NEWSLETTER OF THE FRIENDS OF THE ISRAEL HEART SOCIETY

Moses parting the Red Sea

Editor's Note: Welcome to the Spring 2014 FIHS Newsletter. This Newsletter comes out during the Passover holiday season, and we will include scattered pictures from The Prince of Egypt (from DreamWorks).

This issue, by far our largest, will include several features- a message from our President, Jeff Goldberger, announcements of Cardiology Meetings, 2 articles on Rambam Hospital's underground facility, a novel Israeli approach to preventing progression of aortic aneurysm, research, and a FIHS Heartbeats section. We highlight the cardiac program at Poria Medical Center in the Galilee. In addition, we have thank you notes from 2 Fellows who won FIHS travel grants to ACC, and pictures from this year's FIHS ACC dinner banquet (hot off the presses).

We also want to encourage reader participation- highlighted in our FIHS Heartbeats section, featuring a new App for Iphones and Android smartphones (see end of newsletter).

Please note- description of new technology in our Newsletter does not constitute an endorsement. We just want to give our readership a sense of the vast scope of Israeli ingenuity in the fields of Cardiology.

Remember, this Newsletter and Society belong to you, the membership. We look forward to enhancing this Society and the connections that we hope to foster between Israeli and non-Israeli cardiologists and their institutions. Please feel free to email us with questions, answers, comments, criticisms, or just to tell us to keep working harder!

Our immediate goal is to try to grow our membership and participation to include any and all cardiologists and fellows from around the world who would be interested in supporting this bridging relationship. If you know of any cardiologists or cardiology fellows who we can contact, please email me (my email is jackstroh@usa.net).

In addition, this is the new link for the Israel Heart Society. Please browse the site!

http://www.israel-heart.org.il/english

Message from the President

We had a tremendous gathering for Friends of the Israel Heart Society reception at the recent American College of Cardiology meetings in Washington. With over 100 people in attendance and the musical charm of Stan Hillis (thank you again for your continued support!), it was a truly wonderful evening. The Meltzer Award was presented to the Israel Heart Society and will be awarded at the upcoming Israel Heart Society meeting. Two fellowship awards were given to Israeli fellows Drs. Arie Steinvil and Elad Maor (see their contributions to this newsletter beginning on Page 24) to attend the ACC meeting. The 12th International Dead Sea Symposium Fellow's Case Competition was a highly successful program that brought four North American fellows to attend this meeting in Israel this past February 2014. Our continued efforts to promote scientific interchange between the Israel Heart Society and its friends is only possible with your continued support. In particular, we thank our Silver, Gold, or Platinum sponsors who are listed on pages 19-20. As we are dependent on your charitable donations to maintain our activities, please remember to submit your annual membership dues which can be paid through the FIHS website at:

http://www.friendsihs.org/index.html

Finally, our members are encouraged to send in news – personal and/or professional – to include in our **FIHS Heart Beats** section. Please provide us with your feedback on the newsletter – special thanks to Dr. Stroh for his continued efforts (jackstroh@usa.net).

With best wishes,

Jeff Goldberger

President, Friends of the Israel Heart Society

Meetings

The 61st Annual Conference of the Israel Heart Society in Association with the Israel Society of Cardiothoracic Surgery

April 30- May 1, 2014

David Intercontinental Hotel, Tel Aviv

http://en.israelheart.com/

Guest Lecturers

Dominick J. Angiolillo
University of Florida College of Medicine-Jacksonville,Jacksonville, FL, USA

Elliott Antman
President-Elect, American Heart Association,Brigham and Women's Hospital,Boston, MA, USA

François Carré
Universitary Hospital, Rennes, France

Alain Cohen-Solal
Hopital Lariboisiere, Paris, France

Peter Ganz
San Francisco General Hospital,San Francisco, CA, USA

Philip Greenland
Northwestern University Feinberg School of Medicine,Chicago, IL, USA

Albert A.Hagege
Immediate Past President of the French Society of Cardiology

John G. Harold
President, American College of Cardiology,Cedars-Sinai Medical Center,Los Angeles, CA, USA

Russel Hirsh
Cincinnati Children's Hospital Medical Center, Ohio, USA

Lucile

Houyel
Marie-Lannelongue Hospital, Paris, France

Goy Jean-Jacques
Lausanne University Hospital, Lausanne, Switzerland

Thomas F. Lüscher
Editor-in-Chief, European Heart Journal,University Hospital Zurich,Zurich, Switzerland

Patrick T. O'Gara
President-Elect, American College of Cardiology,Brigham and Women's Hospital,Boston, MA, USA

Jérôme Petit
Marie Lannelongue Hospital, Paris, France

Fausto J. Pinto
President-Elect, European Society of Cardiology,Lisbon Cardiovascular Institute,Lisbon, Portugal

Lawrence Rudski
McGill University Director, Jewish General Hospital

Ronald G. Schwartz
University of Rochester Medical Center,Rochester, NY, USA

Alian Serraf
Safra' Children's Hospital, Sheba Medical Center, Ramat Gan, Israel

David P. Taggart
John Radcliffe Hospital, Oxford, UK

Alec Vahanian
Bichat University Hospital, Paris, France

Panos E. Vardas
President, European Society of Cardiology,Heraklion University Hospital,Heraklion, Greece

Myocardial and Pericardial Diseases Working Group of the European Society of Cardiology

October 22 - 24, 2014

Royal Rimonim Dead Sea Hotel, Dead Sea

Abstract submission deadline- June 30, 2014

http://www.medical.theconferencewebsite.com/conference-info/Myocardial-Pericardial-Diseases-Working-Group-European-Socie

Amyloidosis
Cardiooncology
Genetics
Echocardiography
Magnetic resonance imaging
Biomarkers
Arrhythmology
Metabolic cardiomyopathies
Pericardial diseases
Arrhythmogenic right ventricular dysplasia
The Role Of Systemic Inflammation In Myocardial Disease
Athlete heart
Genetic testing in cardiomyopathies
Modifying Disease Progression In Hcm
Myocarditis
Diabetic cardiomyopathy
Dilated cardiomyopathy and heart failure
ICDs
Atrial fibrillation in a patient with cardiomyopathy
Innovations In Heart Failure Therapy
Basic Science
Other

Innovations in Cardiovascular Interventions 2014

December 14-16, 2014

David Intercontinental Convention Center, Tel Aviv

http://2014.icimeeting.com/

9th International Conference on Acute Cardiac Care

January 18-20, 2015

David Intercontinental Hotel

Tel Aviv, Israel

Preliminary Scientific Program

-STEMI – Pre-hospital management
-STEMI – Controversies
-NSTE-ACS-Mechanisms and management of reperfusion
-injury and microvascular obstruction
-Managing chest pain in the emergency room
-(Joint session with the Israeli Association of Emergency Medicine)

-Ventilatory support
-Joint session with anesthesiologists/ICU
-Patients with structural heart disease in the ICCU
-Post-TAVI acute care – issues for the intensive cardiac care unit
-Antiplatelets in ACS – an update
-Acute Pulmonary Embolism
-Cardiac patient in the internal medicine ward
-(Joint session with the Israeli Association of Internal Medicine)
-Cardiac arrest – out-of-hospital and in-hospital
-Acute heart failure
-Controversial issues in arrhythmia management in acute myocardial infarction
-Meet the experts
-Acute non-coronary patients in the ICCU
-Cardiovascular emergencies in pregnancy

