specialty content had a more negative influence on their interest in plastic surgery in comparison to their specialty interests. Additionally, mentorship and mentor racial/ethnic concordance may have a limited influence on plastic surgery interest. This information can be applied to efforts to increase underrepresented minority interest in plastic surgery.

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3D Mesh Releasing by the Fractional CO2 Laser -- A Retrospective Analysis of Fractional CO₂ Treatment on Contracture Scars

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PURPOSE: Contracture scars located in the joint area often led to a limitation in the range of motion (ROM) of that specific joint and would cause inconvenience for the patient. Fractional CO2 treatment for scars demonstrated a growing clinical application in the past decade. However, the maximum efficacy of the modality for contracture scars has not been reported yet. The purpose of this article is to present the efficacy of this modality in terms of the improvement of ROM of the joint in question.

METHOD: A retrospective analysis was conducted on 10 cases of contracture scars treated by fractional CO2 laser from 2016.11 to 2018.1. The treatment was carried out every 2 months until the improvement has plateaued or the relevant joint has obtained its normal range of motion. All cases were followed-up for 6 months. The primary outcome measure was the improvement of the ROM before all intervention and at the last follow-up. In 6 cases, the immediate improvement of the ROM after the treatment as well as the ROM at the next follow-up were also recorded (the efficacy of one laser session).

RESULT: In the 10 cases, 11 joints were treated by the fractional CO2 laser. Patients in the series went through 2.27(SD 1.42) laser sessions. The average improvement of ROM until the last follow-up was 19.13°(SD 10.25, p<0.02) immediately after the laser intervention, and the average improvement reached 13.58°(SD 8.15, p<0.02) after 2–3 months at the next follow-up.

CONCLUSION: The fractional CO2 laser could improve the limited ROM in the joints affected by contracture scars and the effect maintained at least 6 months. This modality has the advantage of minimal-invasiveness and potentially could serve as a supplement to the current treatment ladder for contracture scars.

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Feasibility of a Virtual Assistant for Patients’ Frequently Asked Questions: An Unexplored Artificial Intelligence Application in Plastic Surgery

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PURPOSE: Virtual Assistants (VA) is a segment of Artificial Intelligence (AI) that is rapidly developing. However, its utilization to address patients’ frequently asked questions (FAQs) preoperatively remains unexplored. We hypothesize that a VA could address preoperative FAQs related to plastic surgery procedures. We developed a VA and assessed its accuracy and participants’ opinion regarding the answers and the technology.

METHODS: Using IBM Watson Assistant Platform, we developed a VA to answer 10 topics of plastic surgery patients’ FAQs. Between July and August of 2018, we recruited subjects with administrative positions at our health care institution to chat with the VA. They asked, with their own words, 1 question for each topic and filled out a satisfaction questionnaire. Post-survey analysis of questions and answers allowed assessment of the VA’s accuracy. Data collected was described in frequencies and percentages.

RESULTS: 30 participants completed the survey. The majority was female (70%), and the mean age was 27.76
years old (SD 8.68, 19 to 51 years old). The overall accuracy of the plastic surgery virtual assistant was 92.3% (277/294 questions), and participants considered the answer correct in 83.3% of the times (250/294 answers). Most of the participants considered the VA easy to use, answered adequately, and could be helpful for patients. However, when asked if it could replace a human assistant, they stayed neutral.

CONCLUSION: AI is predicted to save $300–450 billion annually in the American Health Care System, but the feasibility of VA to address patients’ FAQs was never been assessed before. This pilot study demonstrated that it is feasible, and that volunteers reported that the VA could be helpful for patients.

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Impact of Nipple-Sparing Mastectomy on Patient Reported Outcomes after Immediate Breast Reconstruction: A Multi-Institutional Study

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PURPOSE: Nipple-sparing mastectomy (NSM) with immediate implant-based breast reconstruction (IBBR) has increased in popularity due to its oncologic safety in many women and perceived superior aesthetic results, compared with skin-sparing mastectomy/IBBR. Despite the growing utilization of NSM, few studies have evaluated the impact of mastectomy type on patient-reported outcomes (PROs) and complications. The goals of this study were to compare PROs and complication rates for women undergoing immediate IBBR following either NSM or skin-sparing mastectomy with subsequent nipple reconstruction (SNR).

METHODS: The Mastectomy Reconstruction Outcomes Consortium (MROC) Study prospectively assessed PROs and complications in patients undergoing immediate IBBR at 11 centers in North America. Patients were recruited from 2012–2015. PROs (satisfaction, as well as physical, psychosocial and sexual well-being) and complications were evaluated two years postoperatively, using the BREAST-Q and medical records, respectively. Multivariable models were used to compare outcomes for NSM and SNR cohorts.

RESULTS: Of the 600 women analyzed, 286 (47.7%) underwent NSM. Controlling for clinical covariates and baseline scores, we found no significant cohort differences in satisfaction with breast, or in psychosocial, physical or sexual well-being. The largest adjusted mean difference was seen with satisfaction, where the SNR cohort scored 3.2 points higher than the NSM group (95% CL = -0.40, 6.77), a difference that was likely not clinically meaningful. Mastectomy type was not a significant predictor for major complications (p = 0.17) or reconstructive failure (p=0.84).

CONCLUSION: Mastectomy type (NSM vs. SNR) had no significant effects on PROs or complication rates in immediate IBBR. These findings can help patients and their providers in the mastectomy approach and reconstruction decision-making process.

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Clinical Factors Influencing Breast Reconstruction in Post Mastectomy Breast Cancer Patients

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PURPOSE: Post mastectomy breast reconstruction has been shown to positively affect subjective individual well-being. Despite this, little is known about the factors impacting the decision to undergo reconstruction. Additionally, information regarding reconstruction is commonly impacted by common misconceptions and anecdotal experience which can compromise optimal clinical care. The objectives of this study were to further investigate and characterize clinical factors that affect the odds for undergoing reconstruction after mastectomy as well as to develop a predictive model to identify factors contributory toward reconstruction.

METHODS: Consecutive female patients diagnosed with breast cancer, between 2000 and 2017 were identified in a single-institution database and enrolled in this retrospective study. Chi-squared testing was employed to examine differences across rates of reconstruction while controlling for