



Examples of Medical Devices and Equipment Pioneered in Israel

Aesthetic Medicine

* ESC Medical Systems Ltd. electro-optic medical devices applying proprietary pulsed light technology, for non-invasive treatment of skin cancer, benign lesions, as well as for treatment of varicose veins, skin rejuvenation and hair removal.

* SOL-GEL Technologies Ltd. glass microcapsules containing UV absorbers increase sunblocking by allowing admixture of otherwise incompatible ingredients to maximize photostability and efficacy, and form a layer on but without chemicals contacting the skin.

Autoclaves

* Tuttnauer Co. Ltd. in Jerusalem is a world leader in steam and gas autoclaves of all sizes for sterilizing medical instruments for clinics, hospitals and laboratories.

Cardiology

Cardiac stents are implanted in blood vessels during angioplasty to keep occluded vessels from re-closing:

* InStent with American partner, Medtronic/beStent line and the crimper.

* Medinol with American partner, Boston Scientific/Nir cardiac stent line market leader.

* Angiosonics Inc. a catheter-delivered ultrasound for thrombolysis, a non-invasive therapeutic ultrasound in the heart; early studies have shown that it could break up clots in peripheral vessels.

* Laser Industries a Sharplan holmium/yag laser for unblocking multiply-occluded coronary vessels.

Dental Medicine

* Perio biodegradable chip with slow release chlorhexidine to treat gum disease from the Hadassah Faculty of Dental Medicine, sold to Israel Chemicals.

* CAPTEK gold, platinum, palladium metal composite for aesthetic, high strength dental crowns and bridges that reduce plaque by 10% on natural teeth.

Diagnostics Cardiology

* BioSense Ltd., CARTA & NOGA systems hardware-software non-fluoroscopic intrabody navigation and 3-D mapping system, hailed as the missing, real-time link between diagnostics and therapeutics.

Diagnostics Genetics

* ASI APPLIED SPECTRAL IMAGING Cytogenetics and pathology have been revolutionized by SKYTM (Spectral karyotyping), SkyVision, and the SpectraCube to sort chromosomes, cells or tissues in colors reflecting genetic abnormalities.

Diagnostics Mammo-graphy

* Trans-Scan T-Scan devices which significantly improve mammography diagnostic accuracy with no additional radiation.

* SophisView Technology Ltd. (SVT) MACOM 4000 and MAPP 4000 digitized mammography which enhance sub-millimeter details.

Diagnostics Neurology

* Medis-El Nuritor, an advanced, compact and portable analog/digital EEG

* Mindsense Ltd kits for detecting mental illnesses.



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International Medical Services

- * Imexco General Ltd. Neuritor, a computerized neurological brain-monitor for the acquisition & analyses of multichannel EEG/ECG signals in real time.
- * Riemed Ltd. Intra-View, a new generation of transcranial Doppler including intracranial, extracranial, peripheral vascular and intraoperative simultaneous investigation of two cerebral sites.
- Diagnostics Ophthalmology**
 - * MedEye Medical Imaging Ltd. AngioVision for retinal diagnosis, digital angiographic acquisition and viewing systems.
 - * Talia Technology Retina Thickness Analyzer (RTA), a combined electro-optical laser and conventional optical instrument for the non-invasive measurement of ocular pathologies. Its Laser Slit has been marketed since 1996.
 - * Shapiro Instruments (Israel), Subsidiary of Shapiro-Evans Perceptions Ltd. (UK) Innovative optometric examinations using simple technology, but sophisticated philosophy.
- Diagnostics Respiration**
 - * Delve Medical Ltd. an electronic stethoscope with phonocardiograph instrumentation to receive and digitally process body sounds, filter out interfering noises, and graphically present the sounds on a display screen.
- Diagnostics Sleep Disturbances**
 - * Diagnostic Sleep Laboratory Ltd. diagnostic equipment for sleep recordings (respiration, ECG, movements).
- Emergency Medicine**
 - * First Care (Jerusalem) bandage that enables self-application to wounds; can also block arterial flow and increase distal hemostatic pressure.
 - * Mennen Medical Ltd. Cathlab patient monitoring equipment for critical care.
 - * Wais Med Bone Injection Gun (B.I.G.), treats emergency patients with drugs and other fluids by intraosseous infusion, directly into the bone marrow.
- Endoscopy**
 - * CBF Medical Ciliary Beat Frequency monitor attaches to a standard endoscope, to optically measure the frequency waves of ciliary cells as new diagnostic for mucociliary function in respiratory disease and tubal infertility.
- Gerontology - Osteoporosis**
 - * Myriad Ultrasound Systems SoundScan Compact and SoundScan 2000 bone quantitative sonometers which detect subtle changes in bone quality, as in osteoporosis and other bone diseases.
 - * Sunlight Ultrasonics Omnisense the only sonometer providing multiple sites skeletal bone density assessment.
- Healing Wounds**
 - * LMS or CHAI (life in Hebrew) the USFDA-approved Sure-Closure Skin-Stretching system, replacing costly skin grafts or flaps to close large wounds and avoid disfiguring scars; newer applications focus on polymer technology, a medium for graft storage and a first-ever wound gel for dermal ulcers and chronic wounds.
 - * SPM RECOVERY sealed chamber to apply ozone/oxygen mixture and bacterial medium to infectious wounds, post-surgical wounds, trophic ulcers, decubitus, and burns.
- Healing**
 - * SIL-K silicone sheeting from Kibbutz Degania, which has USFDA approval, eases



