Quantitative Analysis of the Vascular Effects of Tumor Treatments

The goal of this project is to provide clinicians with a tool for visualizing and quantifying vascular changes. The short-term clinical benefit will come from the use of this tool for assessing the effectiveness of radiation and embolization treatments for arteriovenous malformations and other brain tumors. Improved assessment will enable patient and population-specific tuning of treatment protocols. The long-term clinical benefits will arise when this tool is enhanced to enable the tracking of large-scale vascular and organ-shape changes that are associated with open-surgery. Such additional tracking capabilities will enable clinicians to match tumor treatment margins between pre and post-operative images and even align pre-operative CT images of partial-liver donors with post-operative donor and recipient CT images. Such alignment will enable the quantification of donor and recipient liver regeneration.

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This project is being lead by Drs. Stephen Aylward, Elizabeth Bullitt, and Sue Weeks. Significant contributions are being made by the research assistants: Jisung Kim, Andrew Mackelfresh, Julien Jomier, and Jean-Philippe Guyon.

For more information, please see the CADDLab web pages at

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