

Presentation to The Board of Regents, State of Iowa | February 2022

University of Iowa Health Care

PRESENTATION TO THE BOARD OF REGENTS, STATE OF IOWA
February 23, 2022

Agenda

- Opening Remarks
- Operating and Financial Performance
- Faculty Presentation: Carbon fiber custom dynamic orthoses to restore limb function

Opening Remarks

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Brooks Jackson, MD, MBA

Vice President for Medical Affairs

& Tyrone D. Artz, Dean, Carver College of Medicine

Operating and Financial Performance

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Suresh Gunasekaran, MBA

Senior Associate Vice President, UI Health Care
& CEO, UI Hospitals & Clinics

Mark Henrichs, CPA, MHA

Associate Vice President
& Chief Financial Officer, UI Health Care

Volume and Financial Highlights – FY22

THROUGH DEC 2021

Operating Margin

- Actual 7.0% vs goal of 4.3%

Key Volumes

- **Inpatient Discharges**
-5.5% vs budget | +2.6% vs prior year
- **Acute Patient Days**
+0.4% vs budget | +2.9% vs prior year
- **Surgeries**
-2.6% vs budget | +0.2% vs prior year
- **Clinic Visits**
+16.2% vs budget | -1.5% vs prior year (w/ ILI)

Acuity

- Case Mix Index 2.42

Length of Stay Index

- Adult at 1.01
- Pediatrics at 1.02

Gross Patient Revenue

- 1.5% above budget yearto-date
 - IP -0.6% vs budget | OP +3.2% vs budget

Government Pandemic Support

- \$4.2M received FYTD

Payer Mix

- Medicare below historical average since pandemic
- FY20: 38.0% | FY21: 37.2% | FY22: 37.1%

Accounts Receivable

- Days in Net AR– 47.9 days

Salary Expenses

- 1.1% below budget
- New retention pay initiatives and increased agency staffing driving salary expenses upward in recent months

Non-Salary Expenses

- 2.4% above budget due to medical supplies and drugs

Comparative Financial Results

FISCAL YEAR TO DATE DEC. 2021

NET REVENUES	Actual	Budget	Prior Year	Variance to Budget	% Variance to Budget	Variance to Prior Year	% Variance to Prior Year
Patient Revenue	\$1,139,325	\$1,101,581	\$1,038,904	\$37,744	3.4%	\$100,421	9.7%
Other Operating Revenue	30,444	24,399	56,877	6,045	24.8%	(26,433)	-46.5%
Total Revenue	\$1,169,769	\$1,125,980	\$1,095,781	\$43,789	3.9%	\$73,988	6.8%
EXPENSES							
Salaries and Wages	\$452,594	\$457,758	\$456,652	(\$5,164)	-1.1%	(\$4,058)	-0.9%
General Expenses	572,561	559,166	534,943	13,395	2.4%	37,618	7.0%
Operating Expense before Capital	\$1,025,155	\$1,016,924	\$991,595	\$8,231	0.8%	\$33,560	3.4%
Cash Flow Operating Margin	\$144,614	\$109,056	\$104,186	\$35,558	32.6%	\$40,428	38.8%
Capital- Depreciation and Amortization	62,147	60,776	52,254	1,371	2.3%	9,893	18.9%
Total Operating Expense	\$1,087,302	\$1,077,700	\$1,043,849	\$9,602	0.9%	\$43,453	4.2%
Operating Income	\$82,467	\$48,280	\$51,932	\$34,187	70.8%	\$30,535	58.8%
Operating Margin %	7.0%	4.3%	4.7%		2.7%		2.3%
Gain (Loss) on Investments	6,378	20,010	54,147	(13,632)	-68.1%	(47,769)	-88.2%
Other Non-Operating	(7,075)	(6,304)	(6,194)	(771)	-12.2%	(881)	-14.2%
Net Income	\$81,770	\$61,986	\$99,885	\$19,784	31.9%	(\$18,115)	-18.1%
Net Margin %	7.0%	5.4%	8.7%		1.6%		-1.7%

Key Metrics

	FY22 YTD Through Dec	Moody's Median
Financial Operations		
Operating Margin	6.5%	1.1%
Financial – Liquidity		
Days Cash on Hand	236	305
Financial – Leverage		
Debt to Capitalization	16.8%	21.4%



COVID-19 Update

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Patient, Visitor, and Employee Modifications



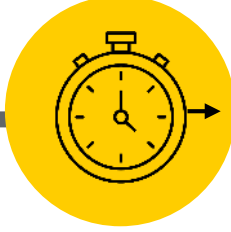
Reinforce and diligently adhere to our visitor restrictions



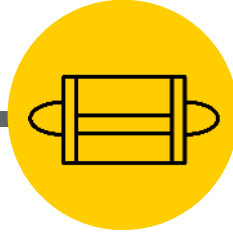
Reinforce and diligently adhere to our safety standards



Expand onsite employee testing



Modify quarantine guidelines for asymptomatic staff following positive test



Update our masking requirements to all medical-grade masks



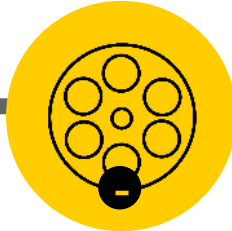
Maintain our inpatient bed capacity as much as possible



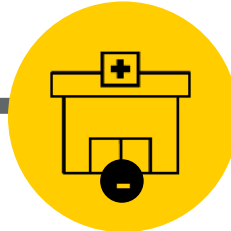
Re-assign staff to support inpatient units, ILI clinics and testing, and University Employee Health Clinic



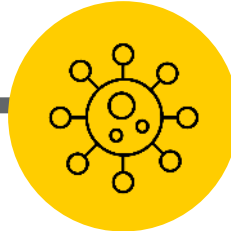
Re-assign staff to assist with call volumes