Invited Faculty (in formation)
Ezra Amsterdam, USA
Yochai Birnbaum, USA
Hector Bueno, Spain
Peter Clemmensen, Denmark
Filippo Crea, Italy
Uri Elkayam, USA
Jeffrey Goldberger, USA
Bulent Gorenek, Turkey
Kurt Huber, Austria
Allan Jaffe, USA
Sanjay Kaul, USA
Christian Mueller, Switzerland

Gabriel Steg, France
Pascal Vranckx, Belgium
Uwe Zeymer, Germany

http://www.isas.co.il/cardiac-care2015/

The 12th International Dead Sea Symposium on Innovations in Cardiac Arrhythmias and Device Therapy (IDSS)

Between the 3rd and 5th of March 2014 over 700 electrophysiologists, from more than 40 countries worldwide gathered in this challenging symposium which was launched 22 years ago. The program was composed of forty nine scientific sessions and four satellite symposia which included the latest topics in the field of cardiac electrophysiology and pacing that were debated by outstanding speakers. This meeting was mainly devoted to innovations in electrophysiology and pacing. More than 40 local and international (Europe, USA) manufacturers and start-up companies in the field of EP and pacing participated in the meeting as sponsors and contributors of the scientific program. What follows are some pictures of the faculty and fellows.

Highlighted Program- Poria Medical Center, Galilee

The Rising Star of the North: The Division of Cardiovascular Medicine at the Boruch Padeh Medical Center

The Boruch Padeh Medical Center was established in 1955 in a collection of rickety shacks. Today it has transformed into a modern, 305 medical facility, the first of Israel's government hospitals to be accredited by the prestigious JCI. Within the hospital, the Division of Cardiovascular Medicine is a leading ward, set to provide state of the art care for the unique population of the Galilee.

Just 12 years ago, Cardiology consisted of 4 beds of the Cardiac Intensive Care Unit treating acute myocardial infarctions with streptokinase. Since then, under the leadership of Dr. Yonatan Hasin the ward expanded, adding catheterization suites and hospitalization units. Recently, Dr Offer Amir assumed the position of chairman of the department, giving a major boost to continued development and growth of the ward.

Today, the Division consists of a CCU of 9 beds, a 25 bed general cardiology ward, 3 catheterization suites, an outpatient ambulatory care unit and is poised to inaugurate the first Cardiothoracic Surgery Service to open in Israel in years. Soon the cardiac imaging service, currently including advanced 3D Vivid 9 echocardiography and cardiac CT will be supplemented by cardiac MRI, when the new MRI facility will be dedicated this summer. The catheterization unit provides round the clock 24/7 primary PCI service, as well as urgent and elective procedures, including peripheral interventions, renal denervation and valvuloplasty. With the addition of the CTS service, we will commence doing TAVI as well.

The Arrhythmia Service implants all types of cardiac rhythm devices and performs electrophysiology studies with the help of the Carto 3 electro-anatomic mapping system including ablations of AF, VT and even some cases of arrhythmias in congenital heart disease, using the Carto Smart Touch © technology for safety and efficacy. It also provides continuing care in the arrhythmia and pacemaker clinics.

The staff of the ward is culturally diverse, reflecting the population that we serve. Dr Diab Ghanem, of Druse extraction who lives in Mahgar Village is the director of the CCU. Dr. Nabi Salman, a Christian, who lives in Shfaram, runs the inpatient Cardiology Service. Dr. Fabio Kusniec has recently joined us from Rabin Medical Center to run the Catheterization Service. Dr. Shemi Carraso a renowned expert in echocardiography of cardiomyopathies leads the Cardiac Imaging Service and Dr. Hillel Steiner returned from the Krannert Institute of Cardiology at Indiana University to direct the arrhythmia service. The nursing staff is especially capable. Mrs. Dina Granot is the director of nursing staff on the Cardiology Ward and Mr. Ghassan Salameh of Turaan leads a highly professional cadre of cardiac intensive care nurses.

The Division plays a central role in the developing academic life of the Galilee as well. With the establishment of the Medical School of the Galilee in Safed of Bar Ilan University, the department has taken a major part in the education of the medical students. The medical and nursing staff teaches at the Medical School and groups of students rotate through the ward throughout the year. This week Bar Ilan University and Poria Medical Center laid the cornerstone of the research laboratory, including the cardiac basic science research lab. This will enable us to continue basic medical research projects currently underway in the pathophysiology of various heart diseases such as acute infarction, heart failure and atrial fibrillation. Other clinical projects planned include genetic

analysis of familial arrhythmia syndromes in conjunction with Indiana University as well as various industry initiated clinical trials. The nursing staff actively participates in clinical research, including projects to increase compliance and adherence to healthy lifestyle guidelines and familial involvement in cardiac care of the elderly. In a provocative project, Khaled Awadi, a nurse of the CCU found that active smoking of husbands in Arab villages of the Galilee may increase the risk of their spouses to suffer a coronary event by a factor of 25!

In conclusion, we at the Cardiovascular Division of Poria Medical Center invite you to visit the Galilee and while you're there, make sure to stop by us to say hello!

How to contact us:

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Dr. Hillel Steiner, Director of the Cardiac Electrophysiology Service
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They do what they have to do

The world's largest and most advanced underground hospital is preparing to open its doors in Northern Israel.

By RAMBAM

11/07/2013 14:26

http://www.jpost.com/PromoContent/The-worlds-largest-and-most-advanced-underground-hospital-is-preparing-to-open-its-doors-in-Northern-Israel-330888

The 2,000 bed underground hospital has been designed to protect patients and hospital staff in warlike conditions.

The world's largest and most advanced underground hospital is preparing to open its doors in Northern Israel. Photo: Rambam

The world's largest and most advanced underground hospital is preparing to open its doors in Northern Israel.

The 2,000 bed underground hospital has been designed to protect patients and hospital staff in warlike conditions. This one-of-a-kind medical facility is located seventeen meters below the surface of where Rambam Medical Center is expanding its medical campus to include the Ruth Rappaport Children's Hospital, the Fishman Oncology Center, a Cardiovascular Hospital and a Biomedical Discovery research tower.

The northern region of Israel is no stranger to missile attacks and the realities of war. During the 2006 war with Lebanon, Rambam Hospital was under attack and in direct line of fire for an entire month. The staff had no choice but to evacuate half of the hospital, placing patients in unrealistic conditions such as basements and corridors. It became clear to the hospital's committee that protective measures needed to be taken for future situations, and a new provision would have to be made in order to continue to function during wartime.

With the conflicts that Israel faces daily from neighboring countries, it

was widely accepted that an underground medical facility was nothing short of a necessity in Israel. Even now, despite the "relaxation" of war within Israel, officials say it is imperative to complete this project before any other unpredictability can disrupt it.

Once the idea for an underground hospital was born, the Israeli government became involved, joining forces with Rambam to expedite this process. The project was made possible after receiving a sizable donation from Israeli billionaire Sammy Ofer. The Israeli government and other donors provided the rest of the finances needed. Once signing on to the project, the government had ideas of their own. The Ministries of Health and Finance, together with the official governmental bodies that deal with country's preparedness, suggested making it a regional hospital, dictating the number of beds it offered. The aboveground facility at Rambam has only a 1,000 bed capacity, while the underground one will have twice as many to meet the demand of providing a strategic solution for Haifa and the Northern region in the case of war.

