

BRH MEDICAL

CE MARK
– “Chronic
Wound
Healing”

**FDA
CLEARED**

Improving the health and well-being of chronic wound patients

February 2018



1 The Company

2 Clinical Indications

3 The Product

4 Market Opportunity

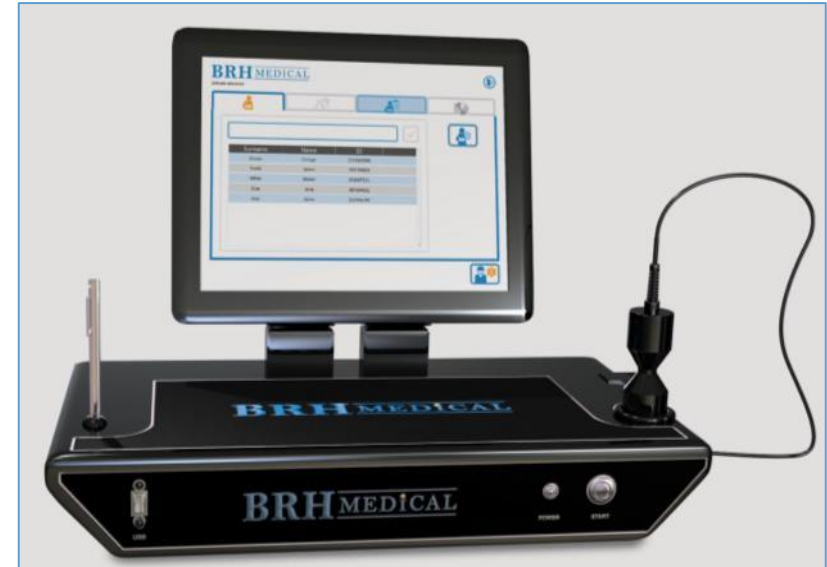
5 Clinical Validation

Management Team

- Hezi Himmelfarb, Chairman of the Board
 - Seasoned medical device executive, go-to-market leader
 - Currently serves as General Manager & COO, Microbot Medical
- Motti Oderberg , CEO
 - Director and investor in several medical start-ups
 - Successful entrepreneur
- Ilan Feferberg, CTO
 - Founder and inventor
 - Serial entrepreneur
- Jonathan Rosenblum, DPM, Medical Advisor
 - Published articles in leading journals
 - Veteran consultant to biomedical companies

BRH Medical Ltd.

- Develops, manufactures and markets the BRH-A2 System for chronic wound care
- Patented technology combines the benefits of two proven therapies:
therapeutic ultrasound & electrical fields
- Proprietary algorithm achieves the most effective combination for optimal healing
- Tested in clinical sites around the world



BRH-A2 Wound Treatment System

Growing Patent Portfolio

- Patents granted in USA and China for the wound healing technology and documentation system.
- Additional patent applications in various examination stages

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Clinical Indications

- Diabetic Foot Ulcers
- Venous Leg Ulcers
- Ischemic Ulcers
- Pressure Ulcers

Diabetic Foot Ulcers Prevalence

- The lifetime risk of a person with diabetes developing a foot ulcer could be as high as 25%.¹
- Rates of recurrence of foot ulcers are very high, being greater than 50% after 3 years.²
- It is believed that every 30 seconds a lower limb is lost somewhere in the world as a consequence of diabetes.³
- Main cause for mortality in people who suffer from diabetes.

¹ N Singh, DG Armstrong, BA Lipsky, **Preventing foot ulcers in patients with diabetes**, JAMA, 293 (2005), pp. 217–228

² Boulton, Andrew JM, et al. "The global burden of diabetic foot disease." *The Lancet* 366.9498 (2005): 1719-1724.

³ International Diabetes Federation, **Time to Act: diabetes and foot care**, International Diabetes Federation, Brussels (2005)

Venous Leg Ulcers (VLUs) Prevalence

- Estimated 500K-700K people in the US suffer from lower extremity venous ulcers.
- VLU's represent the majority of lower extremity ulcerations.¹
- Lifetime prevalence has been estimated at 1% of adults, with rates even higher among the elderly (1.69%).²
- 20% of people with ulcers in the legs are < age 40.³

¹ Valencia IC, et.al, Chronic venous insufficiency and venous leg ulceration. *J Am Acad Dermatol* 2001; **44**: 401–421.

² Hankin CS, et al, Clinical and cost efficacy of advanced wound care matrices for venous ulcers. *J Manag Care Pharm* 2012; **18**: 375–384.