Modify surgical and procedural schedules



Modify clinic schedules



Remember we are still in a pandemic and act accordingly



Leadership Recognition

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UIHC's Amazing Leadership Team



Theresa Brennan, MD

- Leader of our COVID19 Emergency Response
- Leader of our quality improvement efforts



Mark Henrichs, MHA, CPA

- Leader of our continued financial improvement
- Leader of our collaboration with the State Medicaid Office



Tim Kan, MBA, MA

- Leader of our community partnership efforts
- Leader of our clinical growth efforts to expand services off-campus



Lee Carmen, BSEE

- Leader of our information technology efforts



Kim Hunter, DNP, MBA, RN, NEABC

- Leader of our nursing operations and Magnet designation
- Leader of our workplace preservation efforts



Amy O'Deen, BSN, MHA

- Leader of our UIHC-North Liberty effort
- Liaison to State COVID-19 Response efforts



Joseph Clamon, JD

- Leader of our legal organization



Pam Johnson-Carlson, DNP, RN, NEBC

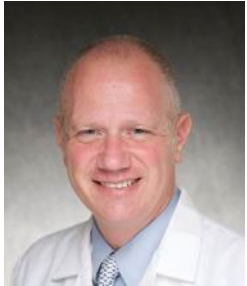
- Leader of our Stead Family Children's Hospital
- Leader of efforts to expand maternal health services



Christine Thiriet, MAC

- Leader of our marketing and communications efforts

UIHC's Amazing Leadership Team



Douglas Van Daele, MD

- Leader of our expanded faculty practice clinics off-campus
- Leader of our telehealth efforts



**Jana Wessels, JD and
Kyle Anson, JD**

- Leaders of our human resources organization



**Melissa Whisler,
MBA, MHA**

- Leader of our Campus Master Planning efforts
- Leader of our efforts to collaborate with Critical Access Hospital Network

New Leadership



Emily Blomberg, MHA

- Chief Operating Officer (starts March 2022)
- Previously Chief Operating Officer of Hennepin County Medical Center
- Extensive academic medical center experience



Organizational Recognition

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Advanced Comprehensive Stroke Center Accreditation

UI Hospitals & Clinics was re-certified by the Joint Commission as:

Iowa's only Advanced Comprehensive Stroke Center



The Joint Commission

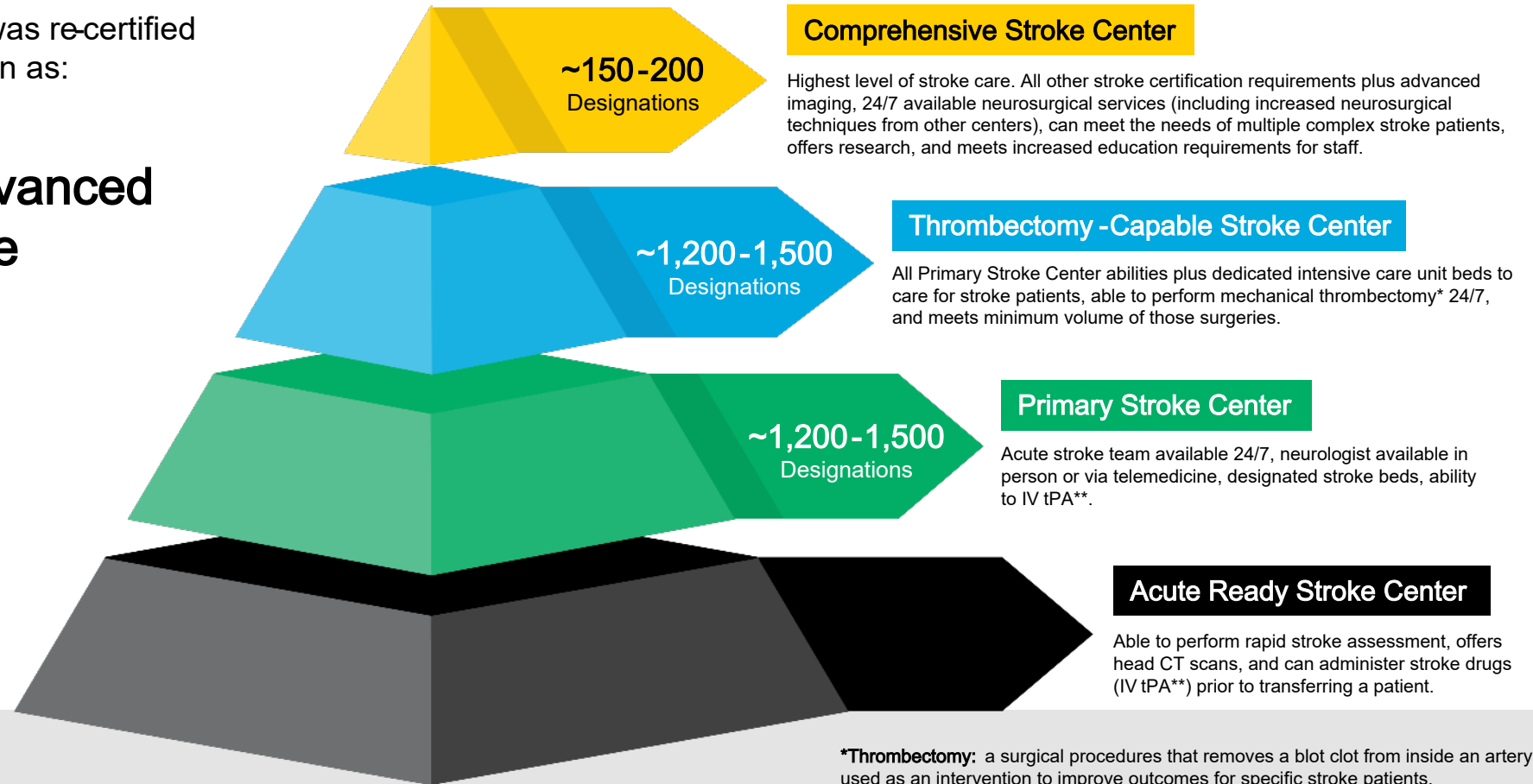


American Heart Association
American Stroke Association

CERTIFICATION

Meets standards for

Comprehensive Stroke Center

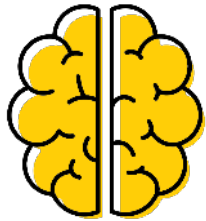


***Thrombectomy:** a surgical procedures that removes a blot clot from inside an artery or vein. Can be used as an intervention to improve outcomes for specific stroke patients.

****tPA (tissue Plasminogen Activator):** a medication that thins the blood and helps dissolves clots that are present. Can be used as an intervention to improve outcomes for specific stroke patients.

Advanced Comprehensive Stroke Center Accreditation

UI Hospitals & Clinics supports:



17

primary stroke centers throughout the state of Iowa



82

critical access hospitals throughout the state of Iowa

OTHER ADVANCED COMPREHENSIVE STROKE CENTERS



JOHNS HOPKINS
MEDICINE



Cleveland Clinic



UWHealth

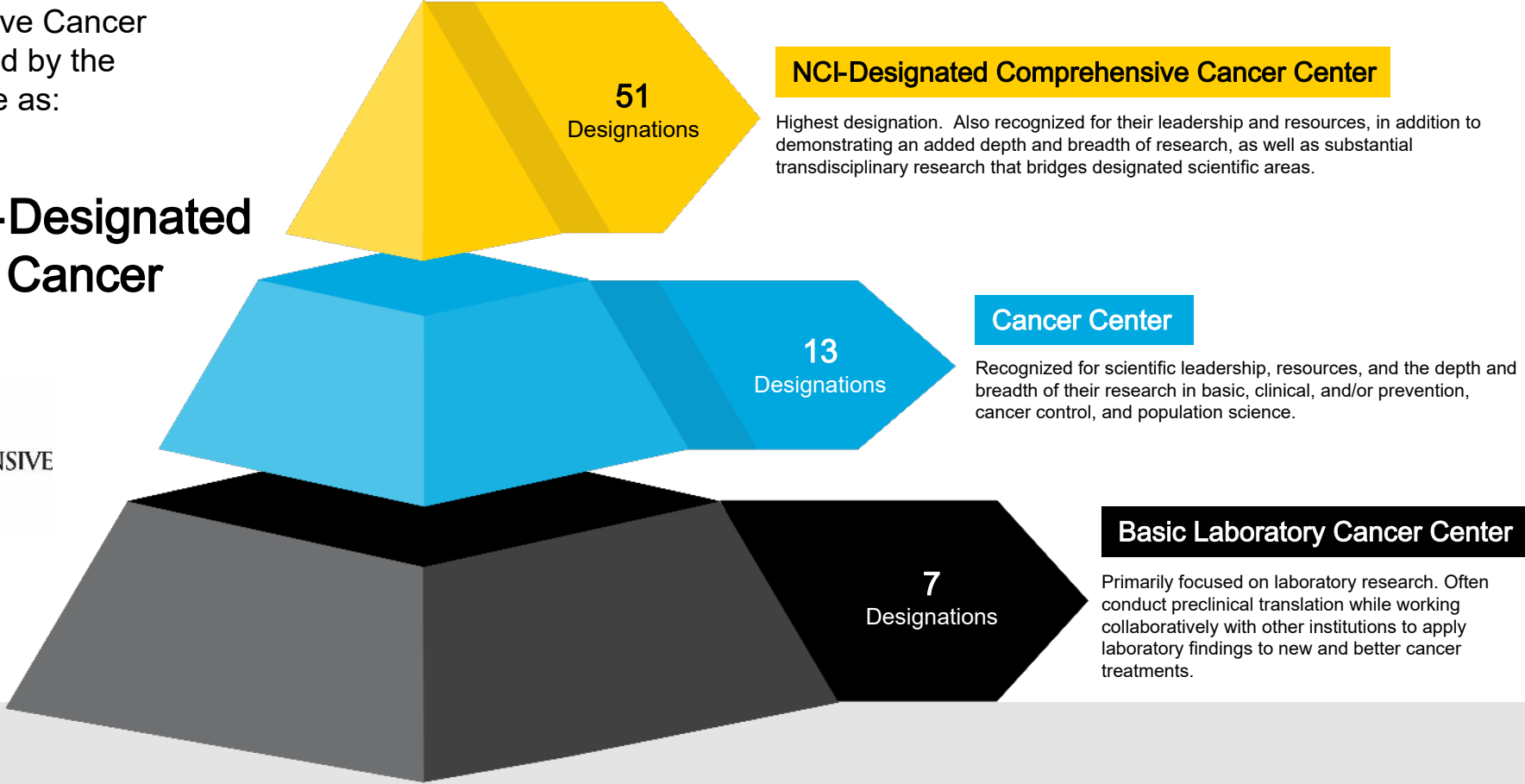
University of Wisconsin
Hospital and Clinics

UC San Diego Health

Comprehensive Cancer Center Designation

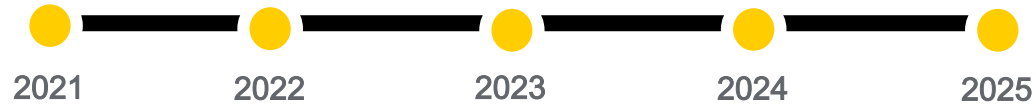
UI Holden Comprehensive Cancer Center was re-designated by the National Cancer Institute as:

Iowa's only NCI-Designated Comprehensive Cancer Center



Comprehensive Cancer Center Designation

This research designation is for 5 years



The designation includes \$12.5 million in support of cancer research

OTHER COMPREHENSIVE CANCER CENTERS



Memorial Sloan Kettering Cancer Center



Dana-Farber/Harvard Cancer Center



A Cancer Center Designated by the National Cancer Institute

THE UNIVERSITY OF TEXAS
~~MD Anderson~~
Cancer Center



AT THE FOREFRONT
UChicago Medicine
Comprehensive Cancer Center

The James



THE OHIO STATE UNIVERSITY
COMPREHENSIVE CANCER CENTER



Masonic Cancer Center
UNIVERSITY OF MINNESOTA

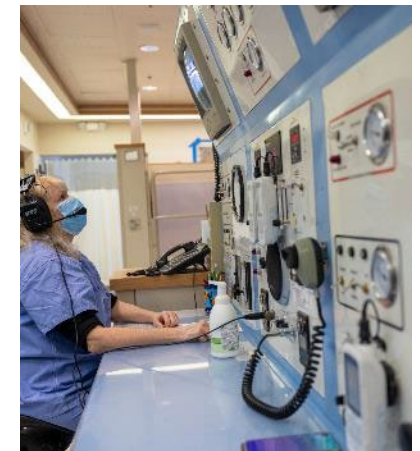


Clinical Highlight: Hyperbaric Medicine

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Hyperbaric Medicine Background

- UIHC operates the **largest hyperbaric chamber** (only 6-person chamber) in the state of Iowa, led by a specialized multidisciplinary team.
- Hyperbaric Medicine **provides life -saving treatment** to patients with complex diagnoses and is available 24/7, 365 days a year, at UIHC.
- UIHC treats these **complex patients across all medical specialties** based on indicators specifically approved by the Hyperbaric Oxygen Therapy Committee. Examples include:
 - Severe burns
 - Carbon monoxide poisoning
 - Infection of bone or bone marrow (osteomyelitis)
 - Severe anemia



Hyperbaric Medicine Overview

- Video Slide

Cutting Edge Future Care for Hyperbaric Medicine

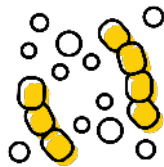
In addition to current clinical operations, **UIHC's multi-disciplinary team leads clinical research studies** to improve outcomes for patients with complex diagnoses across medical specialties.

CURRENT STUDIES UNDERWAY



UPCOMING STUDIES UNDER EVALUATION

Current studies underway to treat patients with:



Septic shock

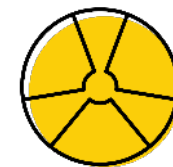


Severe traumatic brain injury

Upcoming studies under evaluation to treat patients with:



Ulcerative colitis
(an inflammatory bowel disease)



Radiation side effects from prostate cancer treatment

Carbon fiber custom dynamic orthoses to restore limb function

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Jason Wilken, PT, PhD

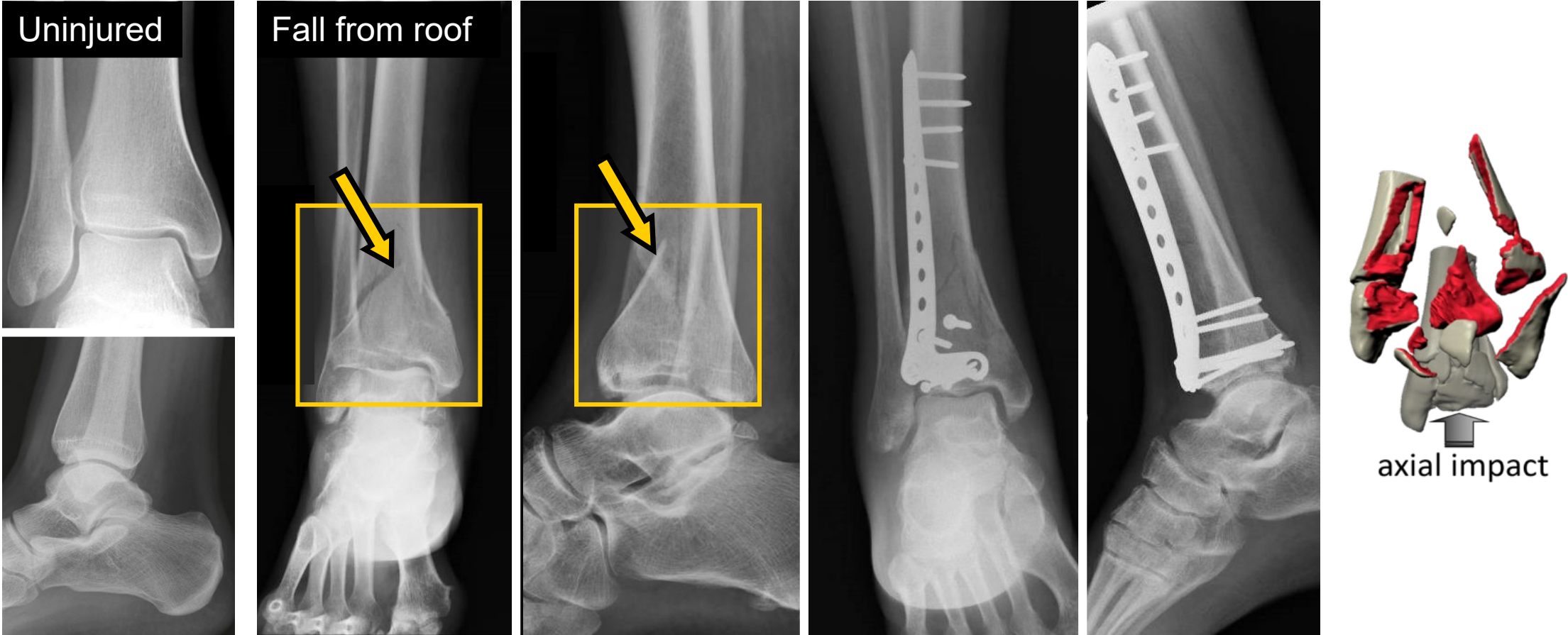
Director, Collaborative Research and Development

