Aim & Scope:

Cancer is one of the leading causes of death around the world. It is estimated that there were about 13 million cancer cases and > 7 million cancer deaths each year globally. With the development of new anti-cancer drugs with better efficacy and fewer side effects, accurate and efficient delivery of these agents to the tumor sites in cancer patients is of utmost importance. For successful delivery of anti-cancer drugs, many aspects have to be optimized simultaneously including encapsulation, targeting, delivery, and controlled release.

Image-guided drug delivery (IGDD) is a therapeutic method where tumor localization and drug delivery are guided and monitored through non-invasive imaging. The goal in IGDD is to optimize specific delivery of the therapeutic agents to the target tissue and provide anatomical and functional imaging feedback of the therapeutic processes. Quantitative imaging is an invaluable tool for target characterization (e.g. detection, localization, and pathology), as well as investigation of the pharmacokinetics (PK) and pharmacodynamics (PD) of therapeutic uptake and efficacy across different spatial and functional resolution scales.

Keywords:

Cancer; drug delivery; imaging; nanomedicine; positron emission tomography (PET); regenerative medicine

Subtopics:

- Image-guided delivery of small molecule drugs
- Image-guided delivery of siRNA/miRNA
- Image-guided delivery of therapeutic cells
- Image-guided drug delivery with positron emission tomography
- Image-guided drug delivery with ultrasound
- Image-guided drug delivery with magnetic resonance imaging
- Image-guided delivery of nanomedicine
- Image-guided drug delivery in cardiovascular diseases

Schedule:

- Manuscript submission deadline: October 2014
- Peer Review Due: December 2014
- Revision Due: February 2015
- Notification of acceptance by the Guest Editor: March 2015
- Final manuscripts due: April 2015