There is a minimal cost difference in placing a regular implant or two narrow-diameter implants. However, using only one freestanding implant to support a fully functioning molar, a single implant may not achieve the crown root ratio of the original tooth, thereby preventing loosening. Regular sized dental implants ensure an adequate bone to implant contact. Furthermore, wider implants can be at risk of crestal bone loss, which can be an unpleasant complication.

Since teeth are a natural load-bearing structure, using more narrow-diameter implants can be beneficial. One way of countering the biomechanical challenges of wide defects is to replace a single molar with two freestanding implants. This can basically eliminate the mesiodistal bending and double the capacity in the buccolingual direction, and minimize stress on the implants. This can also represent an advantage in the short and long terms, as it will increase the surface area of the prosthesis, reducing the risk of loosening, especially in the long term. Since the tooth is a natural load-bearing structure, using two implants can also improve the prosthetic capacity, increase the surface area, and reduce screw loosening.

A treatment plan was outlined that included the placement of two narrow-diameter implants to replace a molar that had been lost due to periodontal disease. The patient was systemically healthy and his periodontal status was stable. Clinical examination and study model analysis of the edentulous site revealed a mesiodistal dimension of 5 mm at the mesiodistal midpoint of the edentulous space. However, a buccolingual dimension of 5 mm at the mesiodistal midpoint of the edentulous space was found to be a major challenge. The narrow-deficient ridge was not treated with bone grafting. Two narrow implants (2.5 mm diameter, single stage) were inserted into the crestal bone. Bone grafting was not necessary, and no complications occurred. The patient was not willing to undergo further surgical procedures for ridge augmentation. Two narrow implants (2.5 mm diameter, single stage) were inserted into the crestal bone. Hence, a treatment plan was outlined that included the placement of two narrow-diameter implants replacing a missing molar.

Brian (2011) presented a case report where the author used two smaller diameter implants to replace a single molar. The use of two implants to replace a single molar provides more surface area to compensate for the deficiency in the width of the implant. This can help in preventing loosening of the implants. The use of two narrow-diameter implants when possible, to obtain sufficient implant bone contact, is the approach that was taken in this case. The patient was monitored for clinical and radiographic evaluation of the implant site and postsurgery for up to 12 years. The placement of two narrow-diameter implants replacing a missing molar, whether endosseous or subperiosteal, can provide an ideal prosthetic framework.

The study concluded that the use of two narrow-diameter implants to replace a single molar provides biomechanical advantages in the short and long terms. The results also demonstrated that two narrow-diameter implants can be placed in narrow deficient ridges, thereby providing a stable prosthetic framework and preventing loosening.