Associate Professor, Department of Physical Therapy and Rehabilitation Science

Foot and ankle injury



High energy lower extremity trauma

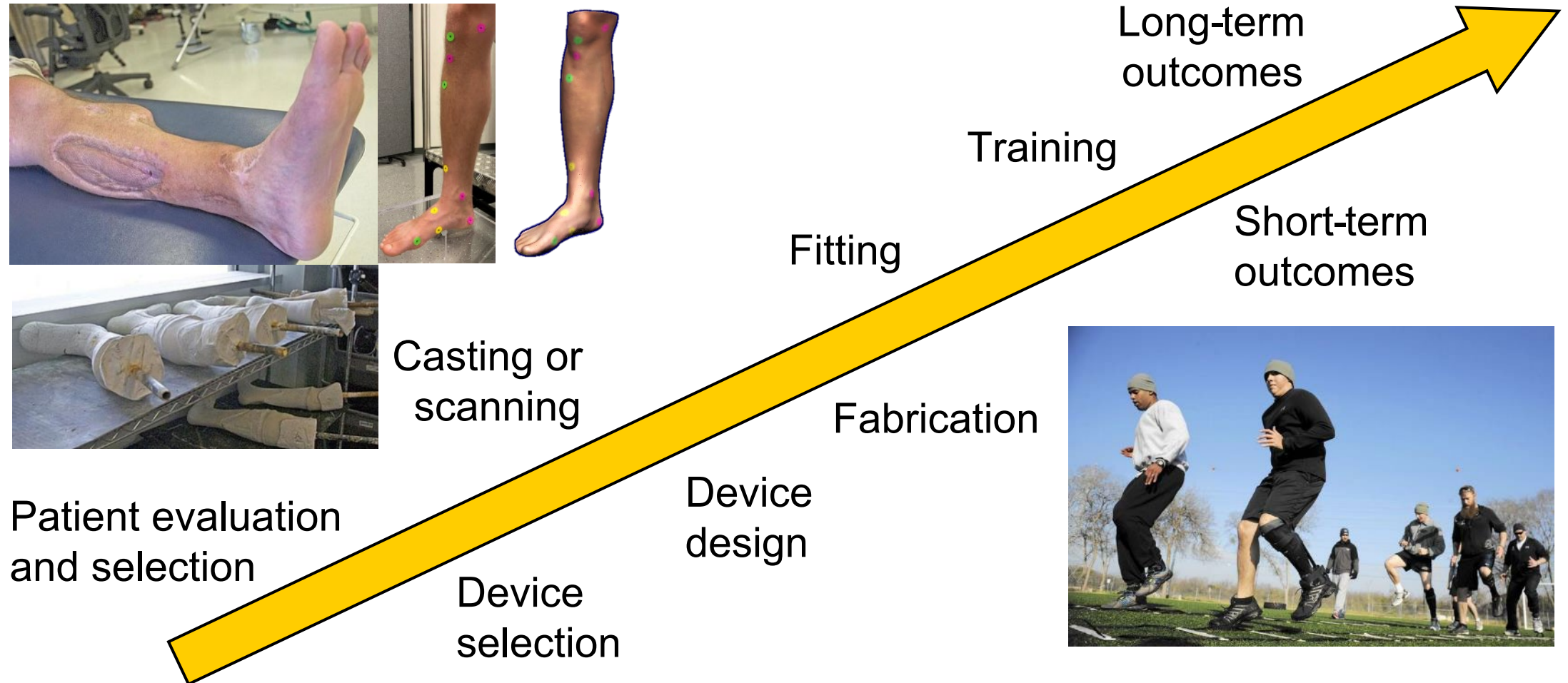


Custom Dynamic Orthoses (CDO)



Patzkowski JC, Blanck RV, Owens JG, Wilken JM, Blair JA, Hsu JR. J SOA. 2011 Spring;20(1):88.

Advancing CDO related care



Device design, mechanics, and outcomes

Original Research Report

Effects of altering heel wedge properties on gait with the Intrepid Dynamic Exoskeletal Orthosis

Andrea J Ikeda^{1,2}, John R Ferguson¹ and Jason M Wilken^{1,2}

Foot & Ankle International (FAI) | International Society for Prosthetics and Orthotics (ISPO) | The International Society for Prosthetics and Orthotics (ISPO) | Copyright and permission: Copyright © 2017, Jason M. Wilken, et al. DOI: 10.1177/1095646117728116

Contents lists available at ScienceDirect

Clinical Biomechanics

journal homepage: www.elsevier.com/locate/jclinbiomech

Biomechanical response to ankle-foot orthosis stiffness during running[☆]

Elizabeth Russell Esposito[☆], Harmony S. Choi, Johnny G. Owens, Ryan V. Blanck, Jason M. Wilken

Center for the Intrepid, Department of Orthopedics and Rehabilitation, Brooke Army Medical Center, Ft. Sam Houston, TX 78234, United States

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Journal of Biomechanics

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The effect of ankle foot orthosis alignment on walking in individuals treated for traumatic lower extremity injuries[☆]