³ Norris, Ray, and Chapman-Jones, D. "Healing trajectories as an indicator of clinical outcomes in patients with venous leg ulcers." *Wounds UK* 11.4 (2015).

Pressure Ulcers Prevalence

- The prevalence of pressure ulcers within inpatient settings has been reported to be 22%, with as many as 50–80% acquired within the hospital. ¹
- Prevalence rates in various types of intensive care units are in the range of 15–20%. ²
- During the first two weeks of admission alone hospital acquired pressure ulcers occur in approximately 9% of hospitalized patients. ³
- Development of a pressure ulcer increases the mortality rate by 7.23%.

¹ E.S. Shahin, et al, **Pressure ulcer prevalence and incidence in intensive care patients: a literature review**
Nurs. Crit. Care, 13 (2008), pp. 71–79

² Berlowitz, Dan. "Incidence and prevalence of pressure ulcers." *Pressure Ulcers in the Aging Population*. Humana Press, 2014. 19-26.

³ Allman, Richard M. "Pressure ulcers among the elderly." *New England Journal of Medicine* 320.13 (1989): 850-853.

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BRH-A2 Wound Healing System

- Heals chronic ulcers
- Reduces lesion size
- Reduces wound pain
- Accelerates tissue regrowth



Low Risk

- Over 12,000 treatments worldwide with no reported adverse events
- High product reliability
- Minimum capital investment

The “BRH Effect”

- The BRH innovation is the method in which the ultrasound therapy and the electrical field stimulation work together.
- During the treatment, the frequency and intensity of the electrical fields and the ultrasound vary simultaneously, causing a “micro-circulation” effect, encouraging increased blood flow and regeneration of the cells.
- Electric currents are applied through the electrodes and the ultrasound waves via the transducer.
- Demonstrated in <http://bit.ly/2ly9OAb>

BRH-A2 Wound Treatment Protocol

- 15-minute treatments, twice weekly for 4 weeks (8 treatments) for minimum effective results
- Does not interfere with other treatment modalities
- Treatment is performed by trained health professional
- Simple training procedure

BRH-A2 Key Features

- **Simple to use**

Intuitive software makes it easy to learn and operate

- **Reliable**

Requires minimum maintenance

- **Non-invasive**

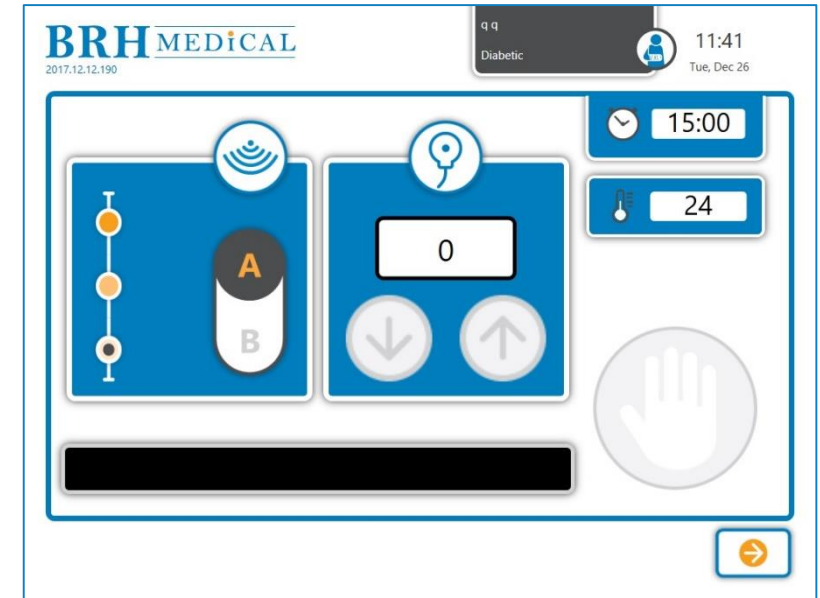
Procedure can be performed in outpatient facility

- **Portable**

Can be moved to different sites, including bedside and home

- **Global market-ready**

Multi-lingual software interface



New Software Features

■ Multilingual Interface

- Easy to use user-controlled language configuration
- Currently supports English , German , Italian and Chinese

