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Obesity and Prostate Cancer

What's the link and what should I do about it?

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**2023
NYC
PROSTATE
CANCER
SUMMIT**

AN AWARENESS AND
EDUCATIONAL EVENT
TO EMPOWER PATIENTS
AND LOVED ONES

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Disclosures

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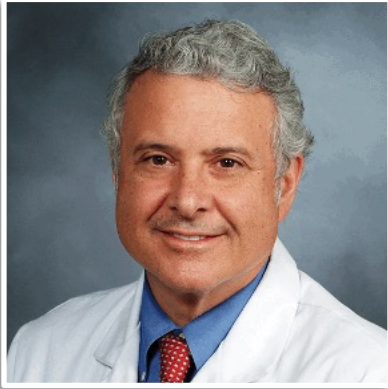
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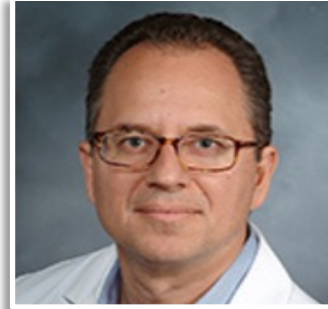
Comprehensive Weight Control Center



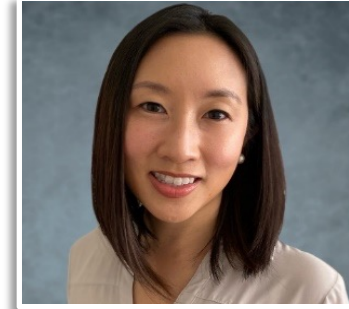
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Laura Del Vecchio, NP



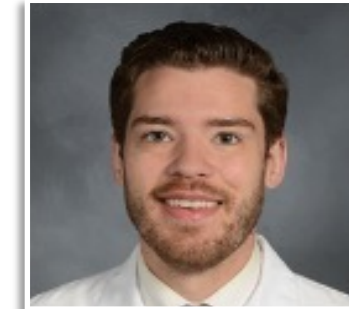
Joy Pape, NP



Maria Spinelli, NP



Mohini Aras, MD



Eugene Lucas, MD



Sarah Schmitz, MD



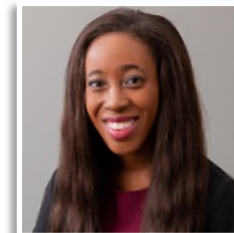
Morgan Dickison, RD



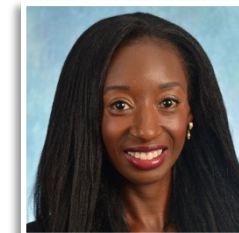
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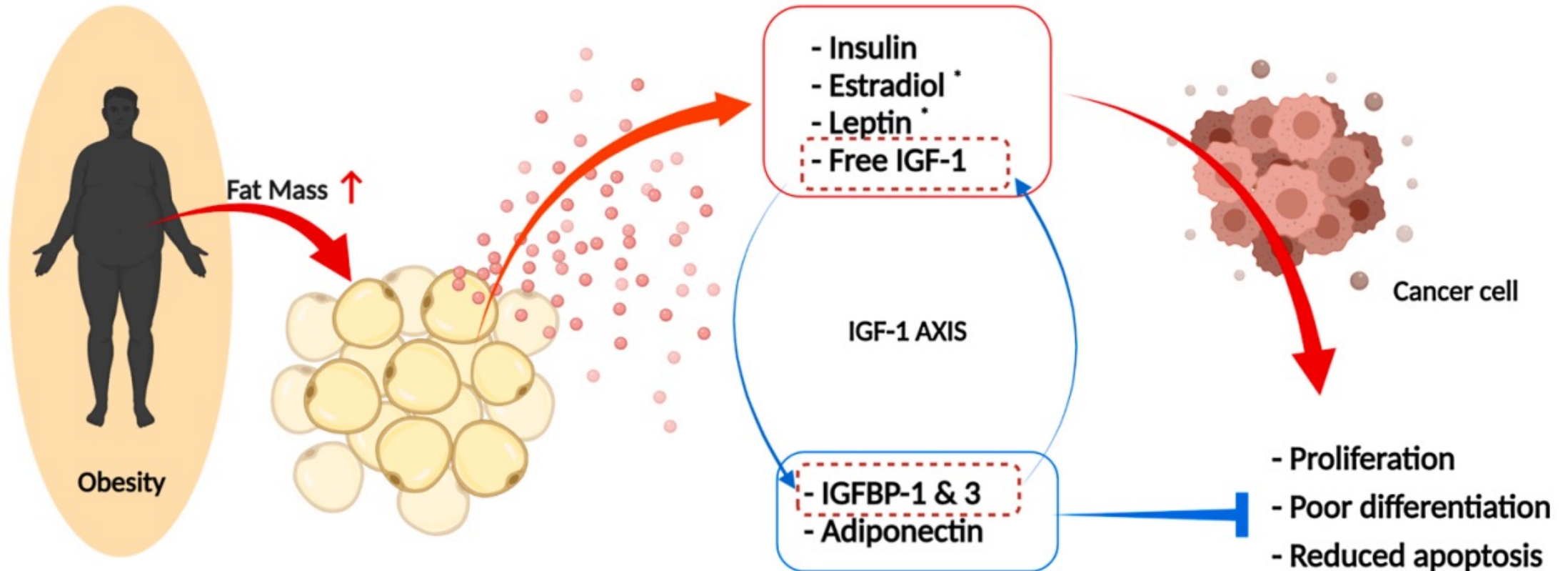