Starr E. Brown^{☆,†}, Elizabeth Russell Esposito^{☆,†}, Jason M. Wilken^{☆,†}

[☆] Center for the Intrepid, Department of Orthopedics and Rehabilitation, Brooke Army Medical Center, JBSA Fort Sam Houston, TX, United States
[†] University Trauma and Amputation Center of Excellence, United States

Contents lists available at ScienceDirect

Gait & Posture

journal homepage: www.elsevier.com/locate/gaitpost

Ankle-foot orthosis bending axis influences running mechanics[☆]

Elizabeth Russell Esposito^{☆,†,‡}, Eilyn C. Ranz[☆], Kelly A. Schmidbauer[☆], Richard R. Neptune[☆], Jason M. Wilken^{☆,†}

[☆] Center for the Intrepid, Brooke Army Medical Center, JBSA Fort Sam Houston, TX, USA
[†] University Trauma and Amputation Center of Excellence
[‡] Department of Mechanical Engineering, The University of Texas at Austin, Austin, TX, USA

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Clinical Biomechanics

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The influence of ankle-foot orthosis stiffness on walking performance in individuals with lower-limb impairments

Nicole G. Harper[☆], Elizabeth Russell Esposito[☆], Jason M. Wilken[☆], Richard R. Neptune^{☆,†}

[☆] Department of Mechanical Engineering, The University of Texas at Austin, Austin, TX 78712, USA
[†] Center for the Intrepid, Department of Orthopedics and Rehabilitation, Brooke Army Medical Center, Ft. Sam Houston, TX 78234, USA

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The influence of passive-dynamic ankle-foot orthosis bending axis location on gait performance in individuals with lower-limb impairments

Eilyn C. Ranz[☆], Elizabeth Russell Esposito^{☆,†}, Jason M. Wilken^{☆,†}, Richard R. Neptune^{☆,†}

[☆] Department of Mechanical Engineering, The University of Texas at Austin, Austin, TX 78712, USA
[†] Center for the Intrepid, Brooke Army Medical Center, JBSA Fort Sam Houston, TX 78234, USA
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[†] University Trauma and Amputation Center of Excellence, United States

Clin Orthop Rel Res (2014) 472:3026–3035
DOI 10.1007/s11999-014-3661-3

SYMPOSIUM: RECENT ADVANCES IN AMPUTATION SURGERY AND REHABILITATION

How Does Ankle-foot Orthosis Stiffness Affect Gait in Patients With Lower Limb Salvage?

Elizabeth Russell Esposito PhD, Ryan V. Blanck CPO, Nicole G. Harper MS, Joseph R. Hsu MD, Jason M. Wilken PT, PhD



