



Geisinger

Christopher D. Still, DO, FACN, FACP

Medical Director, Center for Nutrition & Weight Management

Director, Geisinger Obesity Research Institute

Medical Director, Employee Wellness

Geisinger Health Care System

Danville, Pennsylvania

Disclosures:

Speaker:

- Novo Nordisk Pharmaceuticals (Major)
- Orexigen Pharmaceuticals (Major)

Investigator Initiated Research

- Ethicon-Endosurgery (Major)

Consultant

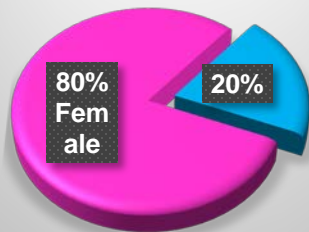
- Ethicon-Endosurgery (Minor)

Organization

- Geisinger Health System is an integrated health care system that accepts Medicare payments and offers bariatric surgery services.

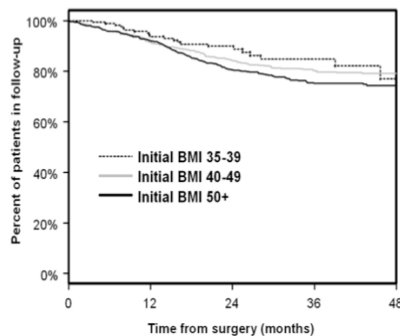
Geisinger Bariatric Surgery Cohort

Gender Distribution

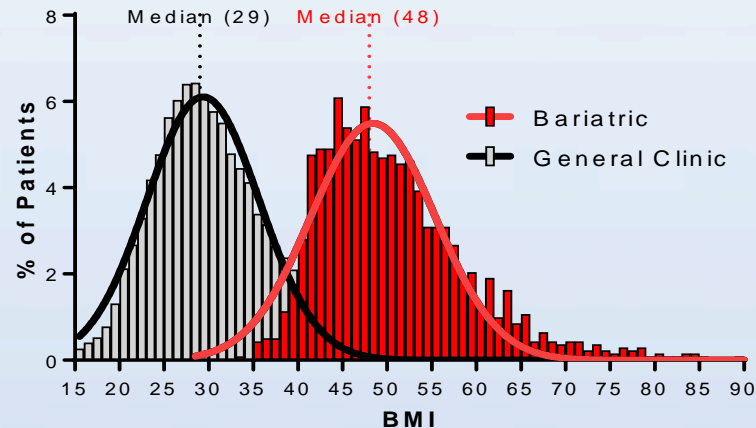


Total enrolled	>5400
Weight (pounds)	
Mean (SD)	303 (66)
Median [range]	291 [161, 654]
BMI (kg/m ²)	
Mean (SD)	49.5 (9.1)
Median [range]	47.6 [35.0, 97.5]
Age	
Median [range]	46 [18, 75]

