North County
Neighborhood Coalition
Meeting

Teresa C. Urquhart
Chief Executive Officer
Palm Beach Gardens Medical Center
As Palm Beach County and the Treasure Coast continues to grow, we are committed to providing award-winning patient care and introducing new services to better serve our community’s needs.
Current and Upcoming Hospital Upgrades

- Operating Room – Hybrid Room
- Façade Main Building
- Medical Office Building Façade & Common Areas
- 3 West Cardiac/Telemetry Unit
- Emergency Department
Neurosciences

- **Dedicated** Neuro Intensive Care Unit
- **Established** Epilepsy Monitoring Unit
- **Expertly Trained** Staff
  - Neurosurgeons
  - Neurologist
  - Intensivist
  - Support staff experienced in neurological management
- **Advanced** Surgical Technology
  - Stealth Station Surgical Navigation System
  - O-Arm Surgical Imaging System
- **Award-Winning** Care
  - Advanced Certified Primary Stroke Center
  - American Heart Association Get with the Guidelines® Stroke Gold Plus (2015-2022)
  - High Performance in the Treatment of Stroke in U.S. News & World Report’s 2022-2023 Best Hospitals

**Neurosurgeons:**
- Ramin M. Abdolvahabi, MD
- John K. Afshar, MD
- Timothy G. Burke, MD
- John D. Cantando, DO
- Michael J. Chaparro, MD
- Fred L. Cohen, MD
- Steven A. Dutcher, DO
- Faris J. Fakhoury, MD
- Helda Gomez Jr., MD
- Martin Greenberg, MD
- Evan M. Packer, MD
- Brett A. Schlipka, DO
- Ronald L. Young II, MD
- Lloyd Zucker, MD
Did you know...

• Over 350,000 cardiac arrests occur per year in the United States with more than 70% of them occurring in the home and 20% in a public place.

• For every minute that passes once someone’s heart stops their mortality increases by 10%.

• Of the 75 cardiac arrests that occurred in Palm Beach Gardens in 2021:
  • 35% were resuscitated by Fire Rescue prior to arrival at the ER
    • Florida average is 17.7%
  • 57% were neurologically intact at hospital discharge
    • National average is 7%
What is a HEARTSafe Community?

• The HEARTSafe Community program is a set of criteria and guidelines designed to improve outcomes to sudden cardiac arrest emergencies through a specific set of training, preparation and response protocols. This includes:
  • Widespread CPR instruction
  • Public access defibrillators
  • Aggressive resuscitation protocols for first responders and area hospitals
HEARTSafe Community Initiative

• Communities that strive to become “heart safe” must meet the 13 different criteria established by the Citizen CPR Foundation.
  • Example of one metric:
    • 15% of the community population to be trained in Hands Only CPR/AED use

• We partner with Palm Beach Gardens Fire Rescue to offer FREE Hands Only CPR classes to our community once a month
  • Next Class is November 15th - Register at PBGMC.com
Community Outreach

If you are interested in a hands-only CPR class or a speaker for an upcoming community meeting/event, please reach out to our marketing department at 561-366-6753 to help coordinate a date and time!
New Procedures and Capabilities

Bloodless Medicine and Surgery Program

Dr. Sean Sawh, Urologist Performed First Optilume Procedure to Treat Anterior Urethral Stricture Disease
Expanding Our Robotic Orthopedic Service Line Capabilities
Dr. Robert J. Avino, Orthopedic Surgeon

Fellowship trained adult hip and knee reconstruction surgeon

Published in the most prestigious orthopedic journal, *The Journal of Arthroplasty*

EDUCATION
- Fellowship: Cleveland Clinic Florida
- Residency: University of Chicago
- Medical: Saint Louis University
- Undergraduate: Saint Louis University

Holds robotic device certification for Mako Total Knee, Mako Total Hip (4.0), and Mako Partial Knee.