60% pain



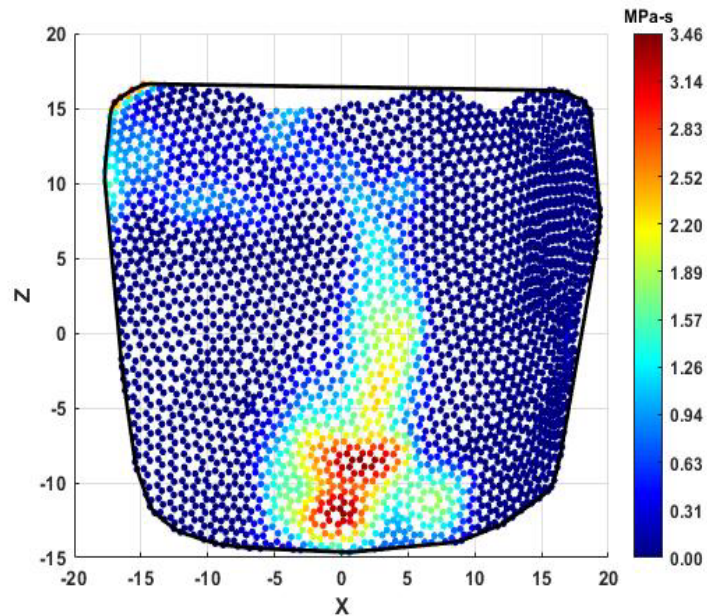
>30% mobility



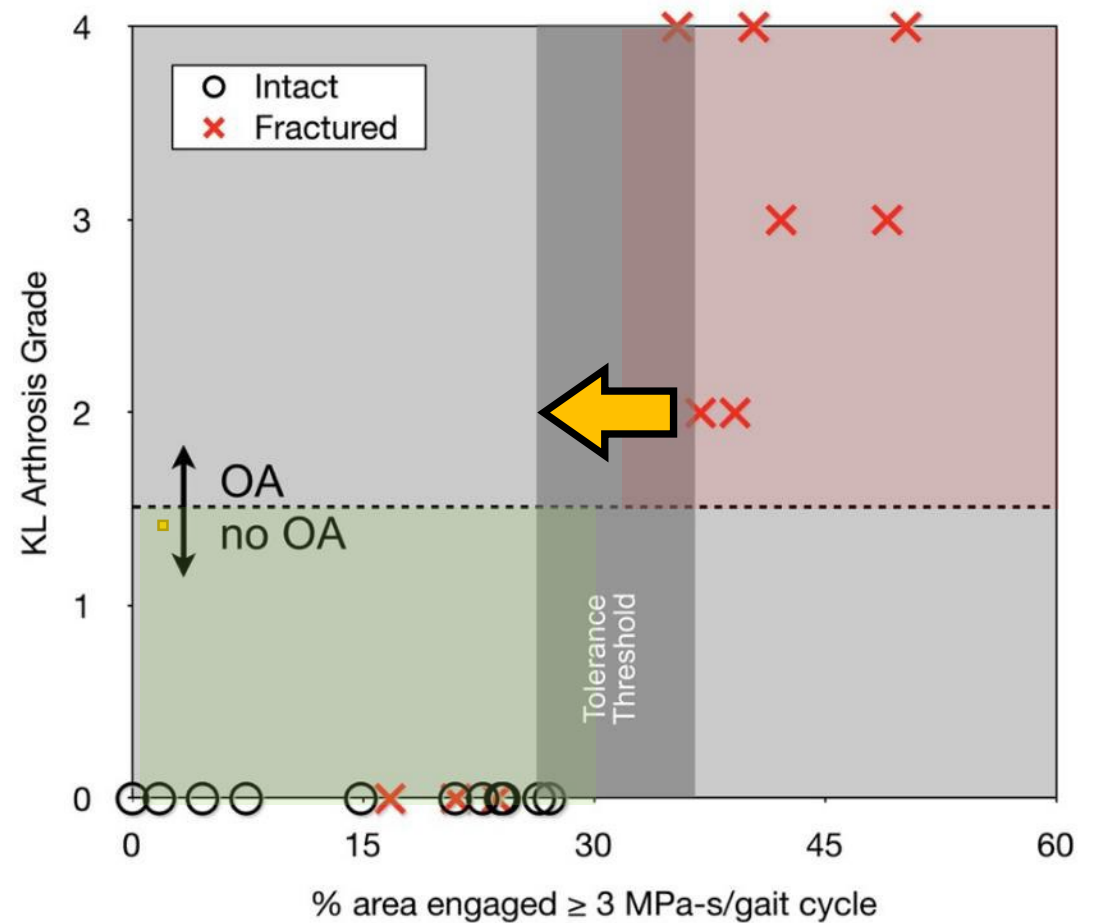
2X function

Ankle arthritis is common after fracture

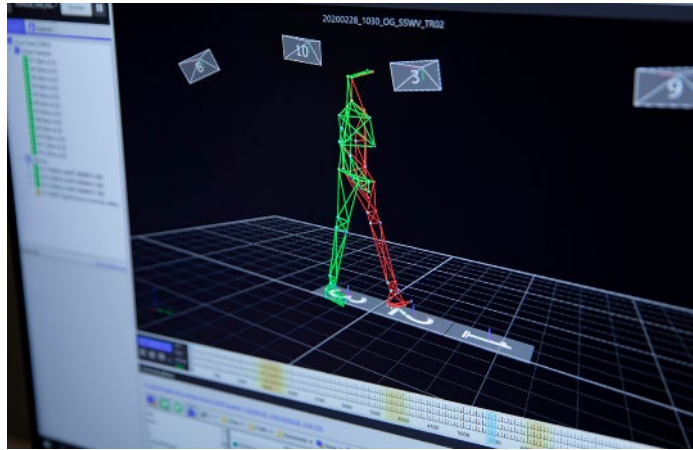
Elevated ankle contact stress is common and predictive of arthritis



Reducing contact stress may decrease risk of arthritis



Quantifying joint contact stress



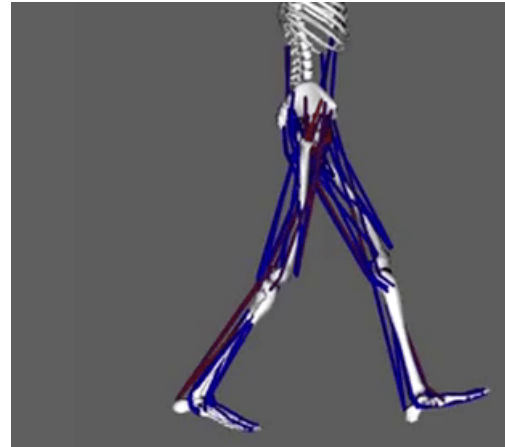
Gait Lab Data

- Height and body weight
- Gait kinetics and kinematics
- Ground reaction force
- Plantar pressures
- Electromyography
- CDO stiffness



OpenSim

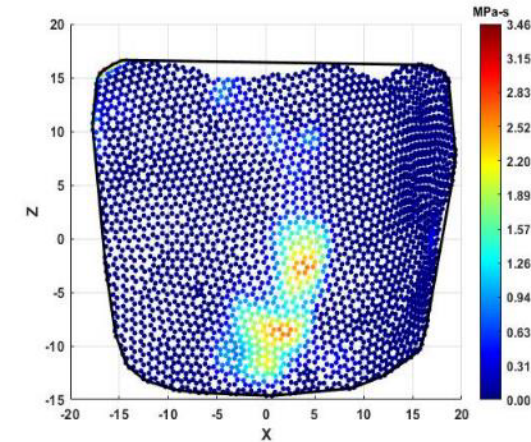
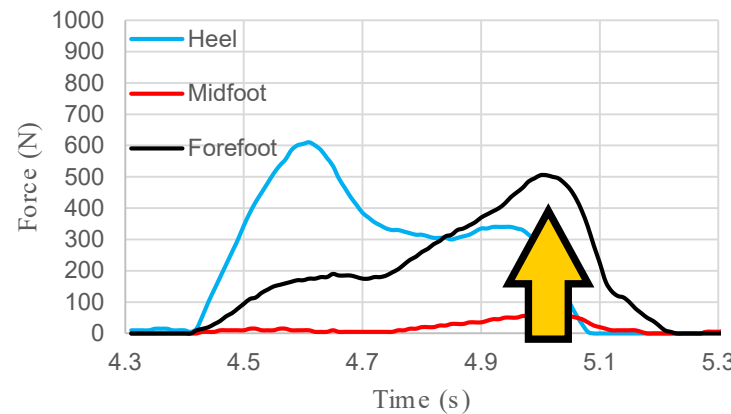
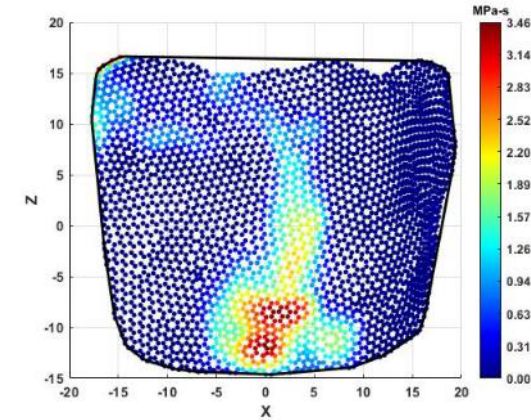
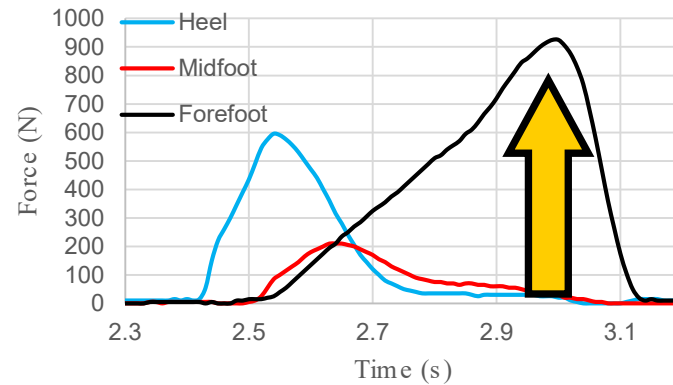
- Scale generic model
- Inverse kinematics
- Residual reduction algorithm
- Static optimization
- Addition of virtual CDO
- Generate muscle driven motion