Post-Op Follow up

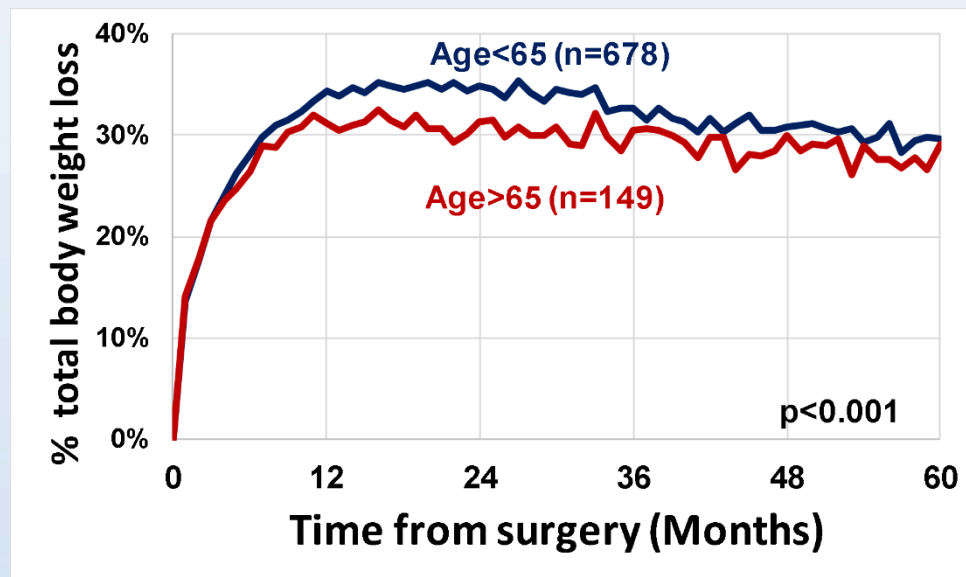


BMI Distribution



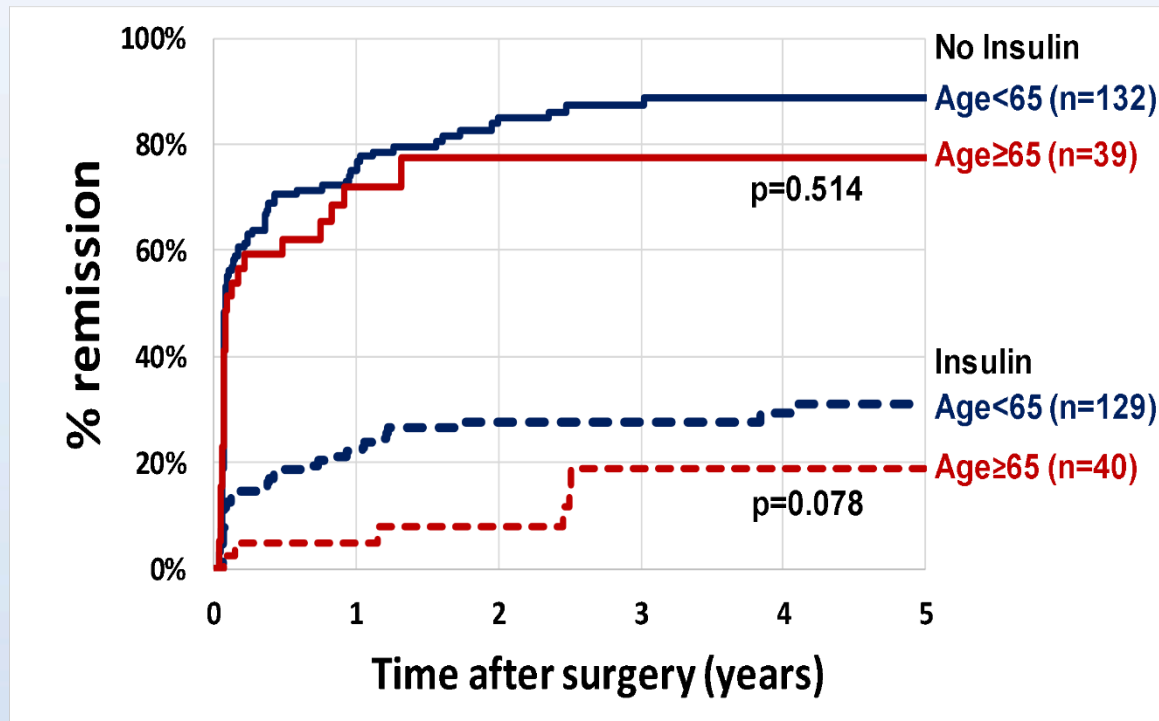
Medicare Population: Weight Loss

Percent of total body weight loss comparing Age<65 versus Age≥65



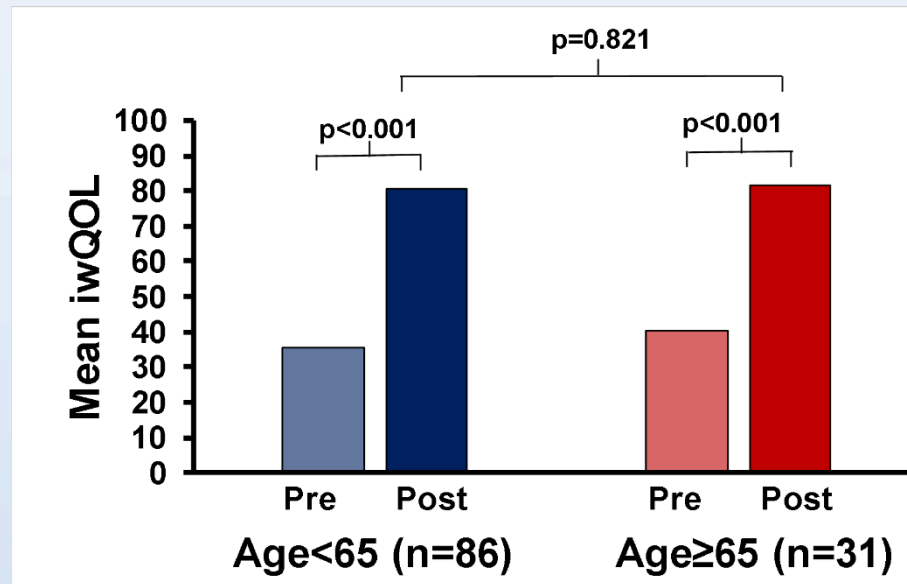
Medicare Population: Diabetes Remission

Time until diabetes remission comparing Age<65 versus Age≥65 stratified by pre-operative insulin use

