

Rambam

ISSUE No. 14 | September 2014

on call

75
YEARS
YOUNG

Rambam
gears up for
**THE NEXT
QUARTER
CENTURY**

When
LOSING YOUR VOICE
Is an
**OCCUPATIONAL
HAZARD**

Is it or Isn't it
A HEART ATTACK?
The answers may surprise you

TREMOR NO MORE
Cutting-edge treatment
for Parkinson's
without the cutting



RAMBAM
Health Care Campus
Creating the future of medicine.



Dear Friends,

The recent inaugurations of the Sammy Ofer Fortified Underground Emergency Hospital and the Ruth Rappaport Children's Hospital, are vivid reminders that our greatest achievements - whether in medical science, or in building a world-class health care center - are the fruit of long years of dedicated and collective effort. Indeed, the extraordinary new chapter that opened this past year in the Rambam Health Care Campus is the culmination of over a decade of vision, planning and partnership.

Our recent Rambam Summit and Rambam Awards ceremony provided an excellent opportunity to acknowledge how far we have

come, and to honor those exceptional individuals who supported us along the way. The unique and essential contribution of each of our Award recipients provides ample proof that shoulder-to-shoulder, we can move mountains.

The Jewish New Year is another milestone for pause, recognition and expressing our gratitude to each one of our friends around the world. Your interest, visits, and devoted partnership place Rambam at the heart of a vast, supportive community. The conflict we experienced this past summer was a grim reminder of the essential need for emergency preparedness, and the importance of friends, both near and far, during times of unrest.

In the year to come, may we realize the joy and satisfaction of helping humankind, alongside health and happiness in our closest circles.

Yours,

PROF. RAFI BEYAR

R. Beyar

Director and CEO
Rambam Health Care Campus

**שנה טובה
בריאה ומתוקה**

**A SWEET,
HEALTHY AND
HAPPY NEW YEAR**

R. Beyar
Professor Rafi Beyar
Director & CEO
Rambam Health Care Campus

רמב"ם
הקריה הרפואית לבריאות האדם

תשע"ה

רמב"ם

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Letters to the Editor:
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Photography:
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Departmental Rounds

Adult Diabetes Coordination

Rachel Shental, Adult Diabetes Coordinator, 44 years old, married + 3



1 What does your work entail?

As the Diabetes Coordinator, I teach patients and staff in our department how to treat people with diabetes whose condition has been destabilized because of their hospitalization. The work entails meetings with patients who were referred to us by the hospital staff. In our meeting, I help them develop a personalized approach in response to each patient's needs.

2 What other responsibilities do you have besides treating patients?

I am involved in several projects related to diabetes treatment that are taking place in the hospital. I hold training sessions and lectures, and circulate updates for the department team. My main goal is that every nurse will understand the principles of diabetes treatment and the changes needed in lifestyle, so they can guide the patients accordingly. In addition, with the Diabetes Clinic staff, I prepared an informational booklet for the staff and patients.

3 What kind of relationship do you have with patients?

I work closest with the patients who are newly diagnosed with the disease, whose condition requires that they begin insulin treatment. These patients receive my cell phone number and are encouraged to call me when they feel the need, and I provide them with personal and professional guidance. Often the relationships develop when they come to the Diabetes Clinic for checkups and treatment.

4 How did you decide to become a Diabetes Coordinator?

I worked as a nurse for 15 years in the Internal Medicine "D" Department, mainly with intubated patients, and for many years I trained nursing students and new nurses. When I was offered the job of Diabetes Coordinator, it seemed like a natural career development, as well as a challenge and opportunity to influence patients and nurses throughout the hospital.

5 What is the most important message you relate to the nurses you train?

I believe that the nurse's job doesn't end with following a doctor's orders. A nurse must also establish meaningful communication with the patient and his or her family, in order to understand their unique needs. Thus, I always emphasize to nurses that they should work in partnership with the patient and their family when making decisions and deciding upon the optimal treatment.

6 Difficult moments at work?

It makes me sad to see patients who have neglected treating their diabetes over long periods, and who come to us suffering from complications of the disease that seriously affect their quality of life.

7 Uplifting moments at work?

It is very satisfying to meet patients who first came to me fearful and anxious after they were diagnosed, and then to meet them several weeks later, relaxed, confident and feeling that they have the tools to cope with their condition. Many times patients thank me for my guidance and support that helped them overcome their fears and taught them how to live with their illness.

24/7**In the Department of Medical Imaging**

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23:30 The CT Unit prepares to receive three patients injured in a severe, head-on car accident. The technician, Aliza Turgeman prepares them for full body CT scans.

01:00 The on-duty trauma specialist arrives at the CT Unit with a young man who fell from the fourth floor. The image reveals bleeding in one of his pelvic arteries. Nurse Ilana Bardichevsky immediately calls in Dr. Igor Kogan, Head of the Critical Endovascular Radiology Service, who finds the artery and stops the bleeding. The youth is saved.

10:00 A man in his fifties is sent to the CT Unit from the Emergency Department after experiencing pressure in his chest during his morning run. EKG test results were normal and it was decided to perform a CT scan of his heart. Dr. Sobhi Abadi examines the CT image, which shows serious clogging of the main artery of the heart.

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11:30 An adult patient with sepsis of an undetermined cause is sent from the Emergency Department for an ultrasound examination of his stomach. The procedure reveals a severe infection of the gall bladder requiring urgent draining. The radiologist, Dr. Nira Beck Razi, drains the gall bladder under sonographic guidance.

13:30 The Ultrasound Unit is notified of a four-year-old child with swollen glands and suspicion of lymphoma who needs to undergo a biopsy under sonographic guidance. Dr. Anat Ilivitzki, Head of the Pediatric Radiology Unit, assisted by Technician Hadas Ben Haim, performs the procedure. The child is diagnosed with Hodgkin's Lymphoma and the immediate treatment leads to an excellent response, which is a cause for great hope.

19:15 An eight-year-old girl who suddenly lost consciousness is sent from the Emergency Department for a brain CT scan. The head radiologist, Limor Badash, checks the child and discovers a piece of shrapnel in her brain, probably from a shooting during festivities in her village. She is transferred immediately for surgery to remove the foreign object.

"We haven't experienced such a massive building initiative at Rambam since the 1970's." Prof. Rafi Beyar, Director and CEO of Rambam Health Care Campus, at the West Campus site.



at the Medical Forefront

A building boom,
infrastructure upgrades,
emergency preparedness
and medical research are
just some of the outstanding
accomplishments and
ambitious plans underway at
Rambam these days.

The largest medical center
in Northern Israel celebrates
three-quarters of a century,
without missing a beat.

Eti Dor >> Photography:
Jonathan Bloom





Model of the fully developed Rambam Campus upon completion of the West Campus



Rambam is on its way to becoming one of the leading academic hospital in the world, integrating excellent medicine and a technological cutting edge for the benefit of humankind in Israel and the world,” declared Prof. Rafi Beyar, Director and CEO of the Rambam Health Care Campus, marking 75 years as the largest medical center in Northern Israel.