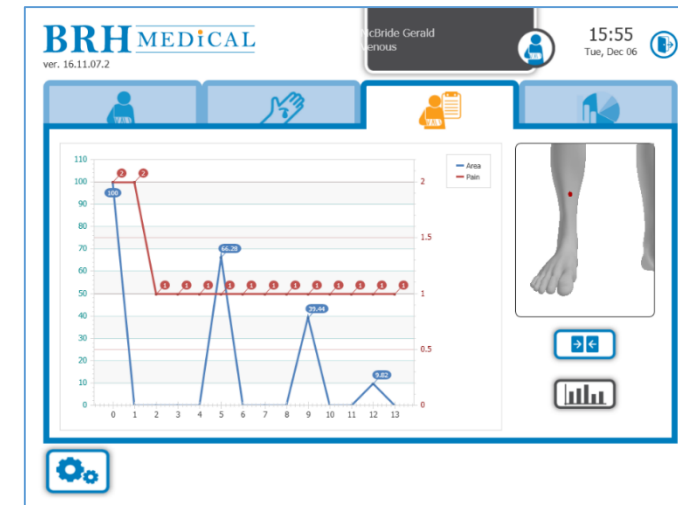
■ Calculation of multiple wounds

- Measure wounds that are separated into two or more secondary wounds .
- Measures the area of each sub- wound individually and show its relevant change
- The system calculates the total of each area and presents the total change in area



Integrated Digital Wound Measurement

- Integrated camera takes photos of wounds before and after treatment
- Wound is marked and automatically measured
- Advanced algorithm compares two photos to highlight the difference
- Documents progress and results
- Automatically generates wound progress graphs



Integrated Digital Documentation Platform

- Efficiently stores patient data and results.
- Touch screen application for easy input of detailed data
- Multiple wound documentation

The image displays two overlapping screenshots of the BRH MEDICAL software interface. The top screenshot shows a patient data entry form with fields for Name (Brown, George), D.O.B. (11/11/1999), Phone Number (1234567890), Address (Main Str. 1/23, NY), and Email (1(23)45678, george@mail.com). The bottom screenshot shows a wound documentation form with fields for Type (diabetic), Complications (Cellulites, Osteomyelitis, Joint), Treatments (Grafting, HBO2, Vac), Recurrent wound (No), and Duration (5 months). It also includes a visual representation of a leg with a wound site marked and a keyboard overlay on the left side.

Regulatory Status

- ✓ FDA 510K - received
- ✓ CE Mark - received
- ✓ ISO 13485/2012 - received
- ✓ Israel AMAR - received
- ✓ Australia TGA - received
- ✓ Singapore HSA - received
- ✓ Chinese FDA - in progress

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Wound Care is a Huge Opportunity

- Huge market size - \$9-13B cost of treating diabetic foot ulcers in the USA alone¹
- The costs are even more staggering when one factors in loss of productivity for affected individuals as well as long-term facility and nursing home care. ²
- Growing medical problem – Chronic Wounds > 8% annual growth in the western world.³

¹ Burden of Diabetic foot Ulcers for Medicare and Private Insurers, J. Bradford Rice, Urvi Desai, Alice Kate G. Cummings, et al,, Diabetes Care 2013 Oct;

² Cutaneous wound healing, F.H. Epstein, A.J. Singer, R.A. Clark, N. Engl. J. Med., 341 (1999), pp. 738–746

³ Rice JB, et al, Burden of venous leg ulcers in the United States. J Med Econ. 2014 May 17(5):347-56

Wound Care Market

- No single comprehensive solution – highly fragmented
- Range of pricing varies from low cost bandages to very expensive hyperbaric chamber treatments
- Wound practitioners are diverse and include: plastic surgeons, orthopedists, dermatologists, podiatrists

Diabetic Foot Ulcers Market Size¹

- Expected growth over a five-year period, increasing from \$302m in 2012 to \$1.58 billion by the end of 2017
- Compound Annual Growth Rate (CAGR) of 39.9%
- Foot ulcers are common among the 22.3 million Americans with diabetes, annually affecting as many as 6 percent of this population and eventually affecting as many as 25 percent of these individuals during their lifetimes.

¹ According to a new report from research and consulting firm GlobalData.

Pressure Ulcers Market Size

- US expenditures for treating pressure ulcers have been estimated at \$11 billion per year.¹
- The average hospital treatment cost associated with stage IV pressure ulcers and related complications was \$129,248 for hospital-acquired ulcers during first admission.²

¹ Kuhn BA, Coulter SJ, Balancing the pressure ulcer cost and quality equation. *Nurs Econ.* 1992 Sep-Oct; 10(5):353-9.