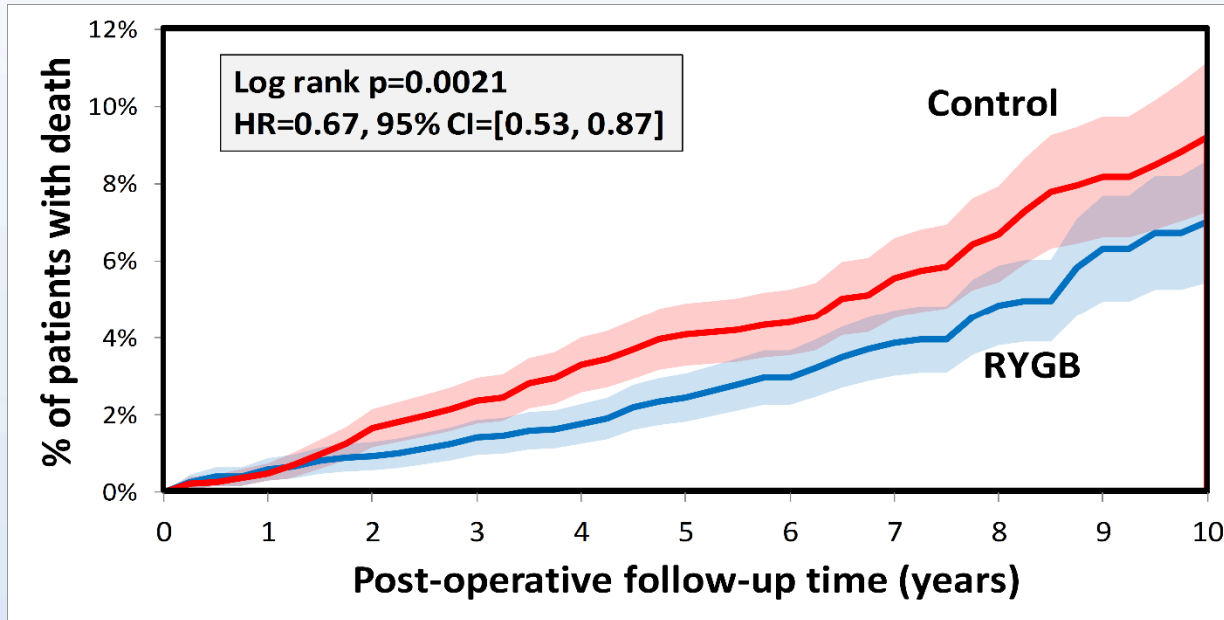


Medicare Population: Change in Quality of life

Mean overall iwQOL stratified by pre versus post-RYGB and Age<65 versus Age≥65

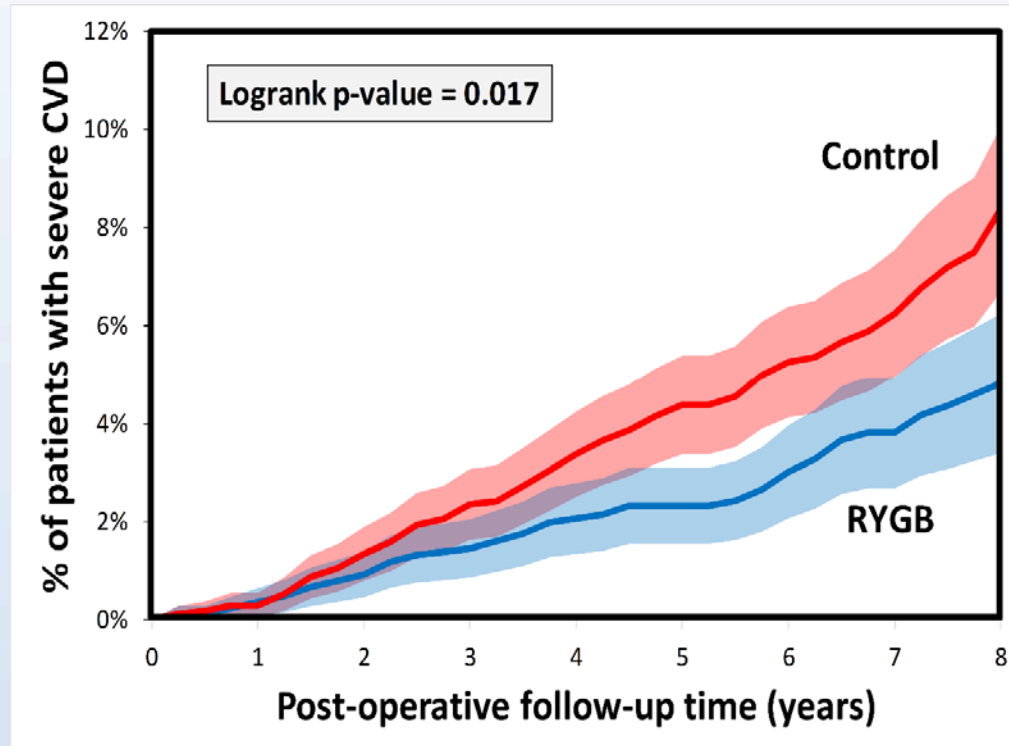


All-Cause Mortality in RYGB vs. Controls (n=2,696 per group)



	Follow-up time (years)									
# at risk	1	2	3	4	5	6	7	8	9	10
Control	2627	2456	2245	1964	1662	1347	991	671	406	207