“And how will we achieve this ambitious goal? Through research and development and investment in human resources, including training students and interns,” Beyar explains, “and by recruiting researchers, specialists and department heads from among the leaders in the country.” All this is complemented by a far-reaching building plan that includes infrastructure upgrades, investment in advanced equipment and technologies, and preparedness for emergency situations.

On the occasion of Rambam’s 75th anniversary, we conducted a comprehensive survey of the developments and innovations that have made Rambam one of the leading hospitals in the world.

The vision for Rambam’s expansion can be found in the Strategic Plan that was put together over a decade ago. “In designing the multi-year development plan, we took into consideration the future needs of the hospital,” says Prof. Beyar. “It was obvious at the time that we had to create new hospitalization facilities. The severe shortage

of bed space dictated that. But it was also clear from the beginning that, without any connection to a specific timetable, the Pediatrics, Internal Medicine, Oncology, Cardiovascular Diseases, and Surgery Departments would all need strategic development.”

With the completion of the Strategic Plan scheduled for 2018, the area covered by the hospital is expected to double, from 102,000 to 204,000 square meters, and will include the underground hospital, three new clinical buildings, and a tower dedicated to research, as well as green spaces to be enjoyed by patients, staff and visitors.

The region’s tenuous security situation presents additional challenges which had to be taken into account in the Strategic Plan. After the Second Lebanon War, during which the hospital operated under fire, an ambitious plan to establish a secure, underground hospital was developed and carried out through a generous gift from the late Sammy Ofer. The plan incorporated a unique strategic solution - construction of an underground parking area which could be transformed into a hospital during an emergency. Two floors of the parking lot were designed to accommodate 2000 beds in the protected hospital, which can serve as a regional facility during an emergency and enable treatment of patients and casualties while under fire, including non-conventional weapons.



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Developing Infrastructures

Above the Western campus, three new clinical buildings are in various stages of planning and construction. The first, the new Ruth Rappaport Children's Hospital, which just opened its doors this summer, was established through a donation by the late Bruce Rappaport and his wife Ruth. "Their exceptional gift met the critical need," says Prof. Beyar.

The second building is the Joseph Fishman Oncology Center; funds for its construction were a generous gift from the late Joseph Fishman and his family, who, according to Prof. Beyar, perceived the challenging conditions experienced by cancer patients at Rambam. The Center will accommodate and provide advanced treatments to all cancer patients, and is expected to open during 2015.

The third building is a center for the treatment of cardiovascular diseases. While it is still not clear when it will open, according to Prof. Beyar the search for a donor for the project is ongoing.

Set in the middle of these three centers, a Biomedical Discovery Tower for biotechnological innovation is planned. The new facility is expected to serve the needs of Rambam physicians as well as biotechnology and hi-tech companies, and will also house six centers of research excellence focusing on cardiovascular diseases, oncology,

brain research and diseases, genomics and genetics, diabetes and obesity, and surgical innovations. Establishing the new Tower also depends on securing the necessary financing, although Prof. Beyar hopes that within 3-4 years its doors will open as well.

Rambam also recently established new research laboratories in the field of hemato-oncology. Furthermore, in recent years the research equipment and treatments in this department were significantly upgraded. Additionally, all of the hospital's imaging systems were upgraded, and three new CT systems were recently purchased. "We have upgraded all our diagnostic capabilities in the fields of brain, trauma and intensive care," says Prof. Beyar. "We improved the level of treatment cancer patients receive through the purchase of a new accelerator that can precisely deliver radiation to brain and other tumors."

"Three years ago we introduced the "da Vinci" Surgical Robot to Rambam where it revolutionized the way we perform urologic procedures. Since then our doctors have adopted it for general surgery, ear, nose and throat, and pediatric applications. In my opinion this is the future of surgery in the world, and Rambam is number one in the country in the field."

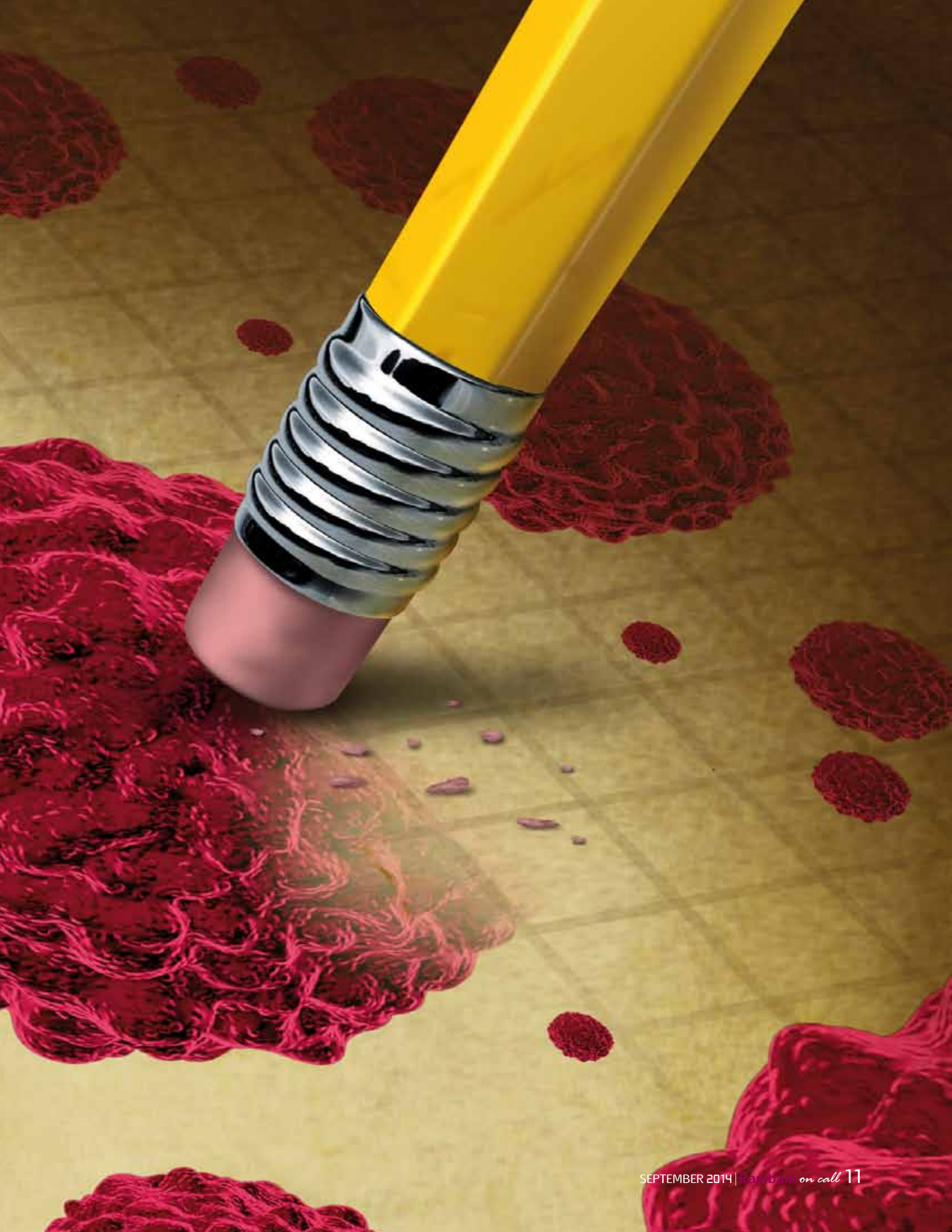


When Cancer Prevention Cures

While there is still no magic cure for cancer, in the Gastro-oncology Unit, it's known that most cancers of the digestive system can be prevented through screening and monitoring.