Robert Gaffey, MD

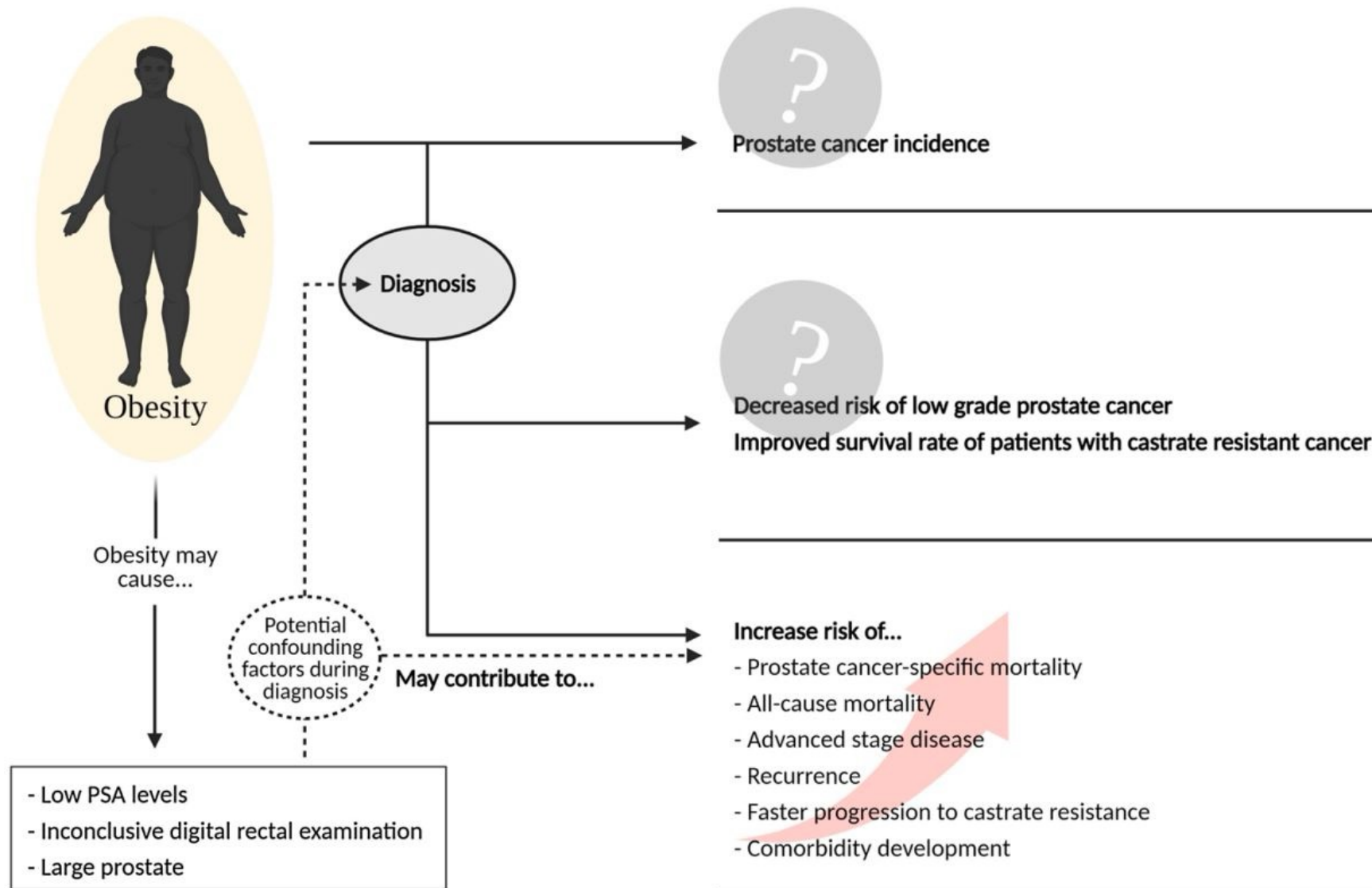


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