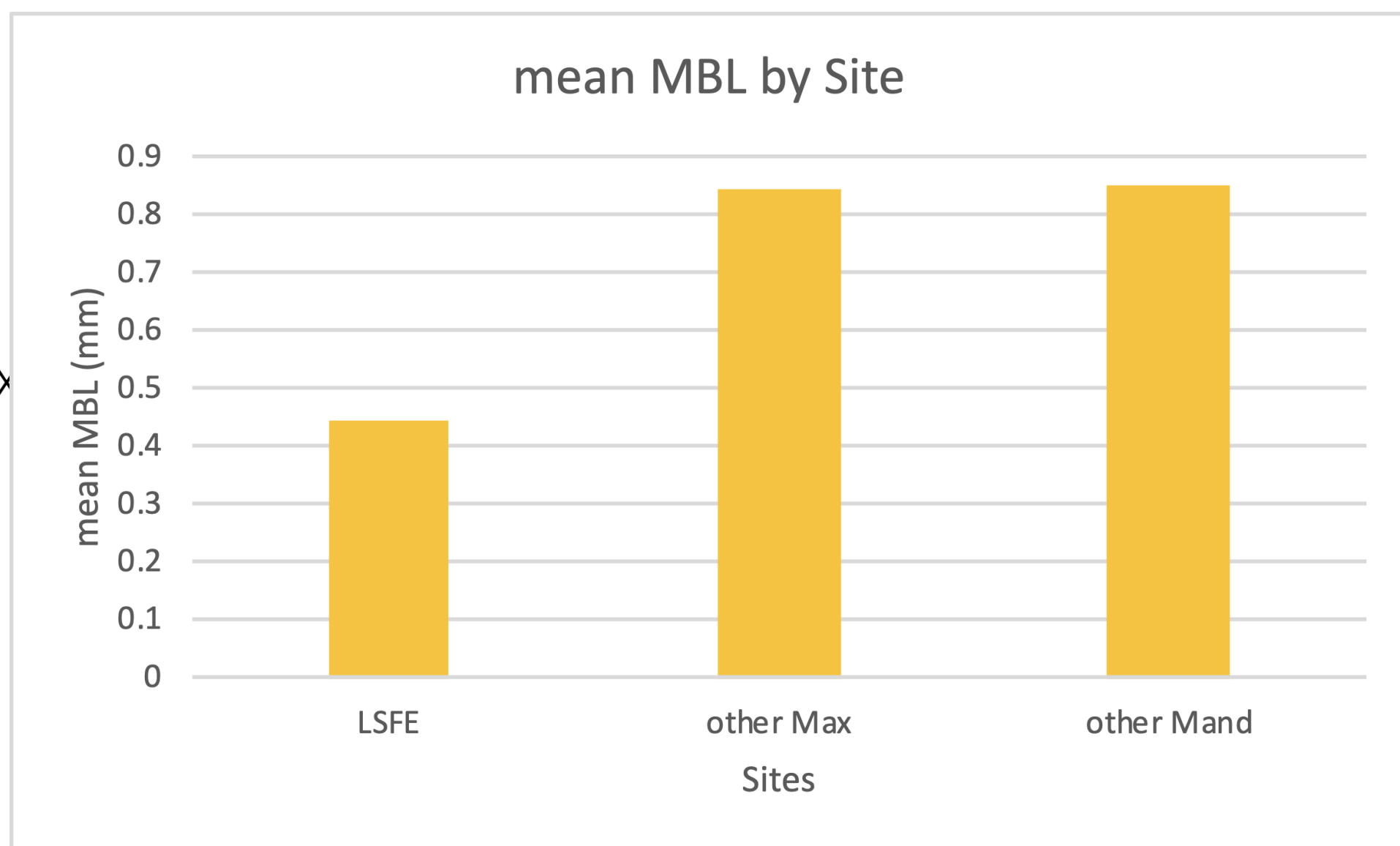
129 implants
Other maxillary sites

Group 3

147 implants
Other mandibular sites

RESULTS