While there are other underground hospitals in the world, Rambam's is the only facility that will be able to transfer 2,000 patients, their staff, and the necessary equipment underground in the period of 48-72 hours.

During "normal" times, the underground structure will be used as a 3-story parking lot which can hold up to 1,400 vehicles - with noticeable differences. The lot itself is structured in a unique manner, allowing the transition during wartime to take place more easily. Every cubicle that can hold 3 cars can hold 8 patients. The walls of the "lot" are equipped with electrical outlets, drinking water, oxygen attachments, air conditioners, and other medical equipment. There are toilets and multiple surgical rooms, as well as a dialysis unit. If the need arises to

create the transfer to medical facility, it is a simple matter of removing the cars, washing out and disinfecting the lot, and wheeling in the beds and other equipment.

The facility can function for several days 100% sealed off from the world, completely self-sufficient and protected against chemical, biological and conventional warfare. This protection also extends to earthquakes and other natural disasters, as the hospital's sides and top are protected by multiple layers of concrete, impervious to whatever situation is taking place above ground. The hospital will be able to generate its own power and store enough oxygen, drinking-water and medical and gas supplies for three days.

"I hope it will never be used or needed, I hope it always stays as a parking lot," said Professor Rafael Beyar, the medical center's director general. However, with the daily threats coming at Israel from the North and the East, it is impossible to predict what any day may bring.

The world's medical community has been eyeing this project, as well as other advances at Rambam for some time. Recently, the Rambam Medical Center has joined a collaboration with China, and is also collaborating with two of the leading facilities in the United States: John Hopkins Medical Institution and Cornell University, through its affiliation with the Technion-Israel Institute of Technology. Researchers from Rambam's Health Care Campus and the Technion have repeatedly been on the forefront of major medical discoveries in the fields of cardiovascular research, stem cell research and oncology. This kind of international activity puts Rambam in an augmented position of research, much of which takes place on the Rambam campus. The new Research Tower being built directly above the Underground Hospital is sure to continue this legacy of excellence at Rambam.

As the underground hospital nears completion, officials at Rambam are still raising funds for electrical emergency equipment, additional beds, respirators, and other materials for the sophisticated equipment that is needed for their special underground cancer facility. In addition to this, major funds are being raised to support the ongoing construction of the Ruth Rappaport Children's Hospital, the Joseph Fishman Oncology Center and the Cardiovascular Hospital.

Haifa's new subterranean hospital runs major drill

Rambam Medical Center's 'downstairs' emergency facility is ready to move to a war footing at a moment's notice

BY DAVID SHAMAH March 28, 2014

http://www.timesofisrael.com/haifas-new-subterranean-hospital-runs-major-drill/?utm_source=Start-Up+Daily&utm_campaign=a36e9b4cd3-2014_03_28_SUI3_28_2014&utm_medium=email&utm_term=0_fb879fad58-a36e9b4cd3-54609981

When the missiles were falling on Haifa during the 2006 Second Lebanon War with Hezbollah, Israelis scurried down to bomb shelters. But not everyone was able to make it down to safety; the elderly, the infirm, and especially those hospitalized in northern Israel had no choice but to hunker down and pray that Hezbollah's missiles missed them.

To prevent such a scenario from recurring, Rambam Medical Center in Haifa spent over $100 million and eight years constructing the world's biggest fortified hospital. This week, it conducted a drill simulating what it would be like to move hundreds of patients from entire units — including the intensive care units — downstairs into the Sammy Ofer Fortified Underground Emergency Hospital.

Normally used as a parking lot, the vehicles that usually park in the underground facility were banned for the day, and the usually hidden equipment, beds, sinks, and other hospital features were opened (they are stored in closets in the walls of the lot). Built into the walls and floors of the facility are all the power outlets, connections, air conditioners and heaters, water and filtration systems, and anything else needed to move hospital operations underground.

In anticipation of a wartime

emergency, conversion of the facility — from parking lot to hospital — can take less than 48 hours, hospital officials said. In case of a war, air vents and entrances would be closed within the bottom two floors, while independent air, electricity and water supplies would allow the underground hospital to be entirely sealed off from the outside world for up to 72 hours, if necessary. The hospital has its own generators and secure water supply.

Construction of the facility was a major technical and engineering challenge, hospital officials said. The facility is so deep underground that its lowest portion extends beneath the water table, which required the pumping of millions of liters of water. When construction actually began in late 2010, the first stage was the pouring of 7,000 cubic meters of concrete to form the base of the facility — basically using all the concrete available in northern and central Israel at the time, with no other concrete available for other projects for days before or after.

The facility was dedicated to the memory of Sammy Ofer, the self-made Israeli multimillionaire who passed away in 2011, and donated nearly $20 million to build the facility.

The drill allowed hospital staff to practice the transfer of patients (played by young army volunteers), and equipment to designated locations on each of the floors of the underground hospital. That equipment included complex dialysis and surgical equipment to reassemble operating rooms and intensive care units. In a real war situation, the hospital said, staff would be assisted in moving everyone and everything underground by the Home Front Command, the Health Ministry, Magen David Adom, and the Haifa Municipality.

http://www.youtube.com/watch?v=s20b70MW1lI

Innovation

Novel Israeli tech prevents aortic aneurysm progression

Posted By Abigail Klein Leichman On January 23, 2014

http://israel21c.org/health/novel-israeli-tech-prevents-aortic-aneurysm-progression/print/

Israel's beloved singer Arik Einstein died on November 26, at age 74, from a ruptured aortic aneurysm. This condition is an abnormal ballooning of the body's main artery that can lead to fatal internal bleeding.

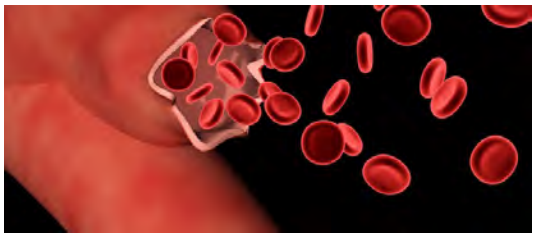


Illustration of ruptured aneurysm via Shutterstock.com.

Abdominal aortic aneurysm (AAA) is the 13th leading cause of death in most Western countries, and more than 200,000 new cases are diagnosed annually in the US alone.

If aneurysms could be treated early to prevent worsening, the incidence of rupture and death would fall dramatically. And that is the aim of a patented technology from Israel.

"Our purpose is to intervene at a stage where the aneurysm is not at the point where an emergency procedure is necessary," says Dr. S. David Gertz, the Brandman Foundation Professor of Cardiac and Pulmonary Diseases at the Institute for Medical Research of The Hebrew University—Hadassah Medical School.

Current forms of treatment focus primarily on advanced stages of AAA and are associated with potentially life-threatening complications, explains Gertz, who heads the research project with Dr. Lilach Gavish.

When Gavish applied to do her doctorate in Gertz's lab several years ago, she explained that for her master's degree she had identified a molecular mechanism by which low-level laser (LLL) reduces

inflammation and promotes wound healing.

"I didn't know much at all about low-level laser at the time. However, having developed the first physiological model of arterial aneurysm in the late 1980s, we quickly realized the potential importance of this technology for this extremely common disease," Gertz tells ISRAEL21c.

"An aneurysm is an inflammation-driven process, and that process causes major weakening in the structural integrity of the arterial wall. So we realized this may be ideal as a treatment approach."

