

Monitoring Clinical Liver Transplantation Grafts Using Fluorescence Spectroscopy: Evaluation of 408 nm Excitation

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Objective: This research explores the potential of fluorescence spectroscopy techniques to minimize the invasiveness of tissue examination methods. In the context of transplantation, these techniques could serve as an adjunctive approach for monitoring liver graft conditions before and during cold perfusion stages. This study aims to assess fluorescence spectroscopy under violet light excitation (408 nm) for monitoring clinical hypothermic liver transplantation procedures. **Methodology:** The study involved monitoring organ grafts from pre-donor body removal to 1 hour post-implantation into the recipient's body. Fluorescence spectroscopy was evaluated at five stages during these transplantation phases. **Results:** The study established a correlation between fluorescence data collected during liver graft transplantation and patient survival outcomes. **Conclusion:** Fluorescence spectroscopy emerges as a prospective tool for graft monitoring in transplantation, offering factual insights to guide surgeons in organ utilization decisions.

Acknowledgements: This research was sponsored by Fundação de Amparo à Pesquisa do Estado de São Paulo (Centro de Pesquisa, Inovação e Difusão/Centro de Pesquisas em Óptica e Fotônica) [<https://doi.org/10.13039/501100001807>; Grants No. 2013/07276-1 and No. 98/14270-8]; Conselho Nacional de Desenvolvimento Científico e Tecnológico (Instituto Nacional de Ciência e Tecnologia/Instituto Nacional de Óptica e Fotônica) [<https://doi.org/10.13039/501100003593>; Grant No. 573587/2008-6]. **Keywords:** Fluorescence, Spectroscopy, Liver, Transplantation, Cold Perfusion.