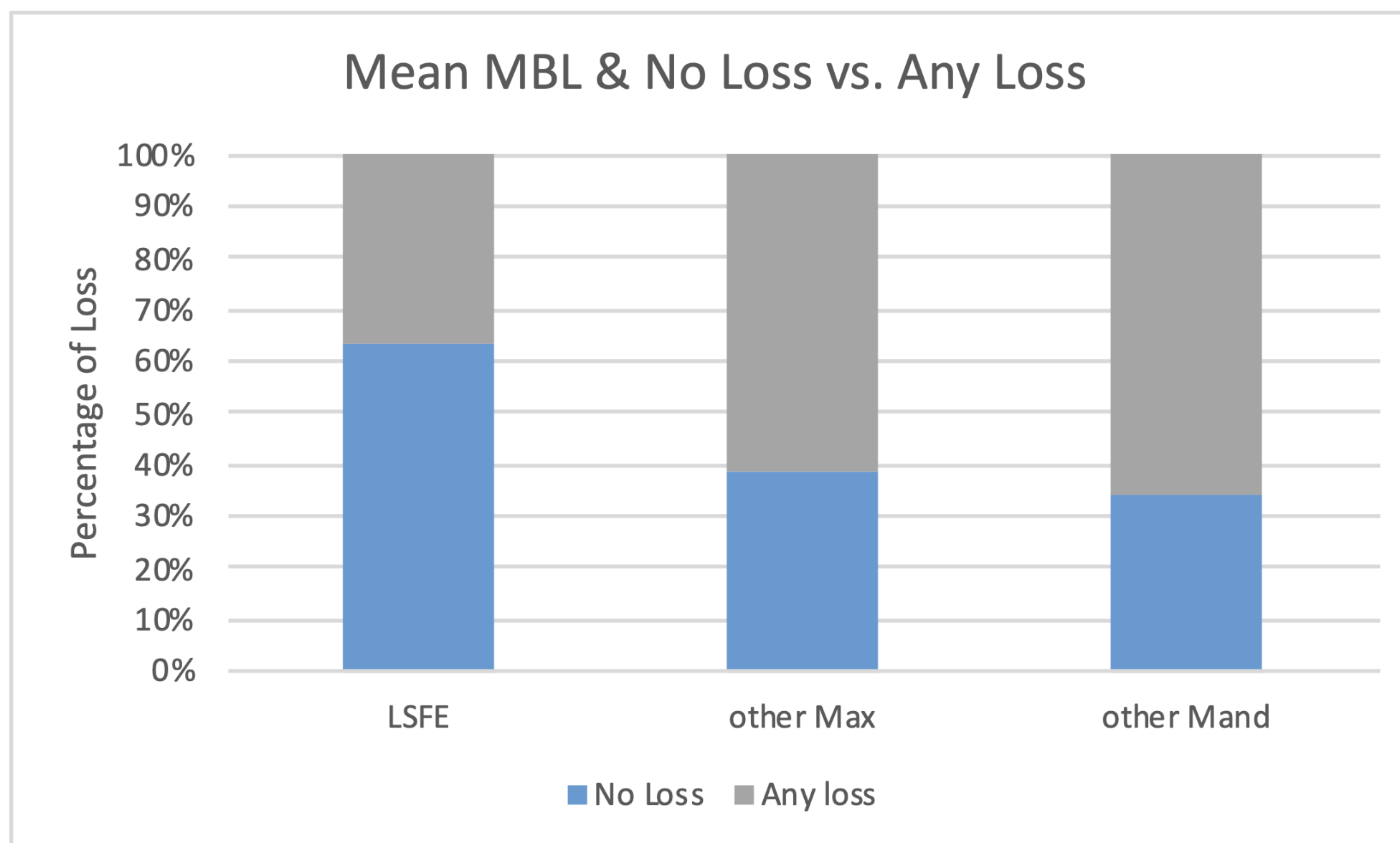
MARGINAL BONE LOSS MEAN per Site



Site	N	Mean	SD
LSFE	142	0.44	0.79
Other Maxillary	129	0.84	0.84
Other Mandibular	147	0.85	0.85

