

# ONCODAILY MEDICAL JOURNAL

*abstract*

## **Liver transplantation in children with hepatoblastoma and initial pulmonary metastases**

**Andrey Filin, Alexey Metelin, Denis Kachanov,  
Roman Moiseenko, Marina Rubanskaya, Garik  
Sagoyan, Polad Kerimov**

[doi.org/10.69690/ODMJ-018-0425-1957](https://doi.org/10.69690/ODMJ-018-0425-1957)



**SIOP ASIA 2025  
SAUDI ARABIA**

# ONCODAILY MEDICAL JOURNAL

SIOP ASIA 2025 SAUDI ARABIA

## **Liver transplantation in children with hepatoblastoma and initial pulmonary metastases**

**Author:** *Andrey Filin<sup>1</sup>, Alexey Metelin, Denis Kachanov, Roman Moiseenko, Marina Rubanskaya, Garik Sagoyan, Polad Kerimov*

**Affiliation:** <sup>1</sup> *Petrovsky National Research Centre of Surgery*

**DOI:** <https://doi.org/10.69690/ODMJ-018-0425-1957>

**Introduction:** Hepatoblastoma (HB), as the most common primary malignant liver tumor in children, demonstrates the presence of initial pulmonary metastases with frequency of up to 20% at time of primary diagnosis. Complete eradication of synchronous pulmonary metastases (SPM) is a prerequisite for liver transplantation and may require staged metastasectomies during neoadjuvant chemotherapy (NACT).

**Methodology:** From 2008 to 2024, 152 children with HB underwent surgical treatment in the Liver Transplant Department of Petrovsky National Research Centre of Surgery. The SPM were diagnosed in 29 (19%) of 152 patients. Living-related liver transplantation (LRLT) was performed in thirty-six patients, 14 (39 %) of whom had the pulmonary metastases at the time of diagnosis. Regression of metastases during NACT was achieved in 6 (43%) cases. In 8 (57%) patients with widespread lesions of both lungs, metastasectomies were performed during NACT.

**Results:** At the time of publication, 28 (77.8%) of 36 patients after LRLT are alive, including 9 (64%) of 14 patients with SLM. Relapses of HB after LRLT were observed in 9 patients (64%) with SLM within first year after surgery. In 5 patients with relapses, rapid progression was noted in the conditions of tumor chemoresistance, which led to fatal outcomes. Four patients underwent successful metastasectomies in combination with chemotherapy. All of these patients are alive at 53, 56, 116 and 120 months after LRLT.

**Conclusion:** Liver transplantation in patients with advanced HB and SLM demonstrates good long-term outcomes. Improving the results of complex treatment in this group of patients can be achieved through timely interaction between pediatric oncologists, pediatric surgeons and transplantologists.