RYGB	2679	2550	2369	2140	1847	1534	1193	865	543	285

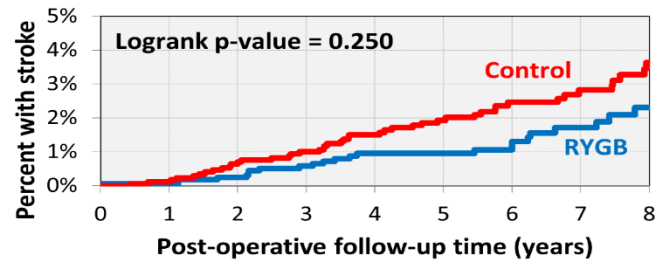
Composite severe cardiovascular events (MI, stroke, CHF)



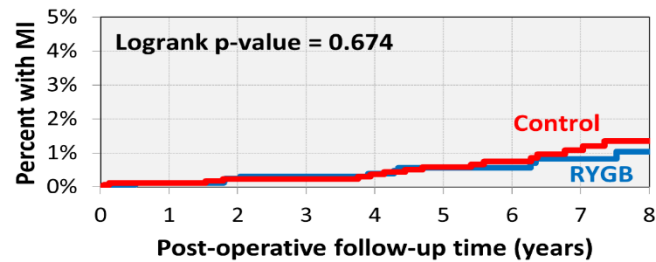
N=1724

INDIVIDUAL OUTCOMES: N=1724

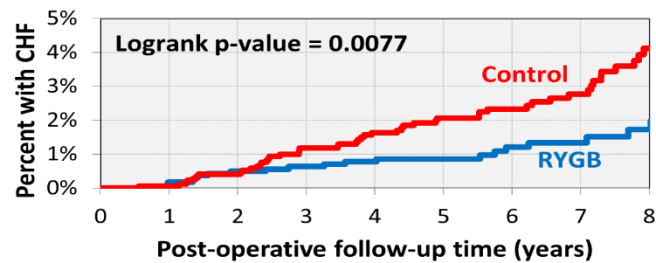
STROKE



MI



CHF





SWIFT Trial: Surgical Weight-loss to Improve Functional status Trajectories following Total Knee Arthroplasty