>> Erela Tarlev Ben-Shahar







Like a lightning bolt out of the blue,” is how many people first diagnosed with cancer describe the moment they received the bitter news. Yet the many remarkable breakthroughs in medical science are bringing us closer to the day when the number of people who receive these distressing tidings will be radically reduced.

Already today, in many cases experts in the field can predict who among us is at higher risk of developing cancer. But the progress doesn't stop there. Early diagnosis can prevent not just the unpleasant surprise of disease, but often the disease itself, as we can see from the work being done in the Gastro-oncology Unit at Rambam Health Care Campus, where people at high risk of developing colon cancer are sent for referral.

“People who are identified as being at a high risk are sent here for an initial screening test which reveals pre-cancerous processes at a stage that they can be treated, before they have developed into malignant growths,” explains Dr. Elizabeth Half, Head of the Unit. “The purpose is, in fact, to discover evidence of changes even before they become growths, or in the early stages of development, when they can be fully treated.”

So what exactly constitutes a high risk of developing this type of cancer? And who is at risk? How can we know if we are at risk, and what should we do? Dr. Half and her colleagues provide the answers to these questions about the screening tests performed in her unit used to identify people at high risk of developing colon cancer.

Risk Management

The screening process begins with the creation of a profile of the patient according to specific criteria, such as a past history of colon, uterine, ovarian or urinary tract cancer, particularly if they occurred at a young age. Individuals whose parents or siblings had colon cancer or colon polyps are also at a high risk. “Suffering from infectious diseases of the colon over long periods of time also places people at a greater than average risk,” Dr. Half emphasizes. In such cases, patients may be evaluated by the unit's Genetic Consultant, Nitzan Sharon-Schwartzman, who can decide that they should undergo genetic testing at the Adult Genetics Clinic at Rambam Health Care Campus.

What are the genetic syndromes that increase the risk of colon cancer? Dr. Eyal Dinstein, head of the Adult Genetics Clinic, explains: “Today several syndromes are known of, where changes in a single gene increase the risk of colon as well as other cancers. Each one of them increases the chances of developing the disease at a different rate and requires a different type of monitoring. The most common syndrome is called “Lynch syndrome”, which increases the risk not just of colon cancer but of other types of cancer as well, mainly of the uterus and urinary tract. Another common syndrome is known as FAP (Familial Adenomatous Polyposis). While it is rare, those who develop this syndrome know for certain that they will develop colon cancer at a young age, and thus preventive surgery to remove the colon is the elective treatment.



Dr. Half and Nurse Sasha during a colonoscopy examination.

The Self Prevention Option

So what does someone do when they know they are at a high risk of one of these types of cancer? After all, there is no vaccine to prevent cancer. "It is important to understand," emphasizes Dr. Half, "that colon cancer can be prevented. That is because it starts out as a polyp, which is a non-cancerous growth. And not only that, but in most cases it takes many years, sometimes decades, until it becomes cancerous (although for people with certain conditions, the process is much faster). When a polyp is removed at a stage before it has turned cancerous, in effect, the cancer is prevented." Thus after diagnosis, a monitoring plan is developed for the patient in accordance with their personal situation (presence of polyps or a personal or family history of cancer), and according to any specific genetic syndromes that were identified and the types of diseases they are associated with.

The monitoring plan outlines recommendations for screening tests, their frequency and in rare cases in which a genetic syndrome entails a 100% risk of developing cancer, the plan can even include a recommendation for preventive surgery to remove the colon. The monitoring plan, in fact, provides important information not just for the patient but also for their treating physician and health insurance provider, as this diagnosis indicates that they will need to plan for more intensive monitoring, which will save the need for surgery and chemotherapy treatments in the future. ■

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Medical consultants:



Dr. Elizabeth Half is Head of the Gastro-oncology Unit at Rambam Health Care Campus



Dr. Eyal Dinstein is Head of the Adult Genetics Clinic at Rambam Health Care Campus.


Foiling Glaucoma

The Silent Thief of Sight

Glaucoma patients once lived under the terrible threat of blindness. New and effective treatments developed over the past decade – including several Israeli innovations – are helping shine light into the darkness.

Eti Dor >> Photography:
Jonathan Bloom



A photograph of two surgeons in an operating room. They are wearing green surgical scrubs, blue bouffant caps, and white masks. They are both looking through a large, white surgical microscope. The surgeon in the foreground is holding a small surgical instrument. The background shows a tiled wall and some medical equipment.

Prof. Blumenthal
(center) in the OR

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A

fter piercing pains in her left eye were too disturbing to ignore, Esther, a woman in her 60s, made an

appointment to see an eye doctor. Although she had never suffered from eye problems before, the doctor referred her urgently to the Emergency Department at Rambam Health Care Campus. In short time, the Director of the Ophthalmology Department, Prof. Eytan Blumenthal, diagnosed Esther with glaucoma.

"Glaucoma is a disease that causes irreversible damage to the optic nerve, a condition which can ultimately lead to total blindness. Since the type of glaucoma affecting Esther does not lend itself to pharmaceutical or laser treatments, we performed a surgical procedure, supported by some of the most advanced technologies available," Prof. Blumenthal explains. "Happily, the surgery was a success."

Esther's experience was not unique. Glaucoma occurs in about 4% of the population over 40, and is one of the three main causes of blindness worldwide.

"Glaucoma is caused by elevated pressure within the eye that can result in significant damage to the optic nerve. This can detrimentally affect the field of vision, and ultimately the sharpness of focus in that eye, sometimes to the point of blindness," Prof. Blumenthal explains. "In most cases, there are no symptoms at the early and middle stages of the disease. This means that, without an eye doctor's exam, the disease can develop and cause significant damage without the person realizing that something is wrong. Early detection by an ophthalmologist, periodic eye exams and appropriate treatment are the most effective ways to prevent damage to the optic nerve

and blindness," Prof. Blumenthal emphasizes. "We need to remember that the damage caused before diagnosis of the disease is irreversible."

