European Cardiovascular Magnetic Resonance (EuroCMR) registry - multi national results from 57 centers in 15 countries

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From 16th Annual SCMR Scientific Sessions
San Francisco, CA, USA. 31 January - 3 February 2013

Background
The EuroCMR registry determined indications, image quality, safety and impact on patient management of clinical routine CMR in a multi-national European setting.

Furthermore, interim analyses of two specific protocols evaluating the prognostic potential of CMR in patients with coronary artery disease (CAD) and hypertrophic cardiomyopathy (HCM) are presented.

Methods
Multi-center registry with consecutive enrollment of patients in 57 centers in 15 countries [1].

Results
27,781 patients were enrolled. The most frequent indications were risk stratification in CAD/ischemia (34.2%), workup of cardiomyopathies (32.2%) and assessment of viability (14.6%). Image quality was diagnostic in 98%. Severe complications were rare (0.03%). In 61.8% CMR findings had an impact on patient management. In 8.7% the final diagnosis changed based on CMR findings (Table 1).

Kaplan-Meier survival curves of the interim analyses showed low adverse event rates in patients with suspected CAD with a normal stress CMR (1.0% per year), and in HCM without delayed enhancement (2.7% per year).

Conclusions
The most important CMR indications in Europe are risk stratification in suspected CAD/ischemia, work-up of cardiomyopathies and assessment of viability. CMR is a safe procedure, has diagnostic image quality in more than 98% of cases, and its results have a strong impact on patient management. Interim analyses underscore the prognostic value of clinical routine CMR in patients with CAD and HCM.

Funding
Medtronic Inc., Minneapolis MN, USA.
Novartis International AG, Basel, Switzerland.
Siemens Health Care, Erlangen, Germany.

Table 1 Impact of CMR on patient management by indication

|                      | Myocarditis/ Cardiomyopathy | Suspected CAD/ Ischemia | Viability |
|----------------------|-----------------------------|-------------------------|-----------|
| All (from n = 27781) | 32.2%                       | 34.2%                   | 14.6%     |
| New diagnosis        | 11.4%                       | 8.1%                    | 5.3%      |
| Therapeutic consequences: |                          |                        |           |
| Change in medication | 25.3%                       | 24.3%                   | 33.2%     |
| Invasive procedure   | 6.9%                        | 23.1%                   | 24.2%     |
| Hospital discharge   | 10.4%                       | 14.3%                   | 6.9%      |
| Impact on patient management (new diagnosis and/or therapeutic consequence) | 55.1% | 71.4% | 71.5% |

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Published: 30 January 2013

Reference

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doi:10.1186/1532-429X-15-S1-O96
Cite this article as: Wagner et al.: European Cardiovascular Magnetic Resonance (EuroCMR) registry - multi national results from 57 centers in 15 countries. Journal of Cardiovascular Magnetic Resonance 2013 15 (Suppl 1):O96.