*Geisinger Health System
Hospital for Special Surgery
New York University
Stanford University
University of Virginia*

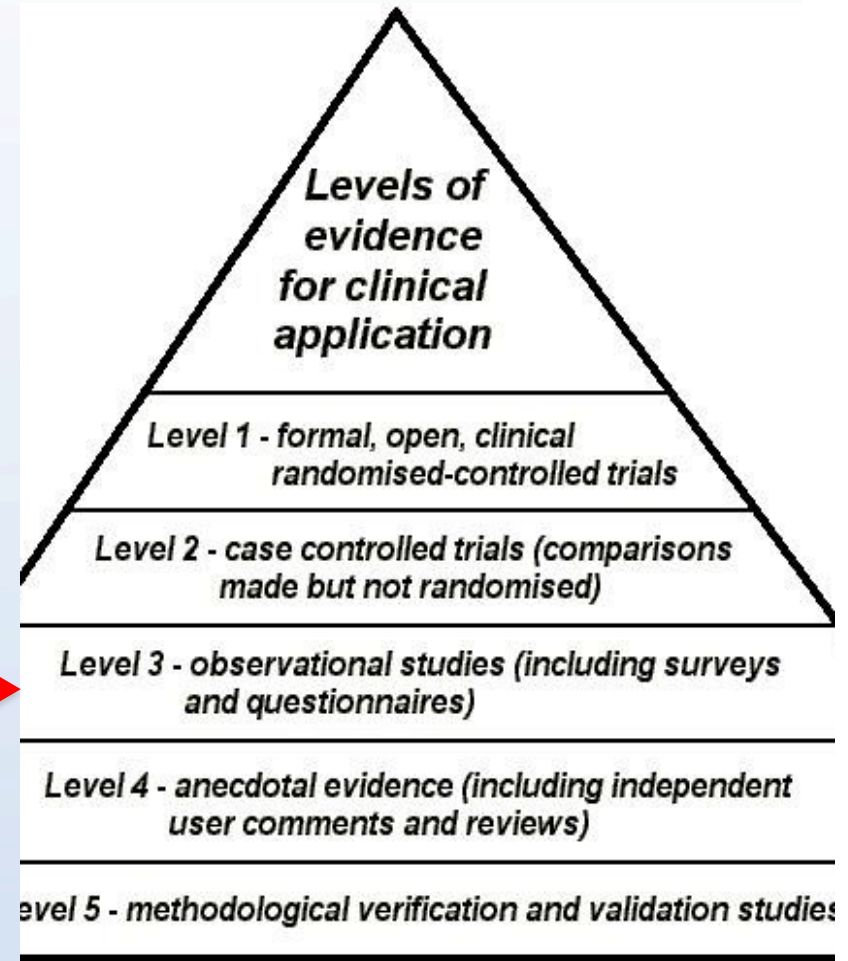
SEVERE OBESITY AND KNEE ARTHROPLASY

- Progressive Degenerative Joint Disease is Common with Obesity
- Knee disability common among candidates for Wt loss surgery
- Obesity is a contributor to the projected increase in arthroplasties
- An individual with class III obesity has a 32 fold increase risk of knee arthroplasty vs normal weight individual
- Obese patients require arthroplasty at a younger age by 5-10 years
- Degenerative joint disease limits activity which contributes to obesity progression

Thirty-Day Postoperative Complications and Mortality Following Total Knee Arthroplasty