Who should be tested and when?

It is recommended that everyone over the age of 40 should have their eyes tested every two-three years, and those who are at high risk should be checked once a year (see box). Because the disease develops without symptoms, glaucoma is often termed "the silent thief of sight."

Innovation out of Israel

According to Prof. Blumenthal, over the last 10-20 years there have been significant breakthroughs in the treatment of glaucoma, with a number of these new developments originating in Israel. "Some 50% of the new treatments in the field of glaucoma in the past decade are the fruits of Israeli development," he says. "Outstanding among them is the new laser treatment "SLT", developed by Lumenis, a leading Israeli laser technology company. Until now, SLT was available mainly at private clinics, although we have recently added it to the treatments available at Rambam, through the public health system."


Laser Treatment using SLT

SLT treatment is administered using low but widely dispersed laser energy which operates selectively on pigment-rich tissues located in the angles of the eye, with practically no side effects or damage to the tissue. The technique is found to be effective in 70%-80% of patients. Anesthesia is administered with eye drops, and the patient returns home after the treatment. For most people, the effects of the treatment last for about 5 years.



CO2 Laser Surgery

A new technology recently developed in Israel uses CO2 laser technology to improve glaucoma surgery. Prof. Blumenthal: "Here too is another Israeli innovation, where laser technology is used to create a drain in the surface of the eye to release the intraocular pressure. The important advantage of this system is its ability to control with microscopic precision the amount of tissue that is affected, which facilitates recovery and improves the outcomes of the surgery. The procedure is performed in the operating room, usually under local anesthesia, and shortly afterwards the patient returns home."

"There are patients with severe glaucoma, for whom medications and/or laser treatments don't succeed in stabilizing the condition," explains Prof. Blumenthal. "Furthermore, there are patients who don't experience extreme pressure within their eye, yet the damage progresses to such an extent that they are at risk of blindness. For this reason, they need surgical intervention." 

Do You Know

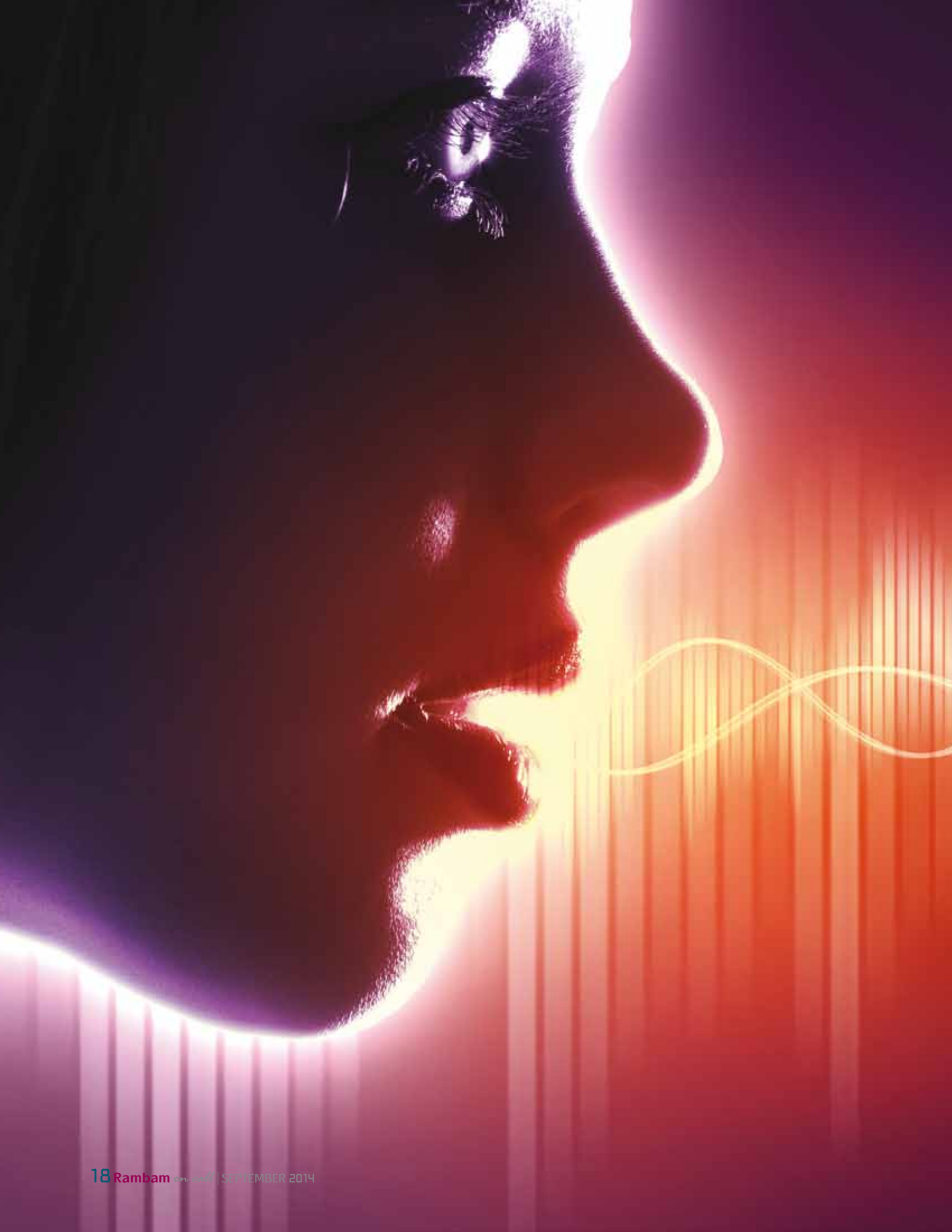
Who is at high risk for glaucoma?

- Individuals with a family history of glaucoma
- Individuals with diabetes
- Individuals with extreme myopia (nearsightedness)
- Individuals who have undergone eye surgery
- Individuals taking prescription medicines such as steroids, over the long term
- Women are at slightly higher risk than men of developing primary open-angle glaucoma and at significantly higher risk than men (2-3 times as high) of closed-angle glaucoma

Medical consultant:



Prof. Eytan Blumenthal is Director of the Ophthalmology Department at Rambam Health Care Campus.



The **Voice** **Squad**

Why does our voice sometimes sound raspy, hoarse or breathy? And what are the newest approaches that Ear, Nose and Throat specialists are using to help find our voice when we've lost it?

>> Erela Tarlev Ben-Shahar



One of the advantages of the technological revolution is that it gives our voices a rest and lets the keyboard do the work. In the past, we had to rely on the power of speech to communicate in real time. Today, even though we can express ourselves through chats, tweets, texts and posts, there is still no replacement for the human voice, which not only transmits the spoken words, but also clues us in to the speaker's feelings.