LLL for AAA

Using laboratory mice prone to developing aortic aneurysms after injection with a hormone that increases blood pressure, the Israeli scientists proved that LLL inhibits the development and progression of AAA by enhancing fibrous tissue reinforcement at the spots where the artery is weakened.

Through Yissum, Hebrew University's technology transfer company, the investigators have submitted patent applications for a device that can be implanted temporarily into the abdomen, using laparoscopic surgery, to deliver LLL to the developing aneurysm.

Their first studies showed that low-level laser successfully prevented aneurysms from forming. Then, they did an additional series of experiments on those mice that had developed aneurysms, which showed that LLL also prevented existing aneurysms from progressing.

A poster on these findings presented at the annual American College of Cardiology meeting in 2012, won first prize in the vascular heart disease section. Five scientific papers have so far been published on the results of this multidisciplinary project.

"Now we are in the process of developing a large animal model so we'll be able to show additional relevance for the human interventional setting,"

says Gertz. "Hopefully, we will be able to identify the appropriate the strategic partner to develop this device."

Dr. S. David Gertz.

Early detection, early treatment

This approach makes sense in light of improved methods of early detection of AAA, says Gertz, a Baltimore native who moved to Israel 37 years ago.

"Since 2005, the US Preventive Services Task Force has recommended that all males between the ages of 65 and 74 who ever smoked should have a one-time ultrasound screening for abdominal aortic aneurysms," he explains.

The reason for the guideline is that smokers and men are at greatest risk for this condition. Cigarette smoking heightens the risk of AAA seven-fold.

Because of increased screening, "we're seeing many more small aneurysms than before. The target population for our intervention would be those in whom a relatively small aneurysm has been identified but, after repeat examination and failure of medication, are predicted to most likely reach the stage of needing either open-abdomen surgical graft repair or stent implantation within two to three years," says Gertz.

"To avoid those patients reaching the stage of needing serious procedures, this technology based on LLL could slow or inhibit the progression."

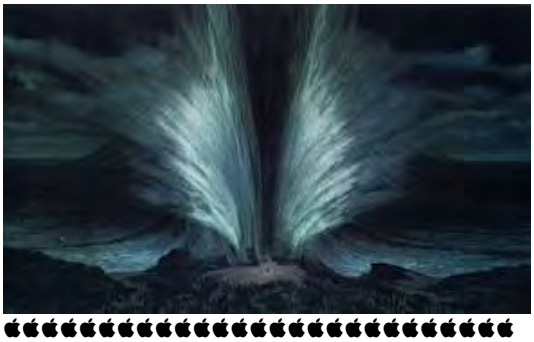
Gertz stresses that it could take some years until the implant is on the market.

"We're pretty far along experimentally, but there's still quite a way to go for it to be applicable to the human

interventional setting," he cautions.

"Nonetheless, this technology offers a minimally invasive approach that has the potential for preventing patients from having to undergo surgical procedures … known to be associated with a high percentage of significant consequences. That would be a major contribution."

The research is funded by the Israel Science Foundation, the Saul Brandman Research Foundation, The Rosetrees Trust Fund (UK), and the Prof. Eliyahu Kelman Fund. In addition to Gavish, team members also include Prof. Ronen Beeri, Prof. Dan Gilon, Prof. Yoav Mintz, Dr. Chen Rubinstein, Dr. Leah Y. Gavish, Prof. Yacov Berlatzky, Dr. Liat Appelbaum, Dr. Atilla Bulut, Prof. Petachia Reissman, and Dr. Mickey Harlev.



Membership

This is also a reminder regarding membership dues for the Friends of the Israel Heart Society. The basic dues are **$50**. You can register through our website http://friendsihs.org/Register.html or send a check directly to:

Friends of the Israel Heart Society
8912 Little Elm Bend
Skokie, IL 60076

Please include your email address to assure you do not miss an issue!

We are particularly grateful to those who can be sponsors at any one of the levels indicated below so that we may continue and increase our support of creating a bridge between Israeli Cardiology and the rest of the World:

$250 Silver member

$500 Gold member

$1,000 Platinum member

$5,000 President's Club

Your support enables us to continue growing our programs, including the ACC meeting, support for Israeli fellows to attend the AHA/ACC meetings, and to grow other programs.

For those who are interested in directed donations, we have the following opportunities:

$500 Sponsor an issue of the FIHS newsletter

$1000 Partial sponsorship of an Israeli fellow to attend the AHA meeting

$1000 Partial sponsorship of an Israeli fellow to attend the ACC meeting

$2500 Sponsorship of an Israeli fellow to attend the AHA meeting

$2500 Sponsorship of an Israeli fellow to attend the ACC meeting

We would like to thank our Platinum, Gold, and Silver Members for their past and future support! Thanks to all!

Friends of the Israel Heart Society
Thank You to our 2013 Sponsors

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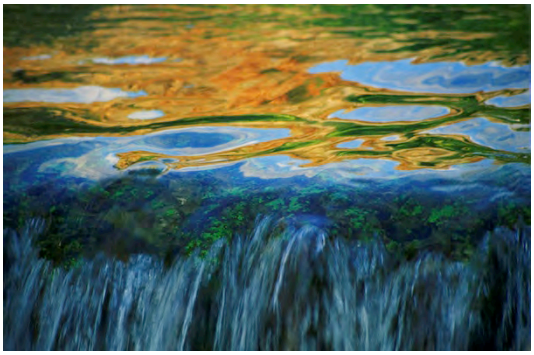


Banias Spring

Research

Thrombolysis Followed by Coronary Angiography Versus Primary Percutaneous Coronary Intervention in Non-Anterior ST-Elevation Myocardial Infarction

Roy Schwartz, MD, A. Teddy Weiss, MD, David Leibowitz, MD, David Rot, MD, Arthur Pollak, MD, Chaim Lotan, MD, Ronny Alcalai, MD
from Heart Institute at Hadassah- Hebrew University Medical Center, Jerusalem

Abstract: Background. Previous studies demonstrated the superiority of primary percutaneous coronary intervention (PCI) over thrombolysis for treatment of ST-elevation myocardial infarction (STEMI); however, this advantage is less evident in low-risk populations. The aim of this study was to assess whether a strategy of thrombolysis followed by routine coronary angiography in patients with non-anterior STEMI is non-inferior to primary PCI.

Methods. Consecutive patients with non-anterior STEMI presenting within 6 hours of symptom onset who received reperfusion treatment were included. Mortality, infarct size, and in-hospital and long-term major adverse events were compared between patients treated with primary PCI to those who received thrombolysis followed by coronary angiography and intervention as needed.

Results. A total of 300 patients were included: 180 who received thrombolysis and 120 treated with primary PCI. No significant differences were found in mortality, infarct size, or long-term adverse events between groups. Higher rates of in-hospital recurrent ischemic events and longer hospitalization were noted in the thrombolysis group.

Conclusions. The strategy of thrombolysis followed by routine coronary angiography in non-anterior STEMI patients results in major outcomes similar to primary PCI. Thrombolysis serves as a viable approach for patients presenting with non-anterior STEMI to hospitals without catheterization facilities. The optimal time between thrombolysis and coronary angiography should be within 2 days to avoid recurrent ischemia.