² Brem, Harold, et al. "High cost of stage IV pressure ulcers." *The American Journal of Surgery* 200.4 (2010): 473-477.

Competition

- Current treatments for chronic wounds include:
 - Cleansing
 - Debridement
 - Bandaging
 - Ozone
 - Hyperbaric chamber
 - Negative Pressure (Vaccum)
 - ElectroStim

Expanding Worldwide Use

- **England:** Accelerate Clinic, London
- **Ireland:** Royal College of Surgeons, Dublin
- **Israel:** Refuit Clinic, Jerusalem. Telem Clinic, Tel Aviv.
- **Singapore:** TTSH Hospital, Changi Hospital
- **South Africa:** Far East Rand Hospital, Gauteng, South Africa
- **India:** Bangalore, Delhi, Bombay: Private clinics
- **Australia:** Dr. Michael Bruce, Melbourne
- **Taiwan:** Dr. Tang, Director of Plastic Surgery, Tainan Municipal An-Nan Hospital
- **Italy:** Catania, Sicily, Rome



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Clinical Studies

- Royal College of Surgeons
 - Lead investigator
 - Type of study
 - Number of patients
 - Start date
- Assaf Harofe Hospital
 - Lead investigator
 - Type of Study
 - Number of patients
 - Start date

Clinical Publications

1. "Combined use of modulated ultrasound and electric current stimulation for diabetic foot ulcers: a case series", T. O'Connor, Z. Moore, et al, Journal of Wound Care (2017), 632-640
2. "Evaluation of a device combining electrostimulation and ultrasound in the treatment of non-healing chronic leg ulcers", Wounds International, Vol 8 Issue 3 (2017), Farrelly, Ina
3. "A Multicenter Evaluation of Chronic Ulcer Recurrence with the Use of Varying Mechanical Wound Healing Modalities", J Vasc Med Surg 5: 323, (2017), Rosenblum J, et al
4. "Early Effects of Combined Ultrasound and Electric Field Stimulation on Chronic, Recalcitrant Skin Ulcerations". J Clin Exp Dermatol Res 8:405, (2017) Toscanella F, et al
5. "Combined Ultrasound and Electric Field Stimulation Aids the Healing of Chronic Pressure Ulcers,"J Gerontol Geriatr Res 5.319 (2016): 2., M. Papamichael
6. "Combined ultrasound and electric field stimulation...", 23 Sept 2016, Chronic Wound Care Management and Research, Volume 3 (2016), Pages 113—116, Toscanelli, et al.
7. "The Effect of Combined Ultrasound and Electric Field Stimulation on Wound Healing in Chronic Ulcerations."Wounds, 27.7 (2015): 199-208, Avrahami, Ram, et al.

Summary of Published Data

Study	Type N=?	Avg age of Wound	Duration & No. of BRH TX (15 mins/TX)	≥50% closure at 4 weeks	≥50% closure at 8 weeks	100% closure
Avrahami (201?)	DFU N= 26	27.4 weeks	8 weeks TX = 16	57.7%		
Avrahami (201?) Single-arm study	VLU n= 36	28 weeks	8 weeks TX = 16	69.4%		
Papamichael Sun Harbor Skilled Nursing Facility	PU N=80	At least 20 weeks	8 weeks TX = 16	87.2%		46.8% 20 weeks
O'Connor (Royal College of Sugeons, Dublin)	DFU N=8	Data not available	4 weeks TX = 8			71% 4 weeks
Dr Michael Bruce, Sydney	DFU N=3	Data not available		66%		11%
Dr Michael Bruce, Sydney	VLU N=19	Data not available		63%		

Summary of clinical results – O'Connor

"Combined use of modulated ultrasound and electric current stimulation for diabetic foot ulcers: a case series", T. O'Connor, Z. Moore, et al, Journal of Wound Care (2017), 632-640

	Wound size at the start of treatment	Wound size at end of treatment	% closure
Case 1	143.01	49.72	65%
Case 2	91.3	Not available	Not available
Case 3	527.95	264.05	50%
Case 4	118.5	48.49	59%
Case 5 (Wound 1)	23.12	14.34	38%
Case 5 (Wound 2)	27.71	2.03	93%
Case 6	104.98	0	100%
Case 7	22.22	1.57	93%
Mean			71%
Range			31%-100%

