

Clinical accuracy in maxillo-mandibular reconstruction using fibula flap: virtual vs stereomodel
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There is no clinical study comparing the planning accuracy and long-term aesthetic outcome of maxillo-mandibular reconstruction using (i) virtual model, and (ii) stereolithographic model planning. The aim of this project is to (a) compare the accuracy of the use of virtual model and stereolithographic model in planning of fibula reconstruction. 22 patients presented with benign oral disease which requires segmental resection and immediate reconstruction will be included in this study. (1) CT scan of skull and fibula, and (2) 3D photo of patients' face will be taken as part of the diagnosis and surgical planning. Thereafter, patients will be randomly assigned into (1) virtual model planning group and (2) stereomodel planning group. The assessment parameters include: (a) the discrepancy of the fibula's dimension between the planned model and the actual situation, (b) intra-operative time of adjustment of fibula bone to the recipient site, (c) post-surgical skeletal together with (d) soft tissue changes, based on superimposition of pre-op and post-op CT and 3D photo.