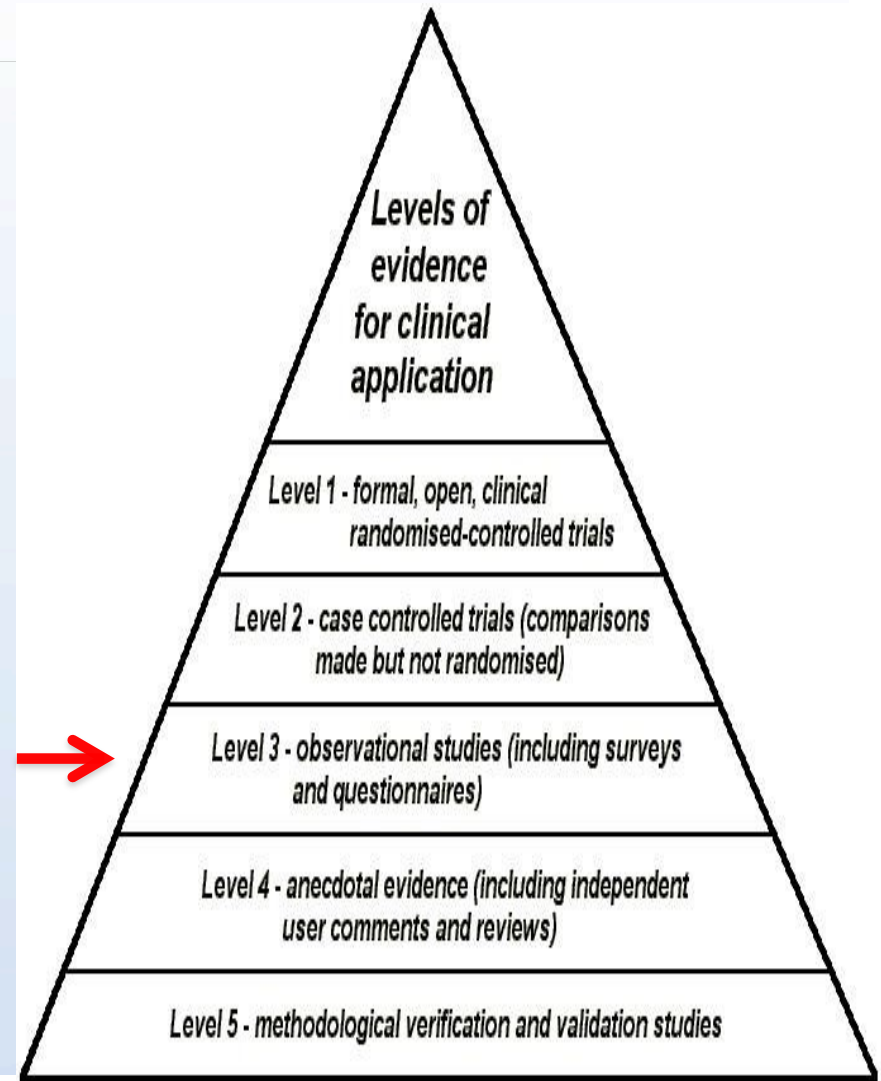
- National Sample, NSQIP database
- N=15,321
- Primary unilateral knee arthroplasty
- 30 day mortality: 0.18%
- Morbidity: 5.6%
- **BMI ≥ 40 kg/m² is an independent predictor of post operative complications**

Belmont, Goodman, Waterman et al. *J Bone and Joint Surgery* 2014;96:20-26.



Significance of SWIFT Trial

- There are **no controlled studies** comparing arthroplasty before versus after surgical weight loss.
- Retrospective studies suggest that surgical weight loss may improve arthroplasty outcomes.



SWIFT Trial Overview

Research Questions:

- Does bariatric surgery before total knee arthroplasty (TKA) improve both perioperative and long-term outcomes of TKA in extremely obese patients?
- Does bariatric surgery before TKA delay or possibly negate the need for arthroplasty?

Hypothesis

Weight loss induced by bariatric surgery prior to TKA will improve TKA outcomes in patients with extreme obesity.

Study Procedures

- Blood draw and Synovial fluid collection
- Physical Function Assessments
- Questionnaires
- Standard of Care procedures for bariatric surgery and TKA