P-value = 0.006886106

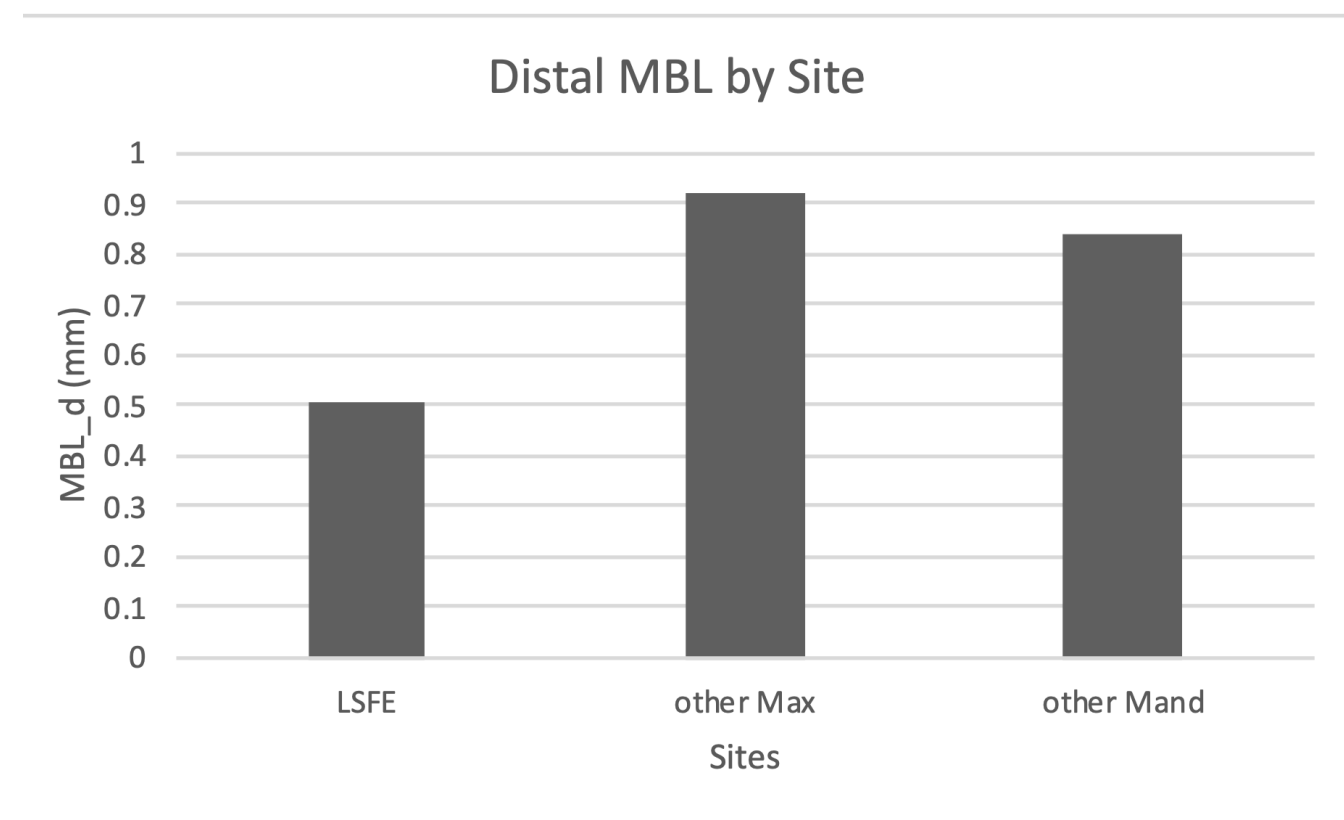
MEAN MBL and No Loss vs. Any Loss



SITE	No Loss	Any Loss
LSFE	86 68.56%	56 39.43%
Other Maxillary	50 38.76%	79 61.24%
Other Mandibular	50 34.01%	97 65.99%

