



### Recent Publications

#### **Scan-Rescan Variability in Perfusion Assessment of Tumors in MRI Using Both Model and Data-Derived Arterial Input Functions.**

By Edward Ashton, PhD, David Raunig, PhD, Chuan Ng, MD, Fredrick Kelcz, MD, Theresa McShane, DVM, PhD, and Jeffrey Evelhoch, PhD  
Journal of Magnetic Resonance Imaging, (JMRI) Volume 28, Number 3, September 2008

**IBC's 13th Annual World Congress**  
Speaker: Mark Tengowski DVM, MS, PhD – VirtualScopics Director, Clinical Affairs **"Imaging in a Multi-Center Trial"** Drug Discovery & Development of Innovative Therapeutics (DDT)  
August 4-7, 2008  
World Trade Center & Seaport Hotel

## Ask Ed: Oncology Trials: What's the value of tumor volume and density?



**Ed Ashton, PhD**  
Chief Scientific Officer  
VirtualScopics, Inc.

Recent literature and study findings suggest that tumor volume measurements provide a more sensitive assessment of tumor burden and response to therapy than RECIST. Because tumor volume can be assessed with roughly the same variability as tumor diameter, and as volume changes more or less with the cube of the diameter, the signal to noise ratio (SNR) for volume measurement is significantly higher than that of single diameter measurements.

This information is particularly important for the development of new agents which may cause long term disease stabilization or a slow reduction in tumor burden. Patients being treated with these agents may not show response based on RECIST criteria despite having a positive biological response to the drug. Additionally, it

has been suggested recently that certain cancer types (GIST being a prominent example) may show large reductions in tumor density during successful therapy without showing large reductions in tumor size. It may therefore be wise to evaluate density in certain indications, as well as in studies of anti-vascular or anti-angiogenic drugs, which may also affect tumor density more quickly than tumor size. As a result, it may be prudent to evaluate response with a combination of 2D and 3D tumor size assessments, along with tumor density to ensure the most complete analytical data and required regulatory information.

### Upcoming Events

**OARSI—2008 World Congress on Osteoarthritis**  
September 18-21, 2008  
Rome Marriott Park Hotel, Rome, Italy  
[www.oarsi.org](http://www.oarsi.org)

**DIA Medical Imaging 2008 Conference**  
Medical Imaging Continuum: Path Forward for Advancing the Uses of Medical Imaging in the Development of New Biopharmaceutical Products  
October 2-3, 2008  
Marriott Bethesda Pooks Hill, Bethesda, MD  
[www.diahome.org](http://www.diahome.org)

**Phacilitate Oncology Leaders' Forum 2008**  
October 28-30, 2008  
The Hilton La Jolla Torrey Pines, San Diego, CA  
[www.phacilitate.co.uk](http://www.phacilitate.co.uk)

### Tumor volume to be discussed at the upcoming DIA Medical Imaging Conference

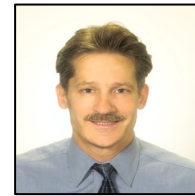
#### **Tumor Volume, Density, RECIST and WHO for the Same Price as Standard RECIST Reads**

VirtualScopics now provides volumetric and structural measurements, including tumor radio density together with modified RECIST measurements for the same price as standard RECIST reads—this completes the package of 2D and 3D tumor size assessment and density measurement .

VirtualScopics' new comprehensive offering reflects our commitment to acquiring high quality data and providing valuable information to our sponsors in order for them to make better and earlier decisions about compounds in development.

*Know more. Move faster.*

### VirtualScopics to participate in the DIA Medical Imaging Conference, Oct 2-3, 2008.



**P. David Mozley, M.D.**  
Senior Director, Imaging  
Merck Research Laboratories

*"It's a privilege for me to chair this meeting. My hope is this conference will align the different players in the field: Pharma, FDA and Imaging Core Labs, so that imaging can have a more significant impact on advancing drug development. Considering the current speed of getting new treatments to market, I can't imagine a more critical initiative than this one."*

For more information on **VirtualScopics** technology or services, please contact Rosemary Shull, Vice President of Business Development at 585-249-6231 x206 or [rosemary\\_shull@virtualscopics.com](mailto:rosemary_shull@virtualscopics.com)