

Quantitative Imaging in Medicine and Surgery: progress & perspective

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Modern imaging techniques can be employed to collect both quantitative anatomic information and in vivo metabolic or functional information. Quantitative imaging methods that have been proven to correlate with clinical outcomes can play an important role in clinical decisions (1-2). Presently, a gap exists between the physics-based development of new techniques and the applications used in the study of disease. There is a need for targeted investigations that might establish the usefulness of more quantitative imaging measures for the assessment of disease state. In order to further advance and promote quantitative imaging and imaging biomarkers to be included in future radiologic practices, there is also a critical need to develop and validate algorithms that can process imaging data to provide clinical information for decision-making, and ideally automatically (3).

Quantitative Imaging in Medicine and Surgery (QIMS, Print ISSN 2223-4292; Online ISSN 2223-4306) was launched in the December of 2011 by the AME Publishing Company. It is an open access journal, and published both in print and online. The website (<http://www.amepc.org/qims>) timely publishes latest articles (ahead of print) and issues, which allows free view and download. The aim of QIMS is to promote research and development of quantitative imaging methods for the measurement of disease progression and prognosis, therapeutic optimization, surgical planning, image-guided intervention, and response to therapies. QIMS will educate practicing radiologists about strategies of augmenting subjective image interpretation with quantitative measures. To achieve these goals, QIMS will strive to engage multidisciplinary teams that involve clinicians, radiologists, as well as imaging scientists who include physicists, engineers, and chemists. QIMS will strive to stay at the forefront of developing and applying

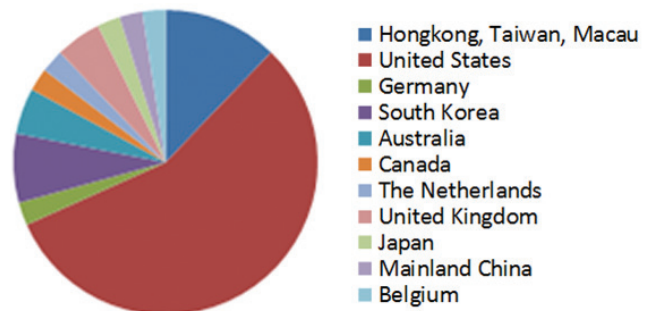


Figure 1 Geographical distribution of editorial board members of QIMS

robust methods to understand disease and help accelerate the development of better treatments (4).

The uniqueness of QIMS includes the following: (I) the first journal dedicated to quantitative imaging research for clinical applications, to provide an interface between physical sciences, computing techniques, and clinical medicine; (II) an imaging research journal based in Asia with global perspective. This journal aims to bring together the scientists in East Asia, North America, and Europe. With the rapid development of scientific research in East Asia, this process becomes increasingly important; (III) With utilization of the large patient data in Asia, QIMS also publishes interesting cases where the specific diagnosis can be established by quantitative imaging measures; (IV) QIMS is one of the first journals implementing the use of QR codes to provide instant access to the line content.

Currently, QIMS editorial board consists of 41 world-class scientists and clinicians, most of them are from USA, Europe, South Korea, Australia, Japan, and Hong Kong