J INVASIVE CARDIOL 2013;25:632–636

http://www.invasivecardiology.com/articles/thrombolysis-followed-coronary-angiography-versus-primary-percutaneous-coronary interventio

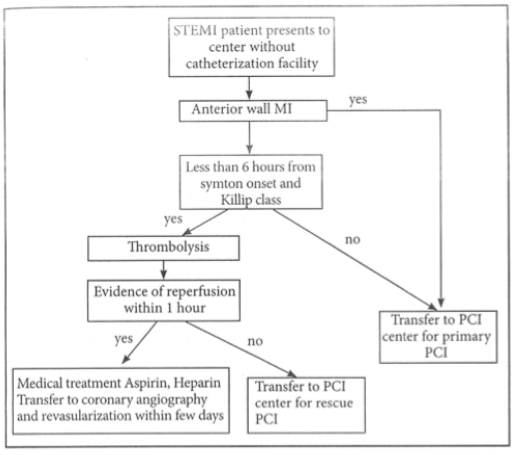


Figure 1. *Algorithm for management of patients with ST-elevation myocardial infarction that was used during the study period.*

Table 2. In-hospital outcomes.

Characteristic	Thrombolysis Group (n = 180)	PCI Group (n = 120)	P-Value
Death	2 (1.1%)	0 (0%)	.52
Recurrent ischemic event	17 (9.44%)	1 (0.8%)	.01
Recurrent MI	13 (7.2%)	1 (0.8%)	.01
Recurrent angina	4 (2.2%)	0	.15
Recurrent urgent intervention	2 (1.1%)	1 (0.8%)	>.99
Stroke	0 (0%)	1 (0.8%)	.40
Major bleeding	7 (3.9%)	2 (1.7%)	.33
LV function*			.73
Normal	47 (30.5%)	33 (37.1%)	
Impaired (>40%)	99 (64.3%)	50 (56.2%)	
Poor (<40%)	8 (5.2%)	6 (6.7%)	
Peak Troponin T (ng/mL)	3.4 ± 3.3	2.9 ± 2.6	.20
Peak CPK (U/L)	1838.6 ± 1774	1570.4 ± 1446.6	.15
Length of hospital stay (days)	8.8 ± 5.3	6.2 ± 2.5	<.01
2nd or 3rd degree heart block	11 (6.1%)	11 (9.2%)	.31

Data given as number (percentage) or mean ± standard deviation.
**Percentage of LV function groups was calculated out of 243 subjects with available data.*
MI = myocardial infarction; LV = left ventricle; EF = ejection fraction; CPK = creatine phosphokinase.

Table 4. Differences in outcomes between failed and successful thrombolysis.

Variable	Failed Thrombolysis (n = 34)	Successful Thrombolysis (n = 146)	P
Death during hospitalization	5.9%	0%	.04
LV function			.04
Normal (EF >55%)	29.6%	30.7%	
Impaired (EF >40%)	59.2%	65.3%	
Poor (EF <40%)	11.1%	3.9%	
1 year MACE	47.8%	22.9%	.02
Peak troponin T (ng/mL)	4.8 ± 4	3.1 ± 3	.06

Data given as number (percentage) or mean ± standard deviation. LV = left ventricle; EF = ejection fraction; MACE = major adverse cardiovascular events.

The effect of thyroid function on clinical outcome in patients with heart failure

Shmuel Chen, Ayelet Shauer, Donna R. Zwas, Chaim Lotan, Andre Keren, and Israel Gotsman*

Heart Failure Center, Heart Institute, Hadassah University Hospital, Jerusalem, Israel

Volume 16, Issue 2, pages 217–226, February 2014

http://onlinelibrary.wiley.com/doi/10.1002/ejhf.42/abstract

Aims

Thyroid dysfunction is known to effect cardiac function and is a risk factor for developing heart failure (HF). Data regarding the clinical significance of thyroid-stimulating hormone (TSH) levels alone as a predictor of outcome in patients with HF is sparse. We evaluated the significance of TSH on clinical outcome in a large cohort of patients with chronic HF.

Methods and results

Patients with a diagnosis of HF at a Health Maintenance Organization (n = 5599) were followed for cardiac-related hospitalizations and death. Median TSH levels were 2.2 mIU/L (interquartile range 1.4–3.5). We divided patients into quartiles based on TSH levels. Median follow-up time was 434 days and the overall mortality rate was 13.2%. Both a high and a low TSH level was associated with an increased mortality rate. Cox regression analysis after adjustment for other significant predictors demonstrated that the highest TSH quartile was associated with increased mortality compared with those with the lowest mortality [second quartile: TSH 1.4–2.2 mIU/L, hazard ratio (HR) 1.36, 95% confidence interval (CI) 1.08–1.71, P = 0.01]. TSH was also an independent predictor of death and cardiac-related hospitalization. Analysis of patients not on levothyroxine treatment (78%) demonstrated that TSH was an even stronger predictor of mortality (HR 1.54, 95% CI 1.17–2.03, P = 0.002). Additional analysis based on accepted clinical cut-offs of TSH demonstrated that increasing TSH levels above normal were independently associated with increased mortality and cardiac-related hospitalizations.

Conclusions

Increased TSH levels are associated with worse clinical outcome in patients with HF. Thyroid imbalance confers significant risk in HF and warrants attention.

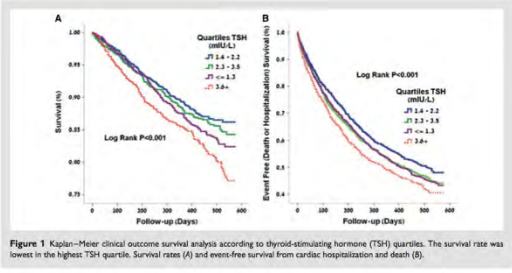


Figure 1 Kaplan–Meier clinical outcome survival analysis according to thyroid-stimulating hormone (TSH) quartiles. The survival rate was lowest in the highest TSH quartile. Survival rates (A) and event-free survival from cardiac hospitalization and death (B).

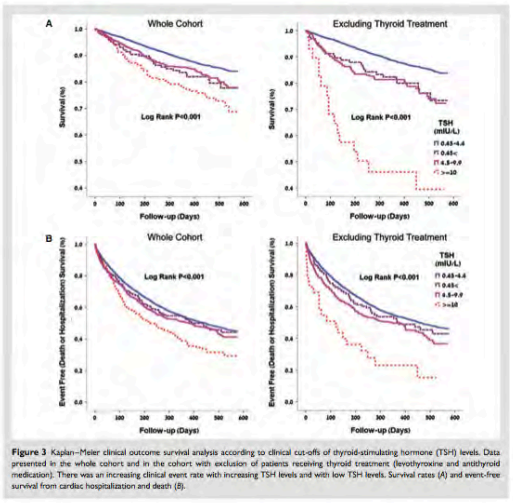


Figure 3 Kaplan–Meier clinical outcome survival analysis according to clinical cut-offs of thyroid-stimulating hormone (TSH) levels. Data presented in the whole cohort and in the cohort with exclusion of patients receiving thyroid treatment (levothyroxine and antithyroid medication). There was an increasing clinical event rate with increasing TSH levels and with low TSH levels. Survival rates (A) and event-free survival from cardiac hospitalization and death (B).