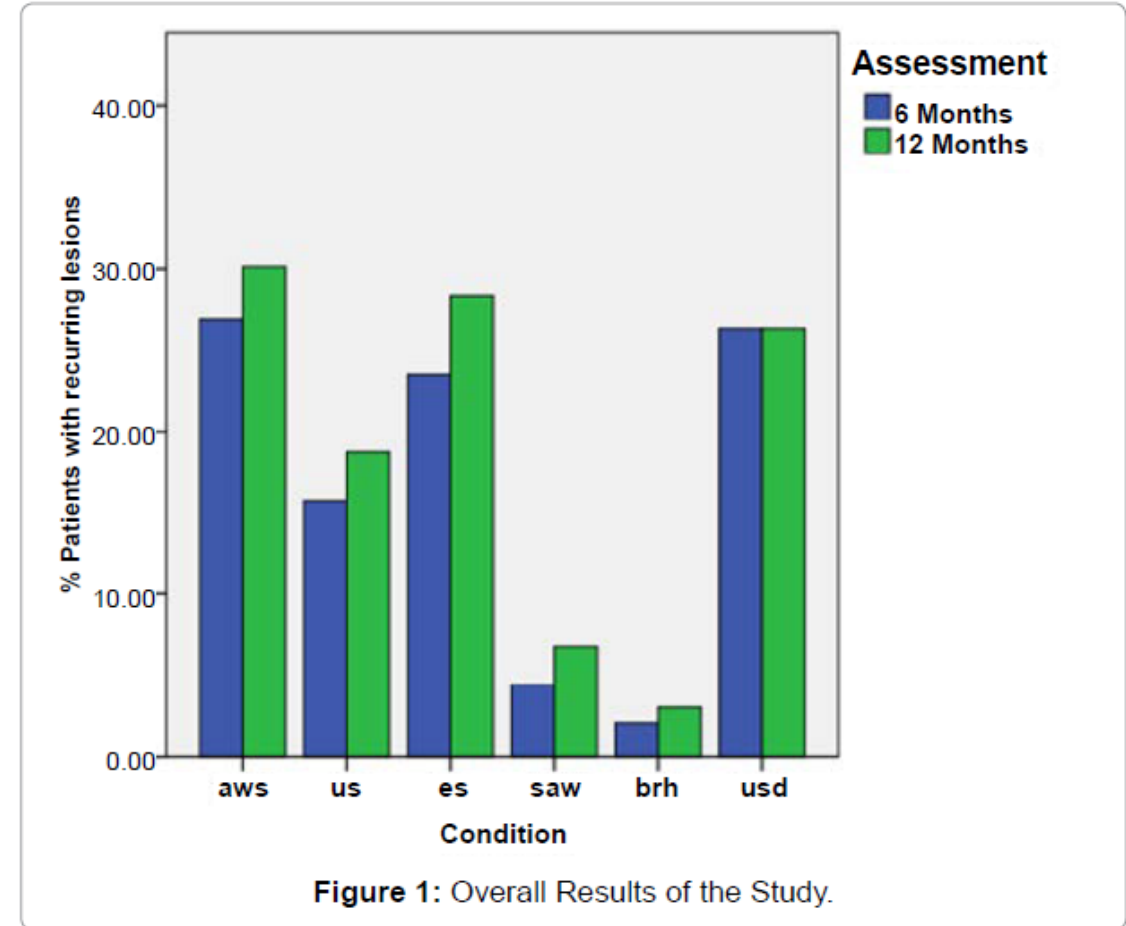
Significantly fewer recurring lesions*

- Retrospective analysis of patients using Advanced Wound Care Products (AWC)
 - Conventional Electric Stimulation
 - Conventional Ultrasound (1-3 mHz)
 - Combined Ultrasound and Electric Field Stimulation (BRH Medical)
 - Surface Acoustic Wave Therapy (SAW)
 - Ultrasonic Debridement
- Inclusion Criteria
 - Patients were treated for either diabetic or venous lesions.
 - Patients had suffered from an ulceration for a min of 2 months prior to healing.
- Patients with recurring lesions were marked with a 1 and patients with no recurring lesions were marked with a zero.
- Recurring lesions at 6 and 12 months were evaluated for each of the 6 treatment groups

"A Multicenter Evaluation of Chronic Ulcer Recurrence with the Use of Varying Mechanical Wound Healing Modalities",
J Vasc Med Surg 5: 323, (2017), Rosenblum J, Gazes MI, Rosenblum S, Karpf A, Greenberg N