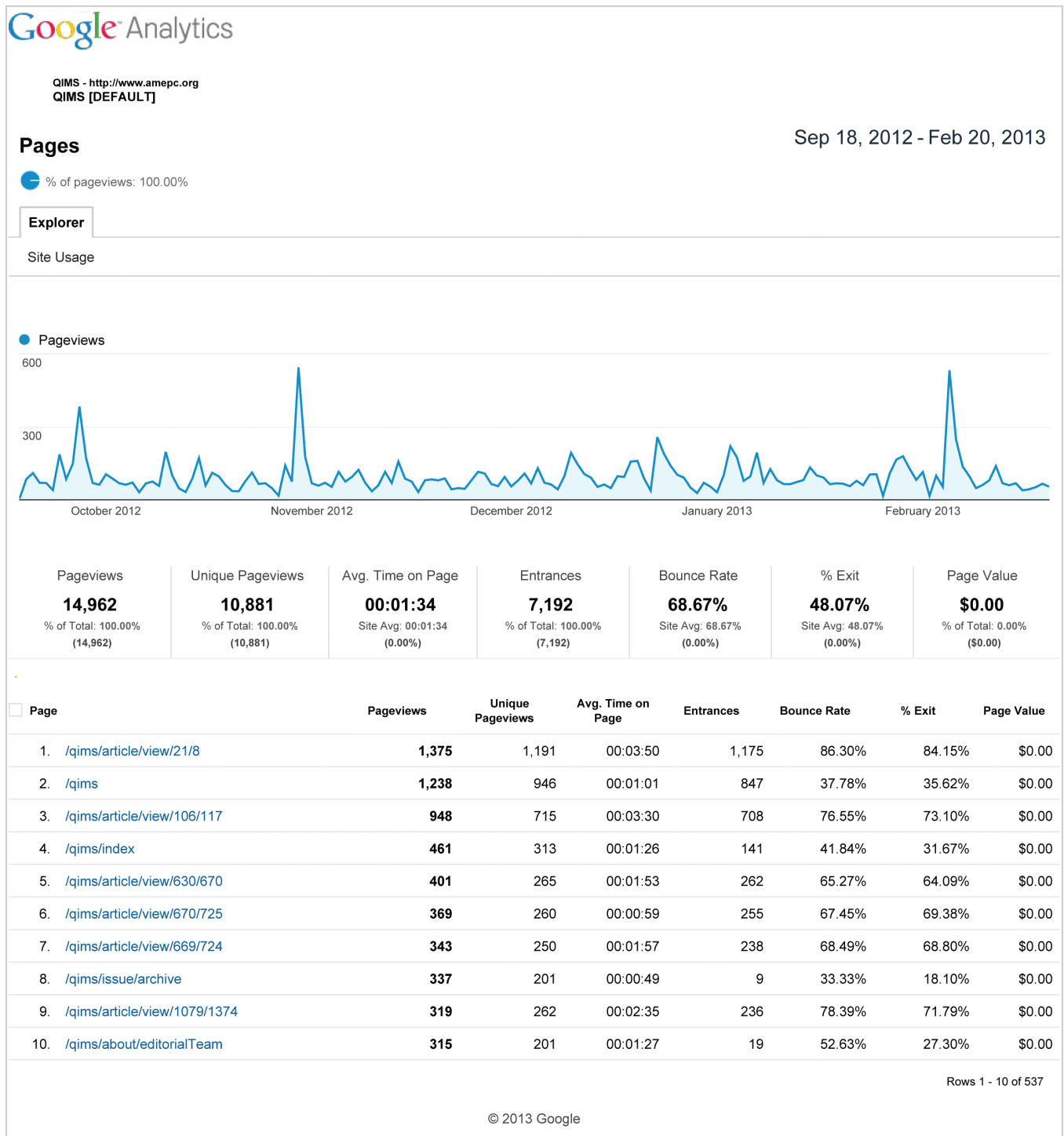


Figure 2 Page view (Google Analysis) number

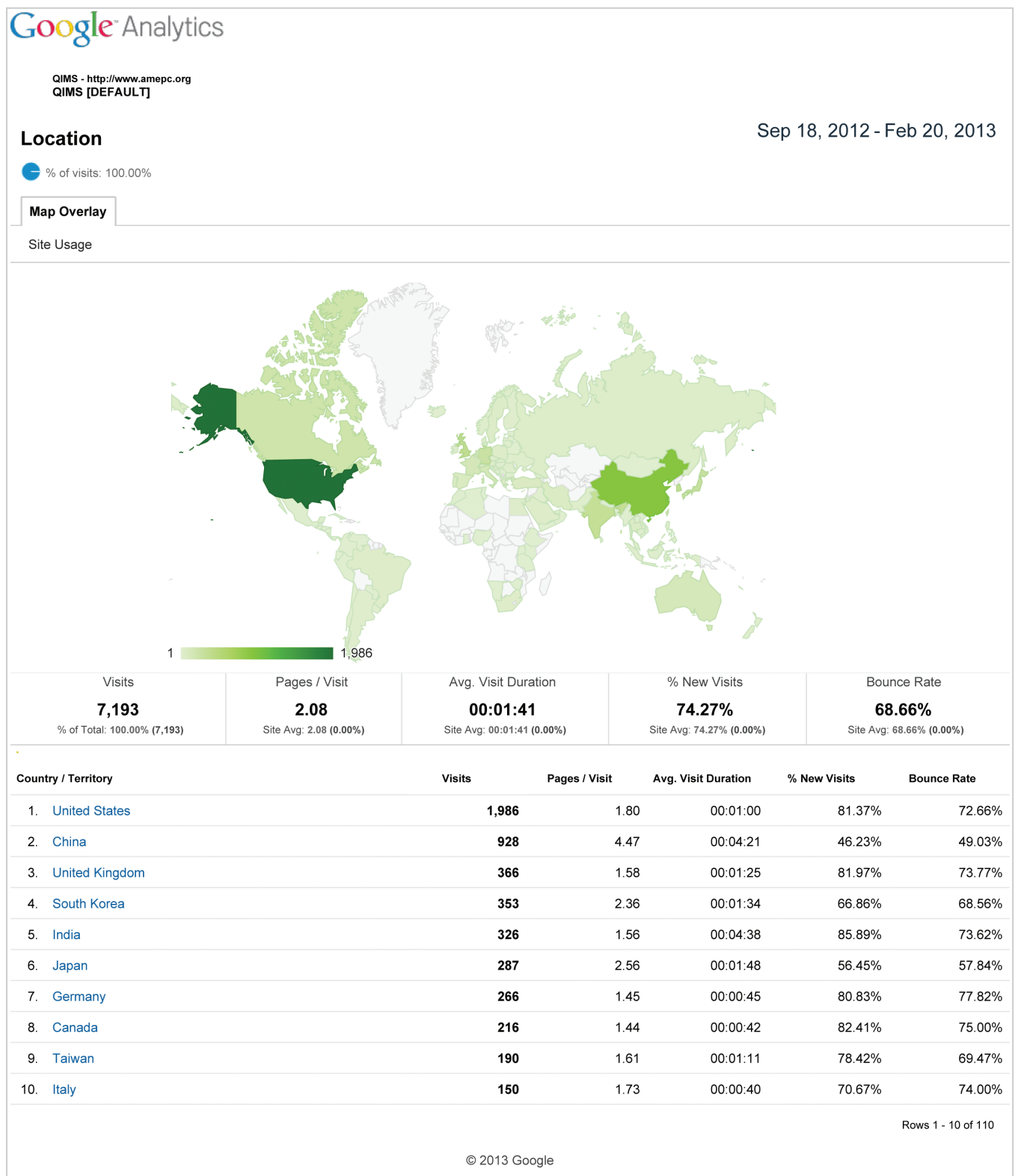


Figure 3 Page view (Google Analysis) distribution by countries

SAR (Figure 1). QIMS has formulated its strict processing and reviewing regulations for manuscripts. QIMS' principal criteria for paper acceptance and publication include: (I) quality and significance of research; (II) breadth of interest of the work to its readership; (III) clarity and effectiveness of communications.

Till now, QIMS has published 6 issues with 14 original articles, and 11 invited high-quality reviews (82% of the citable items are contributed by QIMS editorial board members). Of the total 67 manuscripts, including image of the issue, case report, meeting report, research highlight and editorial, 33 (33/67, 49.25%) are contributed by editorial board members. QIMS has been indexed and covered by Google Scholar since its publication. QIMS promotes articles through RSS feeds and newsletters. It is also promoted by MDLinx (<http://www.mdlinx.com/>) since 2012 and it will also join the Medscape Publisher's circle in 2013 (<http://www.medscape.com/>). One important milestone reached for QIMS in 2012 that it became indexed and covered by PubMed/Pubmed Central. Within five months from Sept. 18th, 2012 to Feb. 20th 2013, the website received 15,737 visits, of which 81.51% comes from USA (Figures 2,3).

Since the launching of this journal, quite a few articles published by QIMS have been cited by Science Citation Indexed journals. Based on outstanding track record of the papers published in QIMS, we can expect an attractive impact factor once QIMS is indexed and covered by Web of Science.