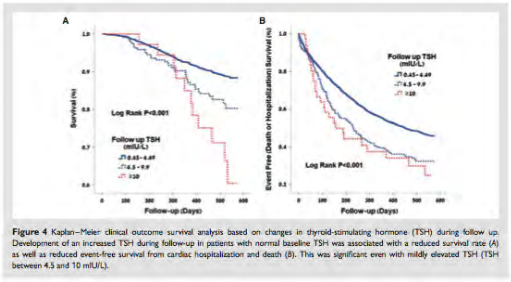


Figure 4 Kaplan–Meier clinical outcome survival analysis based on changes in thyroid-stimulating hormone (TSH) during follow up. Development of an increased TSH during follow-up in patients with normal baseline TSH was associated with a reduced survival rate (A) as well as reduced event-free survival from cardiac hospitalization and death (B). This was significant even with mildly elevated TSH (TSH between 4.5 and 10 mIU/L).

FIHS Sponsorship of 2 Cardiology Fellows to Attend ACC

The FIHS proudly sponsored 2 Israeli cardiology fellows to attend the recent ACC meeting in Washington, DC. The winners were Drs. Arie Steinvil and Elad Maor. The winners had to do the following:

- Be a member of the IHS

- Trainee in Cardiology or Board Certified Cardiologist since 2009

- Priority will be given to candidates whose work is accepted for presentationat the conference and candidates that have not received this grant in the past.

The following are their winning abstracts and descriptions:

The Impact of Carotid Artery Atherosclerosis on Cardiovascular Outcomes is Dependent on Pre-existent Coronary Artery Disease Status

Arie Steinvil MD MHA*, Ben Sadeh MD†, Maayan Konigstein MD*, Ofer Havakok MD*, Sharon Greenberg MD†, Natan M. Borenstein MD‡, Yaron Arbel* MD, Shmuel Banai MD*, Amir Halkin MD*
From the Departments of *Cardiology, †Internal Medicine, and ‡Neurology, Tel Aviv Medical Center affiliated to the Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel

Background: The presence of atherosclerotic lesions of the common and internal carotid arteries portends an adverse prognosis with respect to future coronary artery disease events across a broad clinical spectrum, spanning asymptomatic individuals with vascular risk factors to patients with manifest arterial disease[1]. In fact, progressive carotid artery stenosis (CAS) is reportedly a stronger predictor of imminent myocardial infarction (MI) than of future cerebrovascular events[2]. Current cardiovascular (CVD) prevention guidelines define patients with carotid plaque on ultrasound as being at very high risk (10-year risk of fatal CVD or SCORE ≥10%) and recommend screening carotid Doppler ultrasonography for asymptomatic patients at moderate risk[3]. However, previous outcome studies relating the presence of atherosclerotic carotid lesions to the risk for future coronary events have varied methodologically in their definitions of carotid atherosclerosis (CA) and coronary artery disease (CAD). Furthermore, the relative impact of CAS on the risk of subsequent coronary events in patients with vs. those without angiographically defined CAD is unknown.

Objective: We sought to examine the differential impact of carotid artery stenosis (CAS), as defined from consensus guidelines[4], on the risk of all-cause mortality and major adverse cardiovascular events (MACE) in patients with vs. those without preexistent coronary artery disease (CAD) as defined by coronary angiography.

Methods: We conducted a follow-up survey of 1,390 patients from a previous cohort of our group[5], who underwent non-emergent coronary angiography and same day carotid ultrasound and Doppler study, between January 2007 and May 2009 in a university affiliated tertiary medical center. Follow-up was performed by means of physician initiated telephone interviews, as well

as hospital records review. The components of MACE were defined as follows: all cause-death, MI, stroke, and any revascularization procedure performed ≥30 days following the index date. Follow-up time was defined as the time period between the coronary angiography and either the date of death, MACE, or the survey date. Carotid artery stenosis was defined by means of either peak systolic velocity of the internal carotid artery or the presence of an atherosclerotic plaque[4].

Results: Of 1,391 patients, angiographic CAD was present in 1,105 (79%) patients. Mean and median follow-up was 1,574 and 1,702 days, respectively. Rates of the primary composite MACE endpoint were higher among patients with CAD compared to those without CAD (48% vs. 20%, p<0.001), whereas the rates of all-cause mortality (10 % vs. 9 %, p=0.81) and stroke (7% vs. 5%, p=0.3) did not differ significantly between both groups. CA and CAS were associated with an increased risk of the composite MACE endpoint among patients without CAD (HR=3.17 [95%CI 1.52 – 6.60], p<0.01; and, HR=1.69 [0.95 – 3.01]), p=0.07], respectively), though not in patients with CAD. CAS was associated with an increased risk of all-cause mortality among patients without CAD (HR=2.93 [1.09 – 7.87], p=0.03]), though not among those with CAD.

Conclusions: CA and CAS are independent predictors of MACE in patients undergoing coronary angiography. The prognostic implications of carotid disease are imparted predominantly in patients without preexistent CAD.

Table. Multivariate Cox proportional hazard ratios for all-cause mortality and MACCE among patients stratified by coronary and carotid disease status

	I	II		III		IV	
	Coronary disease absent Carotid disease absent	Coronary disease absent Carotid disease present		Coronary disease present Carotid disease absent		Coronary disease present Carotid disease present	
Outcome	*HR*	*HR (95%CI)*	*p.*	*HR (95%CI)*	*p.*	*HR (95%CI)*	*p.*
CAS (>50%)							
All-cause mortality	Ref.	2.93 (1.09 – 7.87)	0.03	1.05 (0.63 – 1.78)	0.84	1.32 (0.71 – 2.45)	0.38
MACE	Ref.	3.17 (1.52 – 6.60)	<0.01	2.40 (1.69 – 3.40)	<0.01	2.73 (1.81 – 4.12)	<0.01
CA							
All-cause mortality	Ref.	1.05 (0.47 – 2.35)	0.89	0.76 (0.366 – 1.61)	0.48	1.05 (0.54 – 1.03)	0.88
MACE	Ref.	1.69 (0.95 – 3.01)	0.07	2.45 (1.54 – 3.91)	<0.01	2.88 (1.83 – 4.55)	<0.01

* Patients stratified by CAD and CAS/CA status (columns II-IV) are referenced to patients with neither CAD nor carotid disease (column I). The covariate-adjusted models were analyzed for CA and CAS separately (see Methods section for definitions). Covariates used were: age, gender, hypertension, diabetes mellitus, hyperlipidemia, smoking history, history of myocardial infarction or coronary artery bypass grafting at the index event.
† Abbreviations: CA=carotid atherosclerosis; CAS= carotid artery stenosis; CAD=coronary artery disease; HR=hazard ratio; CI=confidence interval; MACE=major adverse cardiovascular events

Figure 1. Kaplan-Meir unadjusted curves stratified by presence of CAD, CA and CAS. Left graphs display all cause mortality and MACE stratified by presence of carotid atherosclerosis (defined as presence of any visible carotid plaque) and/or presence of CAD. Right graphs are stratified by carotid stenosis > 50% and/or presence of CAD.