- Scars** intense pain after scar-tissue removal operations.
- Medical Gases** * Oridion (originally Spegas) pioneered infra-red measurement of carbon dioxide exhaled by patients at all points of care. u Elrad Analytical Systems systems which monitor gases in patients during medical treatment.
- Medical Lasers** * Optomedic Medical Technologies the Kaplan PenduLaser, a carbon dioxide surgical laser system.
- * Hadassah-based Nanomed with US-based Summit a unique movable arm delivery system for cold action excimer laser for intra-ocular surgery.
- * Nanonics Lithography the breakthrough Near Field Optics, which can focus laser beams at a tenth of a micron.
- * A number of companies have developed a broad range of innovative optical glass rods as active media for solid state medical lasers and high intensity luminescence (replacing gas and dye media).
- Neonatology** * NurtureLife the Patir incubator in Jerusalem a device for checking the amount of milk an infant drinks during breast-feeding.
- * Hisense Ltd. 200 \$US monitor called Babysense, sends out an alarm if a baby stops breathing while asleep, as happens in SIDS (sudden infant death syndrome).
- * SPO Medical Equipment Ltd. Long Life, an early warning monitor, which senses lowered breathing and pulse levels and could prevent SIDS.
- Obstetrics** * Medco Electronic Systems Ltd. Femo, a non-invasive fetal ECG and fetal heart rate monitoring system with true beat to beat variability, which prevents unnecessary C-section deliveries.
- * Cybro Medical an optical and non-invasive fetal monitor based on pulse oximetry complementary to the ECG to reduce unnecessary C-section deliveries.
- Organ Transplantation** * Vital Medical the Tissue Vitality Analyzer (TVA), expected to save lives and millions of dollars by detecting failed organs before implantation.
- Pain Control** * Titan Electronics a compact, pocket-sized, battery-powered Transcutaneous Electronic Nerve Stimulation (TENS) stimulator to relieve menstrual pain.
- Radiology & Medical Imaging** * InSight Therapeutics and GEMS new joint venture TxSonic produce state-of-the-art devices for image guided therapies.
- * UltraGuide 1000 new add-on device for ultrasound-assisted interventional procedures.
- * Real-time Radiography Readout (R3) Ltd. a joint venture of YISSUM (the Research Development Company of The Hebrew University of Jerusalem) and T.T.I. (Target Technologies Israel) Ltd.
- * X-Medica new concepts in filmless digital X-ray, for the next generation of medical imaging.
- Rehabilitation** * NESS (miracle in Hebrew) a USFDA-approved glove-like device that aids therapy in



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International Medical Services

restoring function to paralyzed hands and arms.

Telemedicine & Portable Medical Technology * Card Guard with a Hewlett-Packard UK alliance provides software-hardware systems for Cardiology/Portable ECG, Pulmonology/SpiroPhone Transtelephonic Spirometer, and Ob/Gyn/Portable Fetal-Maternal Monitoring Device.

* Imexco General produces CardioScope a pocket cardiological diagnostic ECG monitor, with storage, printer, and transmission capabilities.

* TzamalCare innovative remote controlled systems, Infu-Tech and Infu-Net diffused infrared wireless transmitters and readers to monitor and control infusion therapy from a remote station.

Thermo-regulation * MTRE Advanced Technology ALLON 2000 returns and maintains normothermia of core body temperature into trauma management, during surgery and post-op.

* Medisim Up-Grade gives quick, accurate, digital readout of body temperature.

Urology * Influence a device to treat urinary incontinence.

* Medispec Ltd. and Direx devices for treating kidney stones, gallstones and various prostate disorders.

Vascular Systems * Opgal Medical Systems, a division of Opgal Optronics Industries Ltd. in Karmiel the IVA-2000 Thermal Imaging System for real-time thermal images of blood flow through exposed coronary arteries, without ingesting toxic contrast materials or exposure to radiation.

* OrSense Ltd., a start-up Hemosense, an infrared-based bloodless blood test of hemoglobin and hematocrit.

* Vascular Technologies Ltd. award-winning device attaches to a standard catheter to indicate correct insertion of an infusion needle into a vein.