

INTERNATIONAL SOCIETY FOR COMPUTERIZED ELECTROCARDIOLOGY
ABSTRACT FORM AND INSTRUCTIONS

(Also available from the ISCE website, <http://www.isce.org>)

**** PRESENTING AUTHORS MAY SUBMIT NO MORE THAN TWO (2) ABSTRACTS. ****

Abstracts must fit single spaced in the box provided, using type of 10 points in size or larger according to the following format:

- i. Title of the abstract
- ii. Beginning on a separate line after the title, the authors' names, institution, city, state, and country
- iii. A blank line separating the authors' names from the body of the abstract
- iv. The body of the abstract, which can include a figure or table if appropriate
- v. No references should be included.

Abstracts not selected for regular presentation may qualify for poster presentation.

Abstracts may be submitted for regular presentation OR for entry in the JWYI Competition, NOT BOTH! To qualify as a Young Investigator you must 1) be a current student in an academic degree program; or 2) be an intern, resident or fellow; or 3) have received an academic degree within the 5 years prior to the conference; and 4) your submission must be original and not previously published nor in press in manuscript form (prior publication in abstract form will not disqualify you from the competition). All submissions to the Jos Willems Young Investigators Competition that are not selected as finalist entries will automatically be reviewed for regular abstract submissions to the meeting.

Before 1 December 2004 email the abstract and submitter information as an attachment in MSWord format (*.doc) or Rich Text format (*.rtf).

REGULAR SUBMISSIONS:

Dr. Charles Antzelevitch
Email: ca@mmrl.edu
Phone: 315-753-3217

JOS WILLEMS YOUNG INVESTIGATORS COMPETITION

Dr. Janice M. Jenkins
Email: jenkins@umich.edu
Phone: 312-540-9697

1. Robert A. Warner
PRINT- Name of presenting author -PRINT
2. Inovise Medical, Inc.
Institution
3. 10565 SW Nimbus Ave. Ste. 100
Address
4. Tigard 5. OR
City State
6. USA 7. 97223-4311
Country Postal Code / Zip
8. 503-431-3856
Telephone
9. 503-431-3801
Fax
10. warnerb@inovise.com
Email

JWYI SUBMITTERS ONLY:

11. _____
Date and name of last academic degree
12. _____
Institution granting degree

**Detecting Hemodynamic Abnormalities Using
ECG and Cardiac Acoustical Data**

Michel Zuber, MD, Peter Kipfer, MD, Patti Arand, PhD, Peter Bauer, PhD and Robert Warner, MD
Facharzt and Inovise Medical, Inc., Othmarsingen, Switzerland, Frauenfeld, Switzerland and Portland, OR, USA

Background: Hemodynamic abnormalities can be associated with ECG changes. For example, the ECG evidence of left ventricular hypertrophy (LVH) is a consequence of the hemodynamic abnormalities that produced the LVH. However, we hypothesized that abnormal hemodynamics are more likely to be associated with the presence of a third heart sound (S3) than with ECG findings.

Methods: We obtained recordings from 50 ambulatory subjects (39 men, ages 36-84, mean 65 years) using Audicor™, a device that records and algorithmically interprets simultaneous 12-lead ECG and acoustical data. We used unpaired T tests to determine if there are significant differences in the values of BNP and of 4 echocardiographic parameters of cardiac function in subjects with vs. without an S3 and with vs. without ECG evidence of LVH, prior myocardial infarction (MI) and ST-T abnormalities.

Results: The following table shows all p values <0.05:

Parameter	S3	LVH	ST-T abn	Prior MI
BNP	<0.001	--	--	--
EA ratio	<0.01	--	--	--
T decel	<0.05	--	<0.05	--
EE' ratio	<0.05	<0.001	--	--
Hi diast pressure	<0.001	--	--	--

Conclusions: The electronically recorded S3 is associated with a wider range of evidence for hemodynamic abnormalities than is ECG evidence of LVH, ST-T or prior MI. The electronically recorded S3 can therefore augment the diagnostic capabilities of the ECG.