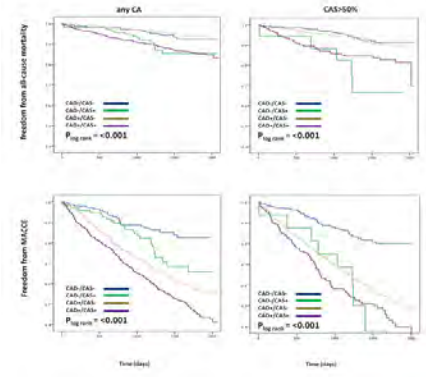
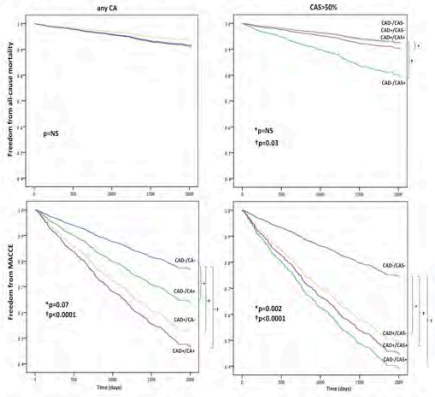


Figure 2. Covariate adjusted Cox regression results stratified by presence of CAD, CA and CAS. Left graphs display all cause mortality and MACE stratified by presence of carotid atherosclerosis (defined as presence of any visible carotid plaque) and/or presence of CAD. Right graphs are stratified by carotid stenosis > 50% and/or presence of CAD.



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My name is **Dr. Elad Maor** and I am currently a cardiology fellow and a member of the Talpiot Medical Leadership Program, both at the Chaim Sheba Medical Center (Tel-Hashomer). I received my MD from the Ben-Gurion University of the Negev, and before joining Sheba Medical Center, I completed a PhD in Biophysics at the University of California, Berkeley. My main areas of research include cardiovascular hemodynamics, biophysics and endovascular medical devices. I applied for the 2014 FIHS travel award in order to present my research at the ACC Scientific Session. Under the guidance and mentorship of Dr. Amit Segev, the secretary general of the Israeli Heart Society, we evaluated the diagnostic role of exercise hemodynamics among patients with pulmonary hypertension. Our research was accepted for oral presentation and was chosen to open the session titled "Pulmonary Hypertension and Pulmonary Thromboembolic Year in Review".

Heart failure with preserved ejection fraction can lead to pulmonary hypertension. The aim of our study was to evaluate the role of exercise during right heart catheterization in the unmasking of diastolic dysfunction. Between 2004 and 2012, 200 symptomatic patients with exertional dyspnea, preserved left ventricular systolic function and suspected pulmonary hypertension, underwent right heart catheterization. Included in the study were 63 patients with resting pulmonary arterial wedge pressure (PAWP) ≤15 mmHg. Patients were divided to three tertiles based on their peak exercise PAWP. Mean age was 60±20 years and 29% were males. Mean pulmonary arterial pressure was 31±14 mmHg at rest and 42±18 mmHg at exercise. Mean change in PAWP between rest and exercise was 0.0±4.3, 4.6±2.4, and 16.6±7.1 mmHg in the

lower, middle and upper tertiles, respectively ($p<0.001$). Higher exercise PAWP tertiles were associated with reduced pulmonary vascular resistance (8.3±6.7, 2.9±2.7 and 5.8±4.6 woods units, respectively; $p=0.004$). A multivariate linear regression model demonstrated that each 5 kg/m^2 increase in body mass index was associated with 2.5±1.0 mmHg increase in exercise PAWP ($p=0.017$). A multivariate binary logistic model showed that subjects with borderline PAWP at rest (12-15 mmHg) were 4.5 times more likely to be in the upper tertile of exercise PAWP ($p=0.011$). We concluded that in symptomatic patients with pulmonary hypertension, preserved left ventricular ejection fraction and PAWP ≤15 mmHg, exercise during right heart catheterization may unmask diastolic dysfunction. This is especially true for obese patients and patients with borderline resting PAWP. "

Highlighting Joint Programs

This section highlights ongoing Interchange Programs taking place at American sites. Thanks to Board member Richard Popp for directing this program and allowing us to publicize it:

Feldman Family Foundation Visiting Professors Program

Stanford University School of Medicine, Palo Alto, California, USA

Program Director: Richard L. Popp, M.D.

Purpose: The aim of the professorship is to allow senior Israeli faculty physicians, in the mid-portion of their careers, to have sufficient time away

from clinical duties to update their general skills and/or to acquire specialized knowledge that they will transmit to their colleagues and students on their return to Israel. Physicians from any field may apply. Each visiting professor will have a program tailored to his or her needs by the Program Director and a collaborating Stanford Faculty sponsor, who will ensure the quality of the visiting professor's day-to-day activities. The experience of living in the United States for 6 months is an additional aspect of the program. If you are a faculty member of an Israeli Medical School please contact Dr. Popp at rich.popp@gmail.com and he will give you the contact person's name at your program.

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I would also encourage Israeli programs to let our membership know about happenings and offers for training in Israel: Please email these to me at jackstroh@usa.net.

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ACC 2014

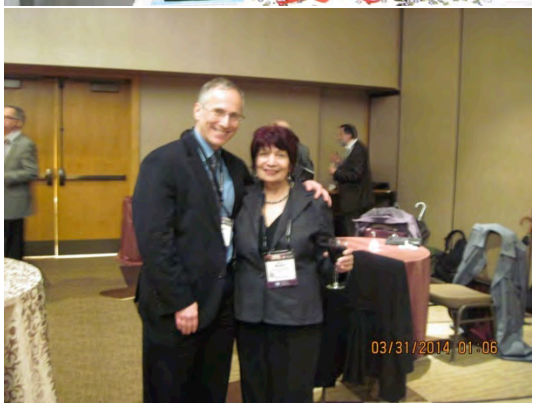
We are just back from ACC and our wonderfully attended annual Friends of the Israel Heart Society Reception at the Grand Hyatt. Included was the presentation of the Annual Richard S. Meltzer Memorial Award presented by Douglas Zipes to Batia Ziv for presentation at the 61st Annual Conference of the Israel Heart Society in May (see elsewhere in the Newsletter for details). The Meltzer Award is presented yearly to an Israeli cardiologist who has distinguished his/herself in cardiology research to further their training at a US institution. This year's winner is Dr. Arie Roth, Director of the Cardiac Intensive Care unit, Tel Aviv - Sourasky Medical Center.

Special guests were Dr. John Harold, President of the ACC, and Dr. Fausto Pinto, President elect of the European Society of Cardiology.

The following are pictures from the evening, as well as from the IHS booth at ACC. For the few of you who missed it, come by next year in San Diego! And ask Batia for some delicious Israeli Halva!!

Drs. Rozenman, Stroh, and Segev at the IHS booth at ACC

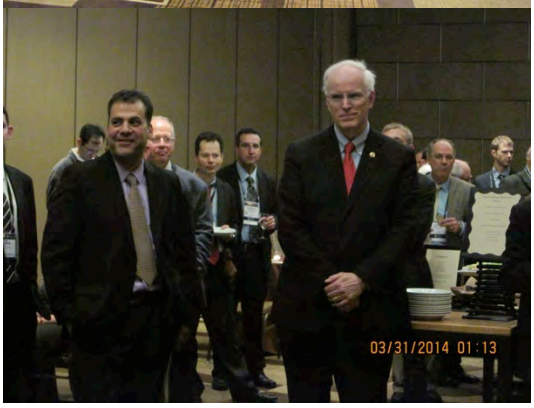
The Incomparable Stan Hillis and his band



ACC President John Harold and FIHS Founding President Douglas Zipes

Jeff Goldberger, Giora Weisz, Douglas Zipes, and Gregory Schwartz

Presentation of the annual Richard Meltzer Award, Accepted by Batia Ziv on behalf of the IHS, for presentation at the 61st Annual IHS Meeting



IHS President Yosef Rozenman

NEWSLETTER OF THE FRIENDS OF THE ISRAEL HEART SOCIETY

ACC President John Harold

NEWSLETTER OF THE FRIENDS OF THE ISRAEL HEART SOCIETY

President Jeff Goldberger with FIHS Travel Award winners Arie Steinvil and Elad Maor

Join us next year at ACC 2015 in San Diego!