Vocal impairments are experienced by many, and in a variety of ways. "Problems with the voice can be expressed differently," explains Dr. Yaki Cohen, Director of the Speech and Hearing Center at Rambam Health Care Campus. "Sometimes there is a change in the volume, generally with the voice becoming too soft, or in the tone, when the voice becomes excessively low or high pitched. Or there is a change in the quality of the voice, making it breathy, pressured, strained or hoarse and raspy."

The reasons for losing one's voice are just as varied in terms of how serious they are and their root causes, which could range from medical conditions to our choices of foods and beverages.

My voice is gone

Many voice conditions develop in people who stretch their vocal cords beyond their limits, as in the following cases:

Singers, Cantors, Actors and Announcers

The Symptoms: Hoarseness, voice fatigue and difficulty shifting between low and high tones.

The Cause: Overuse that leads to swelling and hemorrhage.

The Solution: Medications including steroids and antioxidants, and resting the voice.

Teachers, Lecturers, Lawyers, Politicians and Salespeople

The Symptoms: Here also, the symptoms experienced are generally hoarseness and voice fatigue.

The Cause: Warts or polyps on the vocal chords, and often swelling and hemorrhage.

The Solution: Medication including steroids and antioxidants, and resting the voice. Voice therapy is often prescribed.

Smokers

The Symptoms: Increasingly lower voice tone, eventually becoming extremely hoarse.

The Cause: Swelling, infection and tumors.

The Solution: Every smoker who experiences hoarseness must be checked by a physician. If it is determined that smoking is causing mild swelling of the vocal cords, the solution is to stop smoking. If the swelling is severe, a surgical procedure to reduce the swelling may be necessary as well. If tumors are present, this needs to be treated accordingly (see below).

Pardon me, we can't hear you

Ageing, illness and other conditions beyond our control can also lead to certain voice disorders. How are they expressed and what can be done?

Reflux

The Symptoms: Frequent throat clearing, complaints of phlegm, burning sensation in the throat, shortness of breath upon inhalation, and sometimes also hoarseness.

The Cause: The acidic contents of the stomach flow backwards and up into the esophagus, reaching the throat.

The Solution: Lowering the acidity in the esophagus with antacid medications

(against heartburn) and reducing acidic and spicy foods and carbonated drinks.

Advanced Age

The Symptoms: Breathy voice.

The Cause: Weakness that can make it difficult to fully close the vocal cords, causing a lack of speech clarity and difficulties in swallowing

The Solution: A new procedure allows the vocal cords to be reinforced with a filling material - either drawn from the patient's body, such as fat, or a synthetic material. In this procedure, the surgeon inserts an optic fiber with a special needle into the throat through which he injects the filling material. The procedure is simple, safe, does not require hospitalization or general anesthesia, and has a high success rate.

Surgery of the Thyroid, Cervical Spine and Heart

The Symptoms: An extreme change in the voice, becoming weak, breathy or hoarse.

The Cause: Paralysis of one or two of the vocal cords

The Solution: A new procedure, performed under local anesthesia, during which an implant is inserted which repositions the paralyzed vocal cord, enabling the cords to fully close on their own.

Benign Tumors

The vocal cords often develop benign tumors such as warts, polyps and cysts.

The Symptoms: Hoarseness

The Cause: These tumors prevent the full closure of the vocal cords, allowing air to escape and causing the voice to sound breathy and weak.

The Solution: This problem can sometimes be resolved through exercises prescribed by a voice therapist, or with medication.



"To understand what causes problems with the voice, we need to understand how we produce sound." Dr. Cohen during treatment.

In cases where the conservative approach is not effective, the tumor is removed in a microsurgery procedure under general anesthesia.

Malignant tumors

The Symptoms: Hoarseness and sometimes pain that radiates to the ear

The Cause: A tumor interferes with the vibration of the vocal cords.

The Solution: In the early stages, tumors can be removed with laser surgery. In more advanced cases, radiation and chemotherapy treatments may also be necessary, as well as more complex surgery.



Medical consultant:
Dr. Jacob Cohen,
Senior Ear, Nose
and Throat
Physician and
Director of the
Hearing and
Speech Center at
the Department
of ENT and Head
and Neck Surgery,
Rambam Health
Care Campus





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The Stillness Within

Good news for Parkinson's and essential tremor sufferers: a new non-invasive treatment, without piercing the skull and without general anesthesia.

For sufferers of Parkinson's disease and essential tremor, carrying out simple, everyday actions such as drinking a cup of tea, eating or combing their hair may be beyond their grasp. They will be glad to hear of a new ground-breaking treatment that can completely control involuntary tremor, without the need for invasive procedures and without anesthesia or pain. Sound like science fiction? A new treatment, which was administered in Israel for the first time at Rambam Health Care Campus, opens a new frontier for non-invasive, incision-free surgery.

Recently the treatment was successfully carried out in two patients suffering from essential tremor. The treatment was made possible thanks to a unique cooperative effort between Rambam and the Israeli biotechnology company, InSightec, developer of the new system. At Rambam, the partners in the project were the Neurosurgery Department, headed by Prof. Menashe Zaaroor, the Institute for Mobility Disorders, headed by Dr. Ilana Schlesinger of the Neurology Department, and Prof. Dorit Goldsher & Dr. Ayelet Eran from the Magnetic Resonance Imaging Department.

? How does it work?

The idea behind the new system is a combination of two technologies: focused ultrasound, which is used to deliver heat that destroys tissue at a tiny point in the brain, and an MRI (magnetic resonance imaging) system, that provides real time imaging of the brain and monitors the level of heat at the tissue level, enabling the surgeon to deliver the treatment with pinpoint precision. "The treatment is administered gradually, and at various points during the procedure, the surgeon speaks to the patient to confirm that everything is all right and there are no side effects," explains Prof. Zaaroor. "Only then does he continue, until reaching the level of heat that fully destroys the target tissue, which effectively stops the tremor. The ultrasound waves penetrate

the brain tissue without damaging it and neutralize only the point in the brain they are targeted onto."

How is the treatment administered?

The patient lies inside an MRI machine and the surgeon sits in the control room, watching the entire procedure. Once the exact point for treatment is identified, the surgeon activates a helmet worn on the patient's head, which delivers ultrasound waves into the brain. During the procedure, the patient is fully conscious. The surgeon gradually increases the heat delivered in pulses of ultrasound waves, and in pauses between the pulses, he checks with the patient to see if there is an improvement in the trembling, or if any other side effect has developed. "Shortly into the treatment, one can already see a reduction in the intensity of the tremor," reports Dr. Schlesinger. "When the treatment is over, the trembling has ceased completely and the patient can immediately return to normal activity with a steady hand."

Individuals with Parkinson's disease or essential tremor should undergo an initial evaluation that includes MRI or CT brain mapping to determine if they are eligible for the treatment.

Medical consultants:



Prof. Menashe Zaaroor is Head of the Neurosurgery Department at the Rambam Health Care Campus.