Specializes in direct anterior approach hip replacement, robotic knee replacement, and complex revision surgery

One of 17 board certified physicians at Palm Beach Orthopaedic Institute with offices across Palm Beach County

*Palm Beach Gardens Medical Center*
Let’s talk
Mako SmartRobotics™
Palm Beach Gardens Medical Center’s
Mako Robotic Total Joint Replacement Program

CONGRATULATIONS DR. AVINO
ON PERFORMING THE FIRST
MAKO SMARTROBOTICS™
PROCEDURE AT
Palm Beach Gardens Medical Center
Palm Beach Health Network
Palm Beach Gardens Medical Center is the **ONLY** hospital in Palm Beach County with two Mako Robots
Mako SmartRobotics™ System

1 Mako System

3 applications

Mako Total Hip  Mako Total Knee  Mako Partial Knee

Mako camera stand  Mako guidance cart
Mako SmartRobotics™

combines three key components, 3D CT-based planning, AccuStop™ haptic technology and insightful data analytics**, into one platform which has shown better outcomes for your total hip, total knee and partial knee patients.²,⁹,¹⁸

**Access to data analytics offering requires execution of a separate agreement.

¹ For Mako Total Knee application, “cut less” refers to less soft tissue damage and greater bone preservation compared to manual surgery.⁴,⁸ For the Mako Total Hip and Partial Knee applications, “cut less” refers to greater bone preservation as compared to manual surgery.⁴,⁷,⁸
AccuStop™ haptics

Mako AccuStop™ haptics...

• **Constrains the cutting tool** within a virtual boundary that is established by the surgeon’s **patient-specific plan**

• **Is no longer limited** by cutting blocks and manual techniques

Mako AccuStop™ haptics has demonstrated...

• Greater **precision to plan** compared to manual TKA\(^{19}\)

• **Less** bone and soft tissue damage compared to manual TKA\(^{5}\)

• More **accurate cup positioning** to plan when compared to manual THA\(^{20}\)

• Greater **bone preservation** in Mako PKA and THA\(^{4,8}\)
Evolution of planning and execution
orthopaedic technology

- **Static plan**
  - 1950s

- **Navigated execution**
  - 1990s

- **Navigated freehand power tools**
  - 2000s

- **Robotic-arm assisted surgery**
  - 2000s
Evolution of Mako SmartRobotics™

- **MAKO Surgical Corporation**
- **Restoris MCK Partial Knee System**
- **First Mako Total Hip procedure**
- **Restoris Hip System**
- **Stryker acquires Mako**
- **Third generation Mako System**
- **First Mako Total Knee case**
- **Mako Partial Knee 3.0**
- **Mako Total Hip 4.0**
- **Mako Total Hip 4.1 with Insigna™**

**The Mako advantage**

**Mako is the only SmartRobotics™ System** with 16 years of robotic-arm assisted surgery experience.

**No other technologies in the market** currently offer these comprehensive solutions.

<table>
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<th>Mako</th>
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| **Launch date and indications** | Partial knee – 2006  
Total hip – 2010  
Total knee – 2016 |
| **Imaging** | CT scan |
| **Bone preparation guidance** | Haptically guided cutting with robotic arm |
| **Marketing claims** | Enhanced pre-op planning  
Dynamic joint balancing  
Haptic guidance |
| **Data analytics offering** | HRO, RecoveryCOACH (Insightful Data Analytics)* |

*Access to data analytics offering requires execution of a separate agreement.*
Leading a robotics market

- 16 years of robotic-arm assisted surgery experience
- 615k+ Mako procedures have been performed*
- 1,400+ Mako Systems* have been installed across 36 countries and every state in the contiguous U.S.*
- 150+ ASCs have Mako Systems*
- 67+ teaching institutions have Mako Systems*

280+ peer-reviewed published manuscripts

*Stryker’s 2021 sales data
**Leading a robotics market**

**U.S. Mako growth***

*Stryker's 2021 U.S. sales data*
Mako clinical applications
Mako Partial Knee
Clinical success | Partial Knee

Mako Partial Knee has demonstrated...