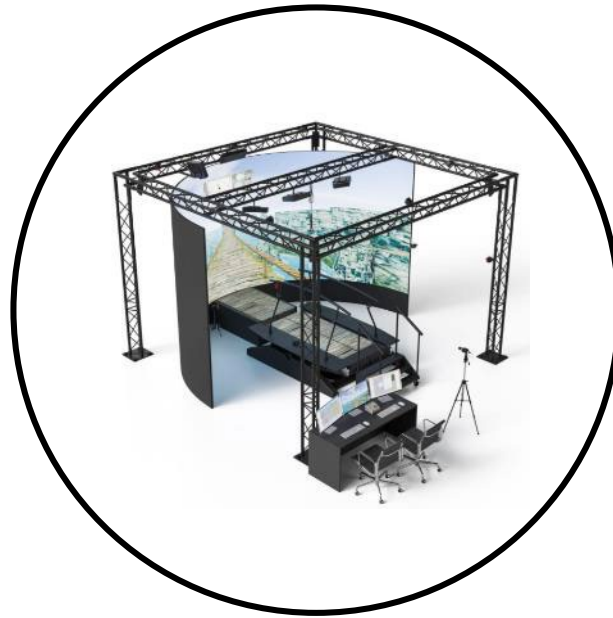
- Bone geometries (obtained from weight-bearing CT)
- Stiffness of springs
- Tibiotalar joint load
- Relative orientation of tibia and talus (joint angle)

Support from the CDO reduces forces on the foot and at the ankle joint

No CDO

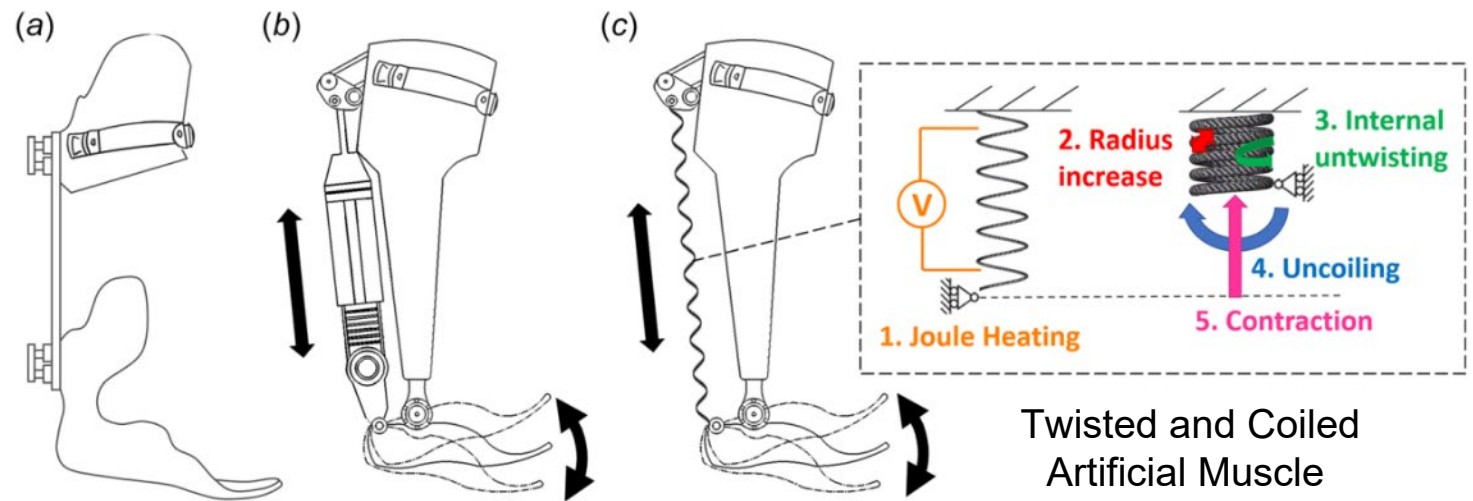


Advanced Rehabilitation: Virtual Reality System



Looking ahead

- Educating future physical therapists, orthotists and scientists
- Developing new technologies



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Thank you

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CHANGING LIVES®