Dr. Ilana Schlesinger is a Senior Physician and Head of the Movement Disorders Institute in the Neurology Department at the Rambam Health Care Campus.

Identity Card

Name: MRI Guided Focused Ultrasound

Manufacturer: InSightec – an Israeli biotechnology company

Date of Birth: The first version of the system was developed 15 years ago. It was initially used to treat uterine fibroids. More recently the same technology has been used to treat neurologic diseases.

Location: In Canada, the United States, Japan and Korea, where the treatment is offered as part of clinical trials. It is approved for general use in Switzerland, and in November 2013, the system was introduced at Rambam Health Care Campus.



1

All Spread Out – The lymphatic system has "branches" in different parts of the body. The peripheral glands are found in the armpits, neck and groin, although other glands are located deeper in the chest and abdominal cavities. Even our tonsils are lymph glands. The glands are interconnected through ducts in which lymph fluid flows.

8

Biological Treatment –

In recent years, a biological treatment for lymphoma has been developed, based on antibodies directed at the malignant lymphocytes themselves.

2

First Line of Defense –

The lymphatic system is the immune system's front line defense mechanism. After exposure to bacteria, viruses or other pathogens, immune cells that have been exposed to the microorganism rush to the lymphatic system where they "brief" the lymphocytes on the nature of the invader. The lymphocytes are activated immediately and vanquish the enemy.

7

Uncontrolled Growth –

Lymphoma is a type of cancer that affects the lymph glands, causing uncontrolled and eventually malignant production of lymphocytes. Lymphoma can often be treated successfully, even after it has spread.

6

All Blown Up – Sometimes lymph glands that remain swollen over weeks can be a sign of problems with the glands themselves. In such cases, a physician should also be consulted.

3

Strategic Positioning –

Because of their importance in responding to pathogens, the lymph glands are concentrated in strategic locations where infection could invade the body. There are key spots without actual lymph glands (for example the small and large intestines), but even in these organs, accumulated lymphocytes assist in the protection from outside invaders.

The Lymphatic System

8 things you didn't know about the immune system's "top gun"

5

Full of Themselves

– Swollen or enlarged lymph glands can indicate a trusty, efficient response to infection occurring elsewhere in the body. Swollen glands are one of the signs of viral infections such as measles or rubella.

4

Draining Fluids – The lymphatic system is also responsible for absorbing and ridding excess fluids from the body. Poor functioning of the lymphatic system can slow down this process, leading to swelling, generally of the lower extremities. Swelling can also point to heart, kidney, liver or thyroid problems, and if it appears, make sure to consult your physician.



Medical consultant: Dr. Netanel Horowitz is a Senior Physician in the Hematology Department at Rambam Health Care Campus.

Rambam Summit 2015 Save the Date

Once a year, we convene at Rambam Health Care Campus for a summit where medicine, humanity, and technology intertwine. This year we will be inaugurating the most modern cancer facility in the north of Israel: The Joseph Fishman Oncology Center.

You are cordially invited to the 2015 Rambam Summit:

- Attend the inaugural ceremony for the Joseph Fishman Oncology Center, followed by an in-depth tour of its spacious and modern facilities.
- Discover the importance of the latest research being performed on our campus and actively learn about the latest health issues at the Summit Medical Symposium.
- Meet with top Rambam physician-scientists to learn more about the latest treatments, medicines, and devices that are bringing new hope to our patients.
- Enjoy a unique gala evening celebrating Rambam's accomplishments and honoring recipients of the 2015 Rambam Award for their unique contributions to society, Israel, and Rambam.

Join us in Haifa for three exciting and inspiring days.

June
7-9, 2015
Sun-Tue
Rambam
Health Care
Campus
Haifa, Israel

Please save the date.
A formal invitation and detailed
agenda will follow.



RAMBAM Summit
Medicine. Technology. Humanity.





Mind/Body Healing



Tips for Healthy Living

1 When you are feeling stressed, remember to take several deep breaths. This should help you feel relaxed immediately.

2 If you or someone close to you is suffering from a chronic disease or illness, and is experiencing anxiety and a steady decline in mood that is affecting their functioning, it is recommended to consult a medical psychologist.

3 At Rambam and most hospitals in Israel, medical psychologists are on staff for consultation. Just ask, and you are not alone.

You might not expect to meet medical psychologist Dr. Dafna Israeli Cohen in the Rheumatology Department at the Rambam Health Care Campus. Her work there is to help patients unravel the mental knots that can develop during serious illness, as well as to support the department staff. "The mind and body are intertwined," she explains. "Stress, anxiety and depression weaken the immune system and can result in an outbreak in an autoimmune disease. And because chronic disease naturally brings on feelings of depression and anxiety, patients need psychological tools to help them cope."

How significant is the psychological factor in rheumatic diseases?

"The patient's psychological state is deeply affected in these diseases. The pain, as well as the realization that it is a chronic disease that will probably only get worse, naturally cause feelings of depression and anxiety."

What psychological tools do you teach your patients?

"In our meetings I try to identify any underlying causes for stress that they experienced before

arriving in the department, whether related to the illness itself or to some kind of loss or other issue (i.e. personal relationships, work, children). Together we explore how to grasp these painful issues in less stressful ways, and to minimize their negative influence. Sometimes, out of this process, the patient is better able to cope with painful past losses. Other than that I teach them stress reduction techniques such as relaxation through breathing and guided imagery. Mastering these techniques enables them to reduce the negative impact of stress on the body."

When do you know you succeeded?

"When the patient returns to the hospital and I see that in spite of the difficulties, they have managed to make a positive change in their life. Sometimes I meet people who went through life without being able to accept themselves, yet they never took the time to examine their negative self perceptions. Ironically, it was the illness that pushed them to do this healing work. For these patients, the illness was not just bad luck, but also an opportunity to take care of painful issues and learn to accept life and their surroundings and love themselves."



Medical consultant:
Dafna Israeli Cohen is a medical psychologist in the Psychological Services and Rheumatology Department at the Rambam Health Care Campus.



Heart Attacks

1 If my father died of a heart attack at a young age, I'll probably also have a heart attack when I'm young.

Partly true. Age and family history can in fact increase the risk of heart attack, although there are other risk factors that can have an impact, including smoking, diabetes, cholesterol levels, weight and more.

2 If you don't feel pain or pressure in your chest, and a radiating pain in your arm, you are not having a heart attack.

False. A heart attack can be experienced in many ways: weakness, nausea, shortness of breath, sweating, back ache and even pain that radiates into the jaw. In some instances of heart attack, the symptoms are not even pronounced.

3 Smoking only a few cigarettes a day doesn't increase the risk of a heart attack.

False. Even a few cigarettes a day can damage the flexibility of the arterial walls and increase the risk of their blockage.

