

***Measurement of mandibular residual ridge height  
and width radiographically using parallel and  
cross-sectional techniques in presurgical  
planning for dental implant***

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By  
**Luay Bassim Simhiry**  
B.D.S

**Supervisor**  
**Prof.Dr. Adnan H. Al-Tikriti**

## **Summary**

Dental implant is the most recent solution for replacing missing teeth. A dental implant is simply a screw metal inserted into a hole made in the residual ridge at area of missing teeth. Its successes depend on the amount of bone available, in another word the longer and wider the implant the better the stability and prognosis of the implant

The residual ridge reduction considered as a major un solved oral disease which is of a multifactorial origin. In general, the rate of reduction of residual ridge varies between different individuals, and within the same individual in different sites. The rate is usually most rapid in the first six months to two years following the extraction of teeth. The present study was done to find the height and width of mandibular ridge at area of missing first permanent molar, by using a periapical film with paralleling technique and occlusal film with mandibular cross-sectional technique.

The study was carried out on 57 patients "26 males and 21 females". Each should be 20-25 years old, healthy and had lost lower first permanent molar 2-5 years ago without denture wearing.

For each patients, two x-ray films was taken "periapical and occlusal " by using paralleling and mandibular cross-sectional technique. By using statistical processing system, the data was analyzed.

The results revealed that no significant difference in the mean of total height of mandible, at area of missing first permanent molar, between males and females, (23.71 males, 23.14 females), also no significant difference in the mean of mandibular height, at the same area, from the crest of alveolar ridge to the upper border of mandibular canal, in both males and females, (15.09 males, 14.80 females). Where as a significant difference was found in the mean of mandibular width, at the same area, between males and females "males had wider mandible than female" also it was found that a paralleling technique and mandibular cross-sectional technique, are dependable in pre surgical planning for dental implant, since the image measurement almost equal to the object measurement