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STRIVING FOR LIFE: DEVELOPMENT OF TRANSPLANTATION
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The study focuses on recent advances in the development of transplantation.

An increasing number of diseases and patients are now potentially treatable with transplants. The developmental stability of transplantation is an indicator of progress in the country. The development of transplantation is directly connected with new medical technologies which are widely used in other fields of practical medicine. That is why the progress in these spheres eventually proves to be beneficial for the population. Transplantation has evolved to become the treatment of choice for end-stage organ failure resulting from almost any of a wide variety of causes.

We studied the digest of the world recent Congress of transplantologists and resolution of the UN General Assembly. Besides, we analyzed World's transplantation statistics, which are tracked by the United Network for Organ Sharing (UNOS). UNOS administers the country's Organ Procurement and Transplantation Network, which includes the organ transplant waiting list. The number of transplants performed yearly has increased over the last decade, but has not kept pace with the steadily growing waiting list. Therefore, the gap is ever widening between the number of transplants performed and the number of waiting patients. In 2015, over 25,000 people received organs in the U.S., according to UNOS. To date, most donor organs have been obtained from deceased donors.

Organ transplants include kidney, pancreas, liver, heart, islet cells, lung, and intestine. Vascularized composite allografts (VCAs) are now possible, including face and hand transplantation. Sometimes, "double" transplants are done, such as kidney/pancreas or heart/lung.

The achievements in the field of transplantation are mainly due to refinements of surgical technique and development of effective immunosuppression medications. Immunosuppressive therapy has played an essential role in the success of clinical transplants, because suppression of the immune system decreases the risk of rejection. Increased understanding of transplants immunobiology enabled the scientists to overcome the obstacle of rejection, thus making clinical transplants possible. However, transplant recipients are predisposed to a wide variety of complications, including infections and malignancies which can lead to significant morbidity and mortality.

It is well known that Belarusian National Science Center for Organ Transplantation in Minsk has made significant advances in this sphere. Today our specialists provide active assistance in developing organ transplantation practices to the neighboring countries. The transplantations of bone marrow, kidney, heart and liver are performed in our country. Many patients also undergo successful tissue transplantations.

The National Center for Organ and Tissue Transplantation has performed more than one hundred heterotopic renal transplantations and more than 70 orthotopic liver transplantations since 2010, mortality is less than 0.7% (only one patient died). Our country ranks first among the CIS member states in the number of transplantations performed per one million of inhabitants. To date over three thousand transplantations have been successfully carried out in Belarus.