4 If I recently did a physical stress test and the results were normal, I won't have a heart attack in the near future.

False. A stress test does not guarantee an assurance of future health. Most heart attacks result from a sudden blockage of the coronary artery by a clot that blocks the flow of blood. The blockage can occur in an area of the artery that previously did not show any substantial narrowing, and thus cannot be detected in a stress test.

5 Taking aspirin at the onset of a heart attack will reduce the damage.

True. Taking aspirin during the early stages of a heart attack can renew the flow of blood to the blocked artery and reduce the damage to the



heart muscle. That said, taking aspirin is not sufficient treatment, and emergency medical services should be called urgently.

6 If the heart attack has passed and you feel better, no medication is needed.

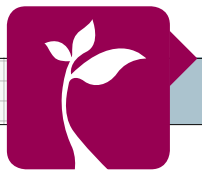
False. A person who has had a heart attack is at extremely high risk of an additional heart attack. Even though any medicine can have side effects, with medications administered after a heart attack, side effects are rare, mostly mild, and reversible, and the benefits of taking them far outweigh their potential side effects. In any case, it is important to confirm with a physician before stopping any life-saving medications.

7 Young women (before menopause) and men who practice sports are not at risk of heart attacks.

False. Even though young age and regular physical activity reduce the risk of heart attack, they do not guarantee that it will not happen. Even young women and men who practice sports regularly could have a heart attack.



Medical consultant:
Dr. Arthur Kerner
is a Senior
Physician in the
Cardiac Intensive
Care Unit and
the Interventional
Cardiology Division
at the Rambam
Health Care
Campus.



Rambam Summit 2014

JUNE 22-24

An Insider's View into the Future

The Fifth Annual Rambam Summit was kicked off with a welcome reception for distinguished guests who came to Haifa from near and far. Over three event-packed days, Summit guests were treated to a special, in-depth viewing of the achievements and future of medicine at Rambam.



An in-depth tour for Summit guests led by Rambam CEO Prof. Rafi Beyar highlighted the newest additions to the Rambam Health Care Campus – the Sammy Ofer Fortified Underground Emergency Hospital and the bright, cheerful Ruth Rappaport Children's Hospital. The tour also included a close-up glimpse into cutting edge medical technology, with non-interventional brain surgery using focused ultrasound, and surgical robotics.



Prof. Rafi Beyar presents the Certificate of Special Tribute to Adam O. Emmerich.

At the Annual Meeting of the Friends of Rambam Health Care Campus, representatives from around the world came together to exchange notes and share their experiences. American Friends (AFORAM) Executive Director Michele Segelnick and British Friends Director Anita Alexander-Passe presented reports on their activities over the past year, and Prof. Rafi Beyar bestowed a Certificate of Special Tribute to AFORAM President Adam O. Emmerich, in honor of his inspiring presidential leadership. Rambam's Chief Operating Officer, Dr. Esty Golan presented a report on the achievements and challenges ahead, which was followed by a brain-storming session on how to develop new outreach approaches.



RAMBAM Summit
Medicine. Technology. Humanity.



The prestigious Scientific Conference

, which caps each year's Summit, focused on the Promises and Horizons in Next Generation Medicine. Key Note speaker Dr. Elizabeth Nabel, President of Boston's Brigham and Women's Hospital, shared insights on the future of healthcare in the USA. The Conference was moderated by Prof. Karl Skorecki, Director of Medical and Research Development at Rambam, and attended by medical, industrial, and economic leaders from Israel and abroad.



The Summit reached its festive peak at the **Rambam Award Ceremony Gala**, which was held on Monday, June 23 in the courtyard of the historic Carmelite Monastery building on the Rambam Campus. The gala was attended by members of the Rambam Friends Associations in Israel and overseas, senior Rambam staff and a host of distinguished guests, some of whom came to Israel especially for the event. The program for the gala featured a special musical performance, which enhanced the festive atmosphere of the evening. At the highlight of the gala, the audience watched with pride as Prof. Rafi Beyar and selected citizens of Haifa presented Rambam Awards to Mrs. Herta and Mr. Paul Amir, Mrs. Relly and Mr. Brent Dibner, Prof. Howard Cedar and Mr. Yona Yahav, in honor of their exceptional vision and partnership in enabling Rambam to achieve its health care and research goals (for more about each Rambam Award winner, see next page).

SAVE THE DATE -

Rambam Summit 2015

JUNE 7-9



Rambam Awards 2014

A Shining Inspiration

This year's Rambam Award was conferred upon six esteemed individuals:

Mrs. Herta and Mr. Paul Amir, Mrs. Relly and Mr. Brent Dibner, Professor Howard (Chaim) Cedar, and Mr. Yona Yahav – in honor of their remarkable contributions to Rambam, Israel and the world.

This prestigious award fittingly acknowledges the recipients' deeds, generosity and dedication to society, which will continue to impact the quality of medical care in Israel for years to come.

Mrs. Herta and Mr. Paul Amir - in recognition of their extraordinary philanthropic contributions to the arts, education, and medicine, and in appreciation and gratitude for their ongoing generosity to Rambam Health Care Campus.

» *The Award was presented by Sari Natan, a PhD student in Biology who as a child underwent heart surgery at Rambam, in appreciation of their support in opening the new Pediatric Cardiology Unit.*

Mrs. Relly and Mr. Brent Dibner - in recognition of their philanthropic support of science and technology, scholarly contribution to Israel's maritime history, commitment to Israel's welfare, and in gratitude to their beneficence to Rambam Health Care Campus.

» *The Award was presented by 67-year-old Zehavi Bar, whose life was regained after undergoing the pioneering new treatment at Rambam for Parkinson's disease.*

Professor Howard (Chaim) Cedar - in recognition of his achievements in medicine and science to the benefit of humanity, and in exceptional gratitude for his commitment to medical research - exemplified by his dedication to the Rambam Health Care Campus.

» *The Award was presented by Haifa 10th grader Eli Agaib, participant in a special program for students gifted in the sciences, on behalf of the future generations of medical researchers.*

Haifa Mayor, Mr. Yona Yahav - in recognition of his ceaseless efforts to strengthen the connection between Haifa, Israel and the global community, and in appreciation of his long years of support on behalf of Rambam Health Care Campus, to the benefit of the citizens of Haifa and Northern Israel.

» *The Award was presented by Rachel Shapira, past President of the Friends of Rambam Health Care Campus and Haifa native, in recognition of the leadership and partnership between the Haifa Municipality and Rambam.*



L-R: Prof. Rafi Beyar and 2014 Rambam Award Winners: Mr. and Mrs. Amir, Mrs. and Mr. Dibner, Prof. Cedar and Mayor Yahav



This is the year of innovation and renovations, of motivation and of great mobilization."

Prof. Rafi Beyar





Color, Light, Space and Hope

The new Ruth Rappaport Children's Hospital was inaugurated with an exciting and moving mezuzah-affixing ceremony, with Mrs. Ruth Rappaport as the guest of honor. Among the distinguished guests were Mrs. Rappaport's family and friends, the Health Minister of Israel - Mrs. Yael German, Chief Rabbi of Tel Aviv - Rabbi Israel Meir Lau, and many others.

