There was no significant difference in pain, swelling, stability, and gingival status between both direct and indirect sinus lift procedure.The choice of various surgical techniques should correlate with the indications, patient expectations about the treatment, predictability of the treatment choice, and clinician's experienceThe pos sibility of an effective preservation of vertical and horizontal crestal dimensions could decrease the necessity of advanced regenerative procedures prior to dental implant placement: further studies are necessary to confirm these findings and to better define the clinical magnitude of the effect.As research progresses and the regulatory landscape evolves, AI has the potential to revolutionize sinus lift procedures, offering a more predictable, efficient, and patient-centered approach to achieving successful dental implant outcomes.AI-powered software facilitates meticulous preoperative planning by generating detailed 3D models and enabling precise virtual implant placement.Within the limitations of this study, it could be suggested that ARP performed after maxillary molar extraction may reduce the entity of sinus pneumatization and alveolar bone resorption, compared to unassisted socket healing.The most commonly reported complication for both open and closed sinus lift ing procedures is the Schneider membrane perforation, with inci dence rates around 20%- 25% and 15% respectively.In order to minimize the occurrence of intrasurgical and postopera tive complications, it is highly recommended to carefully plan the case and examine the health status of the patient to detect any preexisting pathology .or condition that may lead to an increased risk for undesired events.However, challenges remain