From the year of 2013, there will two changes for QIMS. The first is to distribute high quality research in a more timely manner, the journal will be published bi-monthly

instead of quarterly as it did in the year 2012. The second is in each issue there will be video-based materials (video of the issue) published for demonstration and education.

In conclusion, from the right beginning, QIMS is managed with the highest standard and requirements, including the emphasis on: (I) Publish high quality and useful papers and keep relevant for quantitative science in clinical medicine and imaging research; (II) attract best papers around the world and provide an platform for knowledge share for scientists internationally; (III) rigorous peer review process; (IV) publish on time; (V) strive to be the best imaging research journal based in East Asia. The editorial members of QIMS are very confident for the future success of this unique journal.

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References

1. Smith JJ, Sorensen AG, Thrall JH. Biomarkers in imaging: realizing radiology's future. *Radiology* 2003;227:633-8.
2. Wang YX. Medical imaging in pharmaceutical clinical trials: what radiologists should know. *Clin Radiol* 2005;60:1051-7.
3. McGowan JC. On the use of quantitative MR imaging. *AJNR Am J Neuroradiol* 2001;22:1451-2.
4. Wang YX, Ng CK. The impact of quantitative imaging in medicine and surgery: Charting our course for the future. *Quant Imaging Med Surg* 2011;1:1-3.

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