P-value = 0.005512787

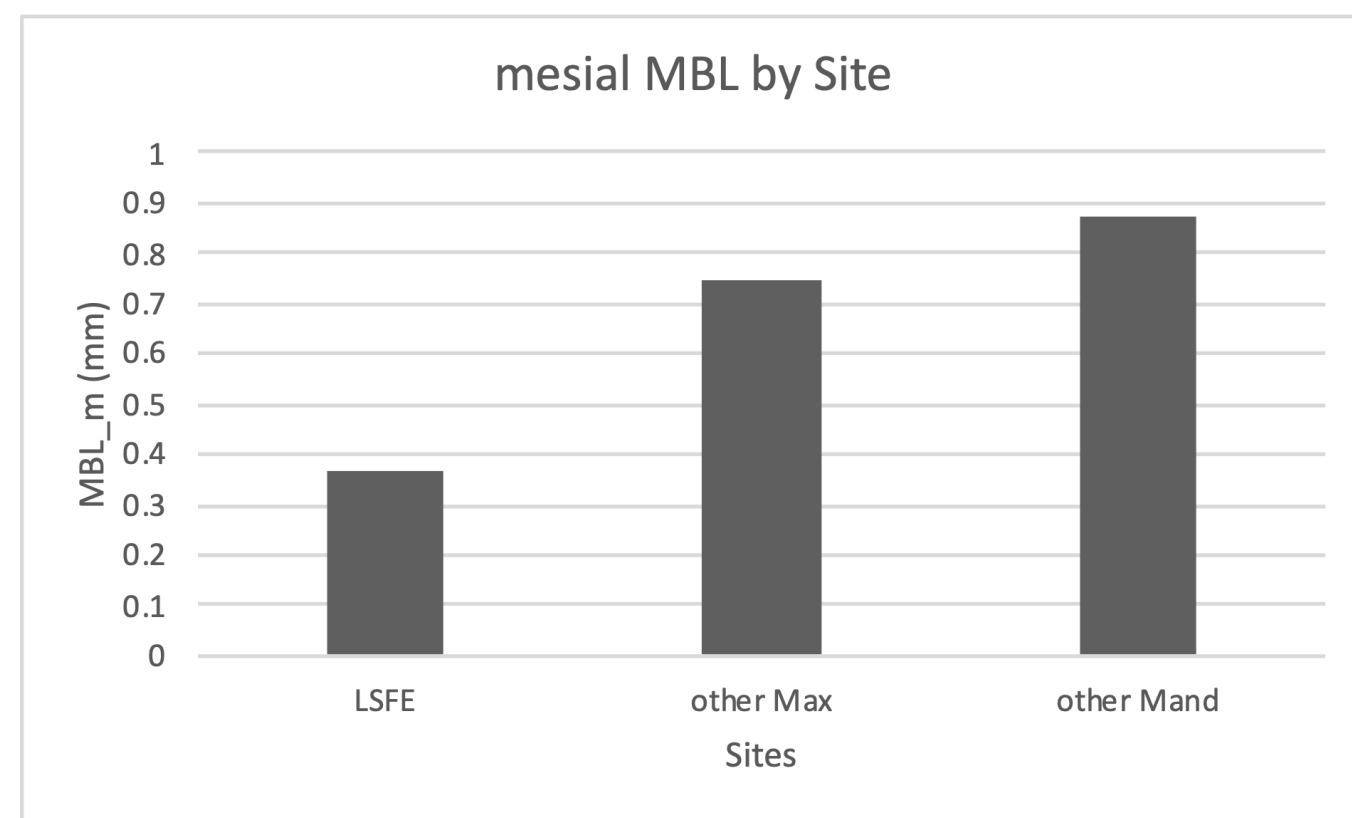
DISTAL MBL per Site



p-value = 0.0158059

Site	N	Mean	SD
LSFE	141	0.51	0.88
Other Maxillary	129	0.92	1.34
Other Mandibular	147	0.84	1.26