Results

- 6 months results show that the BRH conditions had significantly fewer recurring lesions compared to the AWS standard of care condition (BRH: $B=2.9$, $p<.001$).
- BRH had significantly fewer lesions compared to all other conditions.
- At 12 months, logistic regression showed that BRH conditions had significantly fewer recurring lesions compared to the AWS standard of care condition BRH: $B=2.6$



Clinical Results – Case 1

Venous Leg Ulcer

- Age – 60 Y/O, M
- Duration of wound before BRH treatment - 2 months
- 14 treatments



Wound Size before treatment – 4.85 cm²



Wound Size after treatment – 0 cm²

Clinical Results – Case 2

Venous Leg Ulcer

- Age – 60 Y/O, F
- Duration of wound before BRH treatment - 3 months
- 16 treatments



Wound Size before treatment – 9.08 cm²



Wound Size after treatment – 0 cm²

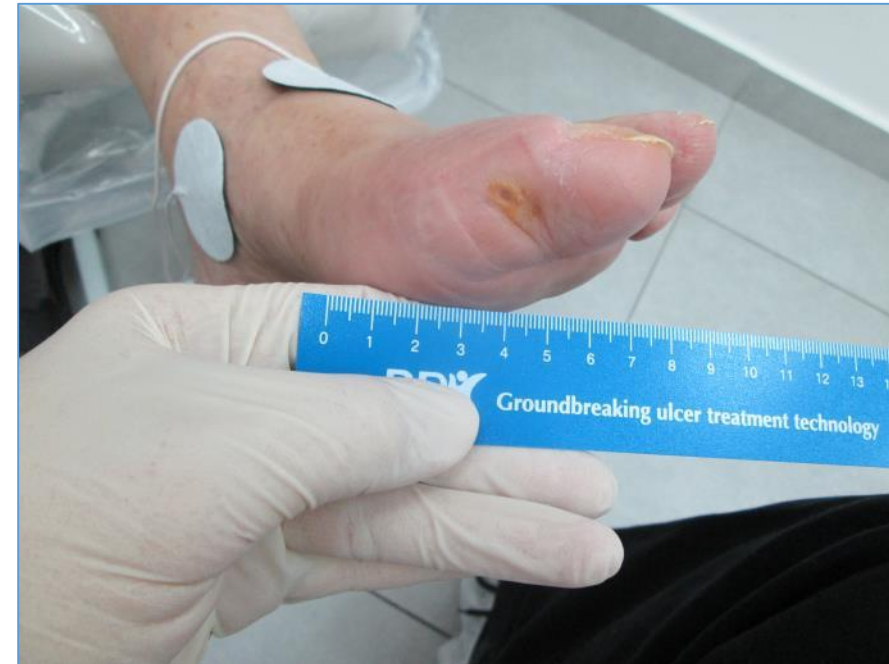
Clinical Results – Case 3

Diabetic Foot Ulcer

- Age – 60 Y/O, F
- Duration of wound before BRH treatment - 3 months
- 16 treatments



Wound Size before treatment – 9.08 cm²



Wound Size after treatment – 0 cm²

Clinical Results – Case 4

Venous Leg Ulcer

- Age – 73 Y/O, F
- Duration of wound before BRH treatment - 8 months
- 19 treatments



Wound Size before treatment – 7.79 cm²



Wound Size after treatment – 0 cm²

Physician Testimonials

*“I just wanted to thank you for involving me in the BRH research project as the Sub-Investigator at Sunharbor Manor. Of the 13 very medically complex residents we have enrolled to date and by analyzing the raw data, we were able to demonstrate improvement in the regression, **and in some cases, healing of wounds by approximately 69%.***

I personally feel that within several years this may be one of the standards of wound care treatment in the United States if not the world.”

Michael Papamichael, M.D., CMD

Medical Director

Sunharbor Manor Skilled Nursing & Rehabilitation

New York, USA

Physician Testimonials

“...One of our residents – BL- suffered enormously for 2 years from a large non-healing leg ulcer and by that time underwent a number of surgeries, debridement’s and grafts with little or no success and she became our first patient.

Soon her wound started to get smaller and after a few months completely closed!

We are still using BRH treatment successfully for many of our residents and happy to recommend it for the treatment of chronic wounds.”

**Dr. Yelena Schneiderman, Medical Manager
Sandringham Gardens, Sandringham, South Africa**

Thank you!



Visit www.brhmedical.com