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## Experimental Modeling Of Children Knee Bones Growing Zones Damage

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**Goal:** Growth numbers of children with primary bone tumors in Ukraine and high cost of expandable prosthesis force us to look for new ways for children limb salvage surgeries. Experimental research on growing animals was done for possible planning of modular tumor replacement of the children growing knee. This is study of influence damage of bone growing zones at growing rats having simulated clinical situation with knee prosthetic replacement.

**Methods:** We have used white rats-males 3 month old selected for 7 serial groups on 5 animals. Endoprosthesis of distal hip and proximal tibia have been custom made for rats especially. Surgeries for bone defects replacement with endoprosthesis and without were performed for distal femur, proximal tibia and both segments at the same time. Postoperative observation till the moment euthanasia was spent with use clinical, osteometry and radiological methods.

**Results:** It had been observed some general tendencies for animals. At carrying out radiologic and osteometry tests it is reporting the animals that have one segment surgery have had an interfacing segment longer than similar to not operated extremity.

**Conclusions:** Experimental by we have proved possibility endoprosthesis replacement children with bone tumors of the knee. The knee unipolar endoprostheses are the method of selection for bone defects replacement at children who is growing, like a method of temporary replacement until the growth process will completed.