The ceremony opened with a festive reception, with clouds of colorful balloons and a performance by the medical clowns who regularly entertain the young patients. Prof. Rafi Beyar extolled Mrs. Rappaport as "a great lady, a cherished friend, and the mother of the Ruth Children's Hospital."

Mrs. Rappaport was delighted and moved when Gali, a young, recovered cancer patient, gave a heartfelt performance of "My Way," the emblematic song of the late Bruce Rappaport. During the ceremony, Mrs. Rappaport was able to appreciate a special dedication wall decorated with her personal photos and blessings.

The new Ruth Rappaport Children's Hospital is almost three times the size of the former facility, with bright, airy spaces specially designed to place the child and parents at the center of a holistic healing process. Guests were invited to explore the spacious ground-floor rooms and the newly opened Pediatric Emergency Medicine Department. Additional departments, as well as play areas, a science museum and classrooms, will gradually open in stages over the coming months.





Michelle Kahn remembers her Bat Mitzva year trip to Israel well. It was during that visit that her father made a donation to Rambam's Dermatology Department. Over two decades later, moved by that same spirit of philanthropy, Kahn decided to renew her family's relationship with Rambam Health Care Campus. Happily, the timing coincided with the establishment of the Ruth Rappaport Children's Hospital, and a generous gift from Kahn was used to construct three hospitalization rooms in the Pediatric Surgery Department. Kahn chose to dedicate the rooms in honor of beloved members of her family, and the revealing of her personal dedication plaque was a moving moment for all who attended the opening ceremony.



The Greidingers of Haifa were pioneers in the movie theater industry during Israel's formative pre-state years. Now, almost a century later, the Greidinger family is still a major figure in Haifa's cinema scene. With such a distinguished family history, what could be more fitting than to donate a theater and lecture hall in the Ruth Rappaport Children's Hospital? The new facilities were dedicated by the family in memory of the family patriarch, Calman (Kenneth) Greidinger, who, in addition to founding the family business, was also a dedicated philanthropist, who enthusiastically supported children's causes and the Haifa community throughout his life.



Friends Help Build a Hospital

Snapshots March 2014 – July 2014



With fortuitous timing, the visit to Rambam of a delegation of 32 high level healthcare professionals, among them CEOs and Chief Medical Officers of some of the top US healthcare facilities, coincided with an emergency drill for hospital operation under missile attack. The visitors, participants in the TPG International Health Academy Chief Executive Officer Trade/Study Mission, were in Israel to gain in-depth exposure to the country's healthcare system. Of special interest to the guests were Rambam's renowned trauma center, and, of course, the Sammy Ofer Fortified Underground Parking Lot/Hospital.

March 2014



The Honorable Chinese Vice Premier Mme. Liu Yangdong, heading a delegation of high ranking officials from the People's Republic of China, was hosted by Prof. Rafi Beyar and Haifa Mayor Yona Yahav on an official visit to Rambam Health Care Campus. Among the group of distinguished visitors were China's Ministers of Health, Education and Science. Vice Premier Liu Yangdong and her colleagues were presented with an overview of Rambam's health care and research accomplishments, and a tour of the Western Campus site.

May 2014



Some 50 guests from the Palo Alto area came to hear Rambam Nephrologist Dr. Daniella Magen deliver a compelling presentation on "Why KIDneys Fail in Young KIDS and How We Can Make a Difference." Dr. Magen's talk was the highlight of a VIP Reception hosted by AFORAM Board member Levy Gerzberg and his wife Liora. Dr. Magen's talk underscored the urgent need for a modern pediatric nephrology facility in the new Ruth Rappaport Children's Hospital.

April 2014



Dr. Avi Weisman, Rambam's Director of Medical Operations, was the guest of honor at a Dinner and Conversation, graciously hosted by Caroline and Michael Hackman, and Randi and Warren Grant. Dinner guests were riveted by Weisman's descriptions of the world's largest 2,000 bed fortified underground emergency hospital at Rambam Health Care Campus. The event, held at the Hackman's Brentwood home, was coordinated by AFORAM's West Coast Director, Sari Katz.

July 2014



A Claim to Renovate

Patients in Rambam's B. Shine Rheumatology Unit had every reason to celebrate, as they joined a group of distinguished guests honoring the opening of the newly upgraded facility. The renovation and refurbishing of the Rheumatology Unit, which is situated in Rambam's historic Mendelsohn Building, was made possible through a grant provided by the Conference on Jewish Material Claims Against Germany. Unit Head, Dr. Alexandra Balbir-Gurman led the festive event, attended by representatives of the Claims Conference, Mr. Avraham Pressler and Mr. Yaron Markus, Rambam leadership, Rheumatology Unit staff and others. Congratulations were extended by Prof. Rafi Beyar, Director and CEO of Rambam, Dr. Esty Golan, Chief Operating Officer, and Naomi Schultz, Head Nurse of the Unit. The highlight of the ceremony was the placing of a mezuzah by Mr. Pressler and Rambam's Rabbi Shmuel Kaplan at the entrance to the newly refurbished Unit, after which Dr. Balbir-Gurman joined Mr. Pressler in the festive ribbon-cutting.



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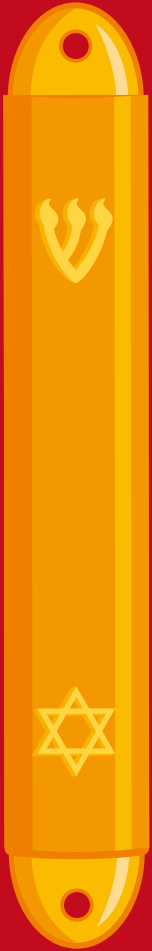
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Ruth

Ruth Rappaport Children's Hospital

Rambam Health Care Campus



MEZUZAHs

For the Children's Hospital Rambam Health Care Campus

A mezuzah is a small, decorative case that contains a handwritten parchment scroll with verses from the Book of Deuteronomy. Jewish law requires that a mezuzah be placed on every doorpost where a Jewish person dwells. Mezuzahs will be posted on every doorway throughout our new children's hospital.

To provide comfort and inspiration to our sick children and their families, you can dedicate a beautifully crafted mezuzah in honor or in memory of a person of your choice. Some opportunities for mezuzah placement:

\$180	\$2,700	\$3,600	\$13,000
1 mezuzah	Mezuzahs for the entire Pediatric Pulmonary Unit	Mezuzahs for the entire Pediatric Cardiology Unit	Mezuzahs for the entire Pediatric Hematology-Oncology Department

A generous gift of \$10,000 or more will entitle the donor to a donation plaque at the entrance to a department or unit in the children's hospital.

To make a dedication: contactus@rambam.health.gov.il