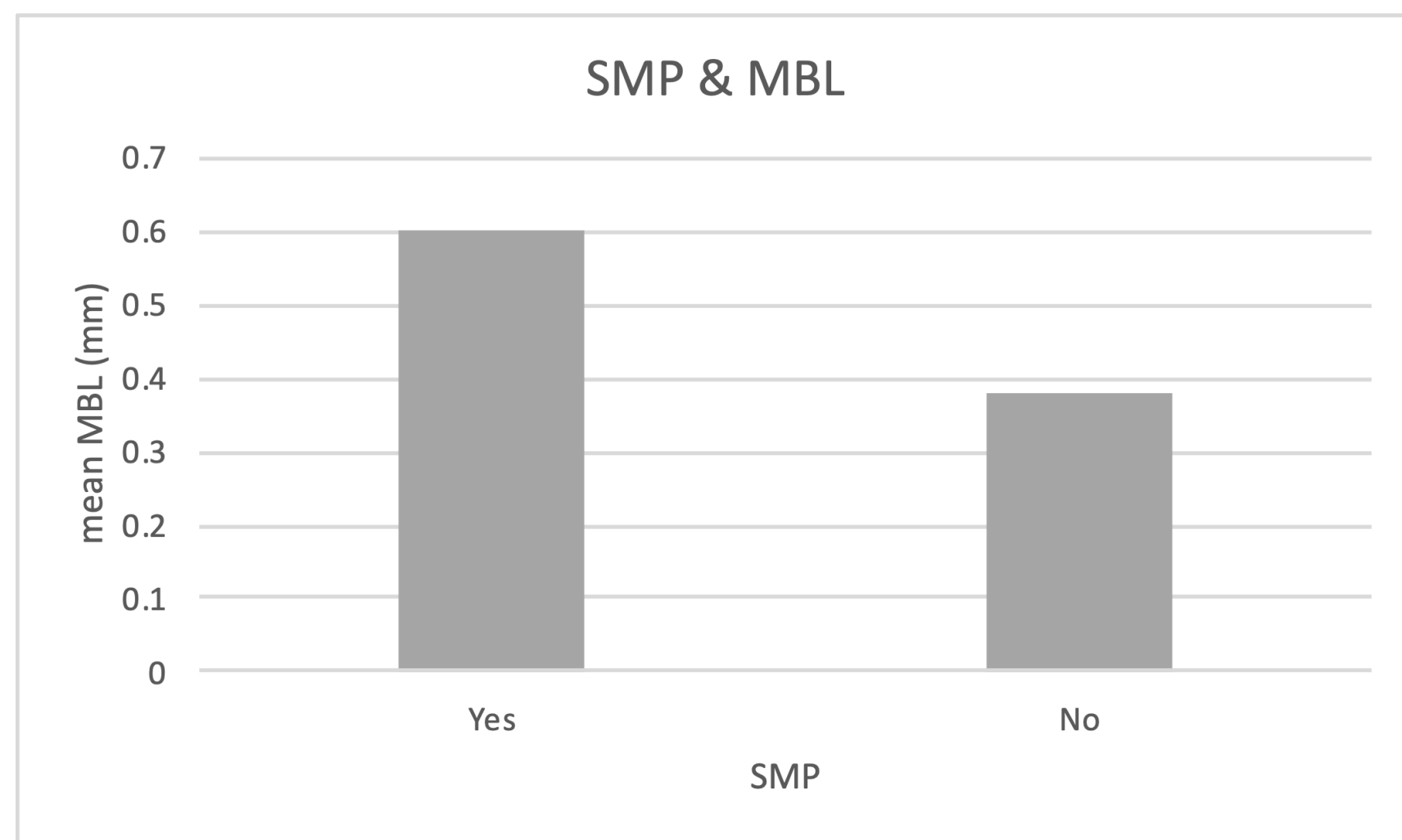
MESIAL MBL per Site



P-value = 0.01139007

Site	N	Mean	SD
LSFE	142	0.37	0.79
Other Maxillary	129	0.75	1.23
Other Mandibular	147	0.87	1.18

SINUS MEMBRANE PERFORATION (SMP) & MBL



SMP	N	Mean	SD
Yes	31	0.60	1.03
No	110	0.38	0.72

p-value = 0.5768291

CONCLUSION:

There is less radiographic marginal bone loss (MBL) in the LSFE grafted sites compared to other sites within the same patient population. The presence of SMP had NO association with implant marginal bone loss