Medical devices

Development of a robot arm for bone processing

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Project Outline

Hole drilling, drilling, and resection of bones are basic techniques, but there is a risk of damage to surrounding tissue (nerves and blood vessels) due to hand tremors, etc. In recent years, robot technology has begun to be recognized as having advantages over conventional manual work. With the global spread of robot surgery and the expansion of insurance coverage, demand for surgical support robots is expected to increase.





A robot under development

In this research, we are developing an AI-controlled robot that automates the processing of bones, based on an industrial robot.

[Effectiveness] Rapid, simple, safe bone resection

[Principle] By analyzing force sensor information using a time series model, we have constructed an AI model that can predict the timing of completion of processing.

Target : lumbar spinal canal stenosis, cervical myelopathy, osteoarthritis, limb fractures Patent information: Domestic application filed

Technical features: Al-based integrated processing of information from various sensors Desired type of corporate collaboration: collaboration with companies that have obtained Type 1 manufacturing and sales licenses