LNPI SYNCHROCYCLOTRON PROTON BEAMS IN STEREOTACTIC RADIOSURGERY PRACTICE

N. K. Abrosimov, S. L. Belostotsky, E. M. Ivanov, Ya. A. Kasman, V. I. Lazarev, Yu. A. Malov, G. A. Ryabov, D. M. Seliverstov, A. A. Vorobyov

T. M. Gorshcova *, D. L. Karlin *, B. A. Konnov *, N. A. Lebedeva *, L. A. Melnikov *, M. V. Pushkareva*, I. Ya. Senitchev*, B. L. Vinogradov *, N. N. Yalinitch *, O. P. Zargarova *, M. V. Zhidkov *, O. M. Zhidkova *

* Central Research Roentgenoradiological Institute of the USSR Ministry of Public Health, Leningrad, USSR

In 1989 we started fractionated irradiation of patients using the 1 GeV proton beam of the LNPI synchrocyclotron as described in ref /1/. For a group of six patients the radiation dose was distributed equally between three runs with two day intervals. From after treatment observations one can conclude that these exposed patients endured fractionated irradiation better than those exposed to a one run irradiation with the same total dose. Our clinical results of fractionated irradiation will be reported later.

During 1989 our irradiation routine and treatment facilities were perfected. The beam monitoring systems have been improved and computer control has been developed. An important radio-biological effect of instantaneous dose power has been investigated.

In 1989 60 patients have been treated as indicated in the following table.

Table

LNPI proton therapy in 1989

Cancer of the breast	Oftalmopathy	Pictuitary adenomas	Arterio-venous malformations
3	2	34	21

REFERENCE

1. *Abrosimov N. K. et al.* Vestnic AN SSSR.. 1985. No 5.