МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
СУМСЬКИЙ ДЕРЖАВНИЙ УНІВЕРСИТЕТ
КАФЕДРА ІНОЗЕМНИХ МОВ
ЛІНГВІСТИЧНИЙ НАВЧАЛЬНО-МЕТОДИЧНИЙ ЦЕНТР

МАТЕРІАЛИ

VIII МІЖВУЗІВСЬКОЇ НАУКОВО-ПРАКТИЧНОЇ

КОНФЕРЕНЦІЇ

ЛІНГВІСТИЧНОГО НАВЧАЛЬНО-МЕТОДИЧНОГО ЦЕНТРУ

КАФЕДРИ ІНОЗЕМНИХ МОВ

"TO LIVE IN A SAFER WORLD"

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The eighth scientific practical student`s, postgraduate's and teacher's

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ROBOTS IN MEDICINE

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Robot is a machine with a human-like behavior which partially or completely fulfills human function when interacting with the surrounding world. Robots are divided into three types: robots with the specific program of actions, operator-controlled robots and artificial intelligence robots.

No doubt, that the development of new technologies had a great impact on medicine. At present, doctors can perform operations, which seemed impossible ten years ago. Robots have become indispensable medical assistants.

The branch of medicine which needs smart machines most of all is surgery. Robots were first used for carrying out operations as early as in the late 1980s. The most common robot controlled by the operator during a surgery is a da Vinci robot (da Vinci Surgical System). Nowadays there are thousands of such robots around the world.

Let us consider the general view and components of surgery robots using a da Vinci robot as an example. It has three components: control panel with a screen, external screen, surgery console with four working manipulators. All the operations and movements of the machine are directed by an experienced surgeon.

Robot-assisted surgery has many advantages as compared to common operative treatment:

- Great degree of surgical accuracy
- Significant reduction in wound infection
- Reduced need for blood transfusion
- Short postoperative period
- Minimal risk of complications
- Absence of large postoperative scars
- Good visualization and range of movements.

Robot-assisted surgery has enormous prospects of its development and improvement. Many scientists are working on it and improving robots year by year.