FIHS Heart Beats

This issue we will highlight a new Cardiology App for Iphone and Android phones which that will help save lives on the go, wherever they may be travelling. Consultants involved in this App include Dr. Jack Stroh in America and Drs. Jonathan Balkin and David Meerkin in Jerusalem.

http://www.best10apps.com/apps/cathmaps-for-medical-professionals-,807401579/

A great time was had by all!

Description of CathMaps+ for Medical Professionals

CathMaps+ is the cardiologist-approved mobile app for people with cardiac history that integrates their cardiac medical records with an interactive map of catheterization facilities around the world, thus allowing them to live their lives with greater freedom & peace of mind.

Created by a cardiology patient for cardiology patients, CathMaps+ was developed with input from numerous cardiology experts including **Dr. Jack Stroh (MD, FACC, FACP, FSCAI), Dr. Jonathan Balkin, & Dr. David Meerkin** to help save precious minutes in a cardiac emergency. The app provides tailored emergency tools in case of a follow-up cardiac incident, allowing users to securely access, manage, and share their medical records with friends & family, and locate the nearest cath labs in many countries around the world.

THE CATHMAPS+ APP PERFORMS THE FOLLOWING FUNCTIONS:

• Dial Emergency Services: At the press of a button, CathMaps+ automatically identifies and dials the local emergency phone number wherever you are in the world. This functionality is especially important for travelers.
• Locate the Nearest Cath Labs: CathMaps+ provides directions to the closest Cath Lab wherever you are through other apps like Google Maps & Waze, as well as contact details and other information for these facilities.
• Store & Share Your Cardiac Medical History with Doctors: Upon arrival at a Cath Lab, it is vital that the medical personnel have access to your full medical history (cardiac and otherwise) to ensure more informed, personalized, and effective treatment. With CathMaps+, this information is instantly available and easily shared upon arrival at a medical facility or in advance through email. Your medical

history can then be easily updated after each visit to a clinic or cardiologist.
• Share with Family Members: Often in the case of cardiac events, patients are unable to perform life-saving functions on their own. In such situations, a family member or friend may accompany you to the hospital. The CathMaps+ app allows you to share your medical records with a friend or family in advance, so they can share the information with doctors in an emergency situation.
• Update Medical Records: You can easily update your medical records at any time by simply entering the details of recent appointments, medication changes, or other medical episodes. You can also scan or take a photo of important documents such as an EKG from your phone and upload them to the app.

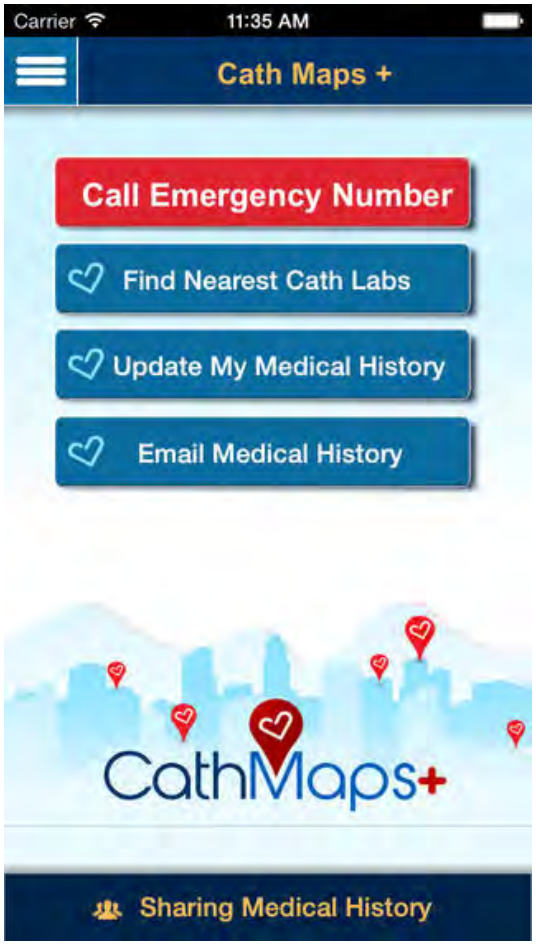
CATHMAPS+ PROVIDES PEACE OF MIND

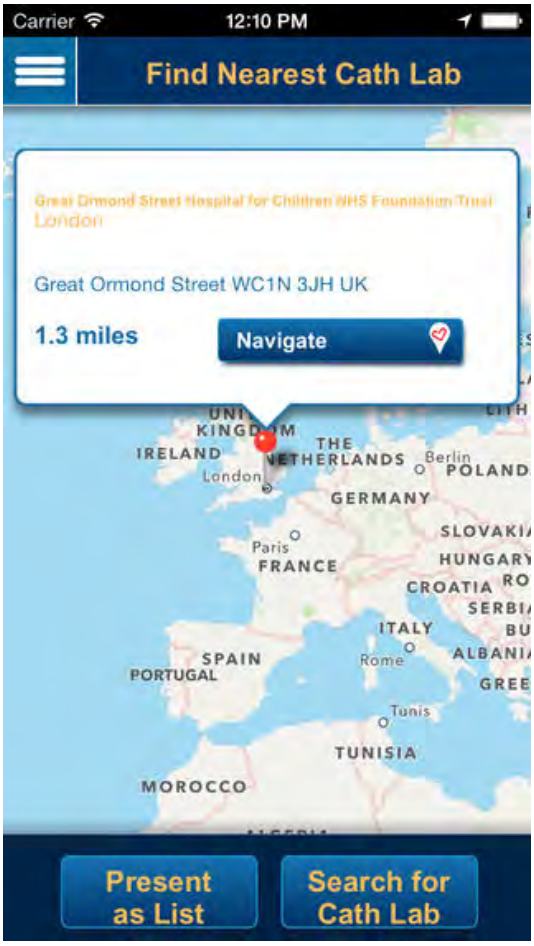
• Security and preparedness for cardiac patients, especially when traveling
• Loved ones will have access to your medical history
• Doctors will have your most current and up-to-date medical records
• HIPAA compliant thus ensuring your medical history is secure
• Designed to be a vital, reliable resource in time of emergency

CATHMAPS+ CAN HELP SAVE LIVES IN AN EMERGENCY

• The *only* global map of Cath Lab facilities
• Supports immediate local emergency dialing in most countries around the world
• Allows users to access and share their medical records with a Cath Lab in advance via email, allowing better treatment by the cardiologist

CathMaps+ is available in English and Spanish, and additional languages should be released throughout 2014.





That's it for this issue of the newsletter of the Friends of Israel Heart Society. Special thanks as always to Mort Lebowitz MD and Batia Ziv for being our "eyes and ears on the ground" in Israel. Special thanks

in America to our Society Administrators- Janice and Larry Brown!

Have any ideas to make this a better tool for our Society? Share them with us!

Tell your friends that we want them to join our mission to be a bridge between Israeli Cardiology and the world. If you have any questions, comment, criticisms (my favorites!) please email me at jackstroh@usa.net.

Happy Passover!!

Friends of the Israel Heart Society

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