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Modern technologies and innovation in medicine

Admission

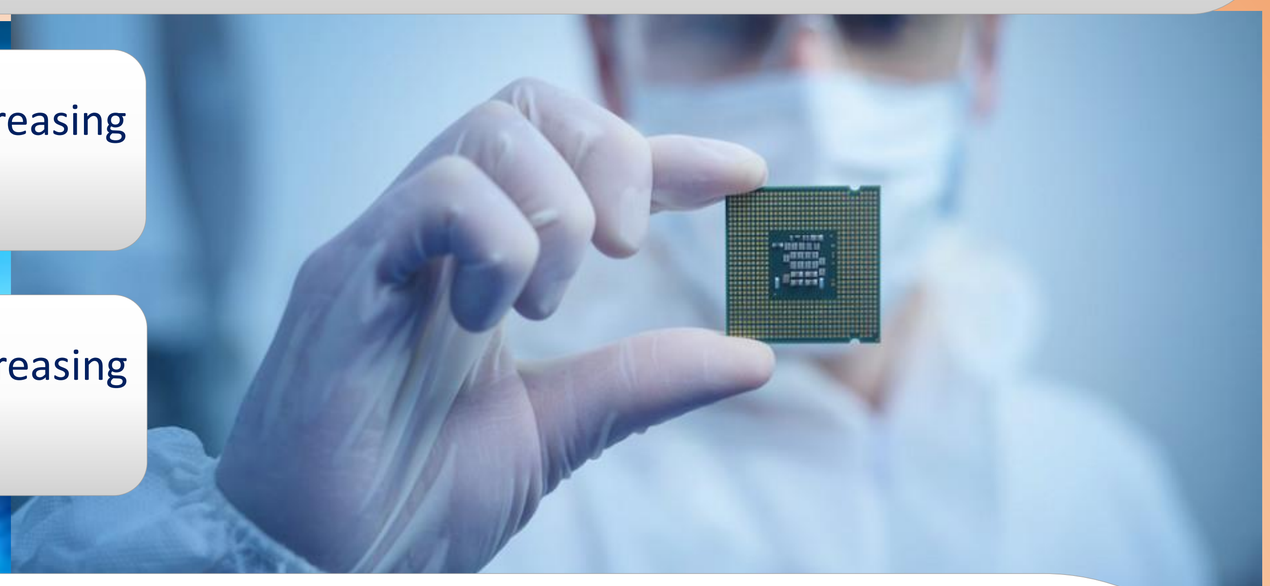
As AI specialists say today, artificial intelligence and machine learning used in medicine increase the chances of providing patients with effective treatment. Biotechnology is considered the future of medicine. Machine learning algorithms are able to analyze a large number of available input data in a short time, verify the possibilities and decide on the selection of measures and necessary actions. This gives AI a huge advantage over humans, although this is where questions and doubts of a legal and ethical nature begin to emerge.

Objective

Searching for answers to the question about the limits of the increasing use of biotechnology and AI in medicine.

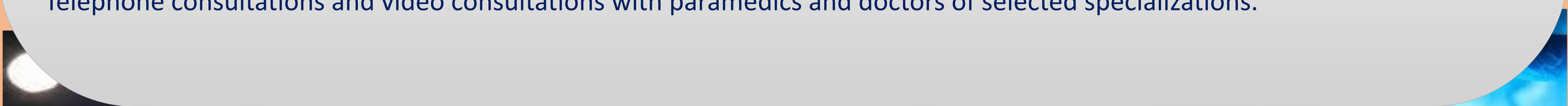
Material and methods

Searching for answers to the question about the limits of the increasing use of biotechnology and AI in medicine.



Results

Innovation in medicine is related, inter alia, to the use of information and communication technology, thanks to which the patient's treatment process and his recovery can be faster and more efficient. The use of technology in medicine may relate to computer-aided procedures, intraoperative navigation during teleoperation, and telemedicine (remote medicine) widely used today in the pandemic, e.g. in the form of Remote Medical Care. Thanks to this solution, it is possible to constantly monitor the health of patients and perform preventive and control examinations outside the hospital environment or primary health care facilities. Such a possibility is provided by the use of portable medical devices that record certain vital parameters. The test results are sent to the Remote Medical Care Center, where they are automatically analyzed. If any irregularities are detected, the medical staff contacts the patient, and in the event of a threat to life or health, they call an ambulance. One of the companies on the Polish biotechnology market offering this type of solution is, among others the Comarch group working with the support of the Comarch e-Care platform, thus ensuring professional, high-quality care. What distinguishes Comarch and their platform? First of all, they are: Access to the application and the history of patient parameter measurement results from anywhere via a web-based browser; Interfaces for the ambulance service; Visualization of patient locations on maps; Supporting charges in their daily activities, implementing schedules with the use of recommendations and questionnaires; Integration of telemedicine equipment; Integration with HIS and EDM class systems; Implementation of learning algorithms for data analysis; Alerts in the event of a call for help or measurements exceeding individually set thresholds; Graphical representation of data; A 24-hour center located on the premises of the iMed24 medical facility; Monitoring of the health of patients only by qualified medical personnel: rescuers and specialist doctors; Continuous collection and analysis of medical data sent from devices with which patients are equipped - 24/7/365 care; Ensuring the implementation of medical routines during the intervention; Telephone consultations and video consultations with paramedics and doctors of selected specializations.



Summary

Online visits accounted for more than 8 out of 10 contacts with primary care clinics during the pandemic. As a result, as many as 87 percent of Poles positively evaluate the facilities offered by telemedicine. In the United States, more than half of the hospitals there already have systems that allow remote health checks. Thanks to this, it is possible to optimize the activities of medical services: intervene faster in emergency situations, reduce overcrowding in hospitals, and even take care of a patient in need of help from a distance. However, the foundation of technology development in medicine, apart from the implementation of properly constructed digital innovations, is trust. Concerns about safety may prove to be a significant barrier to the development of telemedicine.

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