



## Pathology/Biology Section - 2014

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### **G123 The Technical Working Group Postmortem Angiography Methods (TWGPAM): An International Collaboration for Research and Training**

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After attending this presentation, attendees will be familiar with the the Technical Working Group Postmortem Angiography Methods (TWGPAM), an international working group created in February 2012 in Lausanne, Switzerland. Attendees will know its structure, the aims of the group, and its ongoing projects.

This presentation will impact the forensic science community by providing information about the TWGPAM, a recently developed research group that is very active in performing multi-center research, organizing workshops, and providing mutual assistance for centers starting to implement CT-angiography. This presentation gives an overview allowing attendees to obtain information about the possibilities offered by the group.

Postmortem Computed Tomography- (CT) angiography (pmCTA) is an exam that seeks to increase the sensitivity of postmortem investigations by providing useful information about the vascular system and its lesions. Although research conducted currently proves that this goal can be achieved, most applied methods have remained experimental for the moment, and centers using pmCTA as a routine exam are few. In order to become a technique that is accepted in the forensic scientific community and in jurisprudence as a proof in court, standardized and validated methods are necessary. To optimize the workflow and integrate the exam into daily routine in a medicolegal center, adequate equipment and formation of staff is necessary. To satisfy these needs and to further develop and validate techniques of pmCTA, an international working group called TWGPAM was created in 2012. Today, it consists of nine participating centers situated in six European countries: Switzerland (University of Lausanne and University of Basel); Germany (University of Hamburg, University of Munich and University of Leipzig); England (University of Leicester); Italy (University of Foggia); Poland (University of Krakow); and France (University of Toulouse). Each center provides a team consisting of forensic pathologists, radiologists, and radiographers. The teams meet regularly three times a year for meetings to exchange experiences and discuss ongoing studies and future strategies. Between these meetings, the different teams exchange data with each other and report cases on a secured homepage, generating a growing common database and allowing a constant exchange of the increasing knowledge between members.

As a first research goal, the TWGPAM group has started a multi-center study in order to validate the technique of Multi-phase Postmortem CT-Angiography (MPMCTA). In the context of this study, each center expected to investigate about 50 cases using the standardized protocol of this method and standardized equipment. The idea of this study is to definitely identify advantages and limitations of the method and to define indications for its application. Once this first multi-center study is finished, further studies are planned allowing the validation of other techniques as well as the development of new protocols for performing pmCTA.

Besides performing different studies, one primary goal of the TWGPAM is the dispersion of knowledge. Therefore, the TWGPAM members are organizing workshops at international meetings and a pmCTA workshop will be held once a year. The next challenge for the team is the editing of an "Atlas for Postmortem Angiography" which should help physicians all over the world start their own pmCTA exams and will provide guidelines for the interpretation of radiological images.

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#### **Postmortem CT, Postmortem Angiography, Forensic Imaging**