

The invention relates to medicine, in particular to maxillofacial surgery and can be used for restoration of head and neck bone tissue defects.

Summary of the invention consists in that on the basis of computed tomography of the defect area and the contralateral side if the defect is unilateral for the virtual three-dimensional reconstruction of the osseous part and soft tissue surface is constructed a virtual geometric model corresponding to the affected area, where is determined the defect osteotomy or resection plane, at the same time in this plane is virtually simulated a surgical guide, which marks all the geometrical and topographical parameters for the passage of the instrument for performing the osteotomy on the basis of computed tomography of the donor area, is virtually planned the topography of location of a bone graft in the defect area or a metal element for reconstruction, configured before operation on stereolithographic models, for which is also planned a surgical guide relative to the topography of the recipient area, and for the locating fixtures are simulated surgical guides used for drilling holes with the same type of attachment to bone, afterwards on a 3D printer of biocompatible resin is printed a surgical guide used for osteotomy and surgical guides used for drilling holes, then during the surgical intervention is performed an incision in the required area, is mobilized the osseous part, are applied the surgical guides used for drilling holes with their execution, afterwards is applied the corresponding guide with the performance of osteotomy and is applied the bone graft or metal element, simulated according to the topography of the defect using the locating fixtures in accordance with the previously drilled holes, and the wound is sutured in layers.

Claims: 3