- **More accurate** implant placement to plan and **55.4% less pain** from day 1 to week 8 postoperative compared to manual partial knees with Oxford in a randomized controlled trial\(^1\,^2\,^22\)

- **97% survivorship** at 5- to 6-year follow-up, which outperformed other large cohort studies (94.2%) and annual registries (93.1%)\(^1\,^8\)

- **98.4% registry survivorship** at 1 year in the **Australian registry**\(^21\)

- **98% survivorship** at 10-year follow-up\(^23\)
Mako Total Knee
Mako Total Knee **fast facts***

- **5** years on the market
- **+250k** world-wide cases performed since launch
- **+67** published peer-reviewed studies
- **44%** of primary Stryker knees are put in with Mako
- **50%** of Mako Total Knees are cementless

*Stryker's 2021 U.S. sales data on file*
Challenges in total knee arthroplasty

20% patient dissatisfaction\textsuperscript{24}

Key drivers for revision

- Infection
- Malalignment
- Joint imbalance (Leads to other indicators of revision)

Overall rate of revision could potentially be reduced by 25% by careful ligament balancing and cementation alone\textsuperscript{25}
Two distinct, prospective, consecutive series, single-surgeon studies comparing patients undergoing conventional jig-based total knee replacement versus Mako Total Knee surgery (40 patients and 30 patients in each cohort), concluded that Mako Total Knee with Triathlon was associated with:

- Reduced postoperative pain
- Reduced soft tissue trauma
- Reduced postoperative blood loss
- Less time to achieve postoperative goals
- Shorter hospital stay
- Fewer physiotherapy sessions

Patient specific 3D plan
Real time dynamic refinement
Haptic surgical execution

Mako Total Knee clinical story

MKOSYM-PRE-115_32567
Mako Total Knee has demonstrated...

Two distinct, prospective, consecutive series, single-surgeon studies comparing patients who underwent conventional jig-based total knee replacement versus Mako Total Knee surgery (40 patients\(^9\) and 30 patients\(^5\) in each cohort) concluded that Mako Total Knee with Triathlon was associated with:

- **Less** bone and soft tissue damage\(^5\) (p<0.05)
- **Less** need for opiate analgesics\(^9\) (p<0.001)
- **Less** time to hospital discharge\(^9\) (26% reduction in LOS)
- **Less** need for inpatient physical therapy sessions\(^9\) (p<0.001)
- **Less** postoperative pain\(^9\) (p<0.001)
Enhanced acetabular component placement accuracy and reduced dislocation rates when compared with manual THA\(^2\)

Favorable short-term patient reported outcomes\(^{26-28}\)

The highest Forgotten Joint Score reported in literature for THA\(^{28}\)

Decreased length of stay\(^{29}\)
Healthcare Economics
Mako Partial Knee has demonstrated...

- **Reduced** number of PT sessions and earlier achievement of PT goals\(^{30}\)
- **Reduced** revision surgery\(^{15,18,21,23,31-36}\)
- **Reduced** payer costs\(^{15}\)
Mako Total Knee has demonstrated...

- **Reduced** pain and use of pain medications\(^9\)-\(^{11}\)
- **Reduced** utilization and cost of health services such as skilled nursing, home health aide, readmissions and emergency room\(^12\)-\(^{14}\)
- **Reduced** 90-day EOC costs for Medicare and private payer\(^{12,14}\)
Economic outcomes | Total Hip

Mako Total Hip has demonstrated...

- Reduced utilization of post index rehabilitation services such as skilled nursing, home health aide and inpatient rehab$^{37}$
- Reduced 90-day EOC costs compared to manual THA$^{37}$
- Reduced cumulative cost compared to manual THA for Medicare and private payer over 5 years$^{38}$
References


8. Hampp E, Chang T-C, Pearle A. Robotic partial knee arthroplasty demonstrated greater bone preservation compared to robotic total knee arthroplasty. Presented at: Orthopaedic Research Society Annual Meeting; February 8-11, 2020; Phoenix, AZ.


References


35. Catani F. Clinical outcome of robotically assisted UKAs at 3 years of follow-up. Presented at: The Partial Knee Meeting; January 25-26, 2018; Bruges, Belgium.


A surgeon must always rely on his or her own professional clinical judgment when deciding whether to use a particular product when treating a particular patient. Stryker does not dispense medical advice and recommends that surgeons be trained in the use of any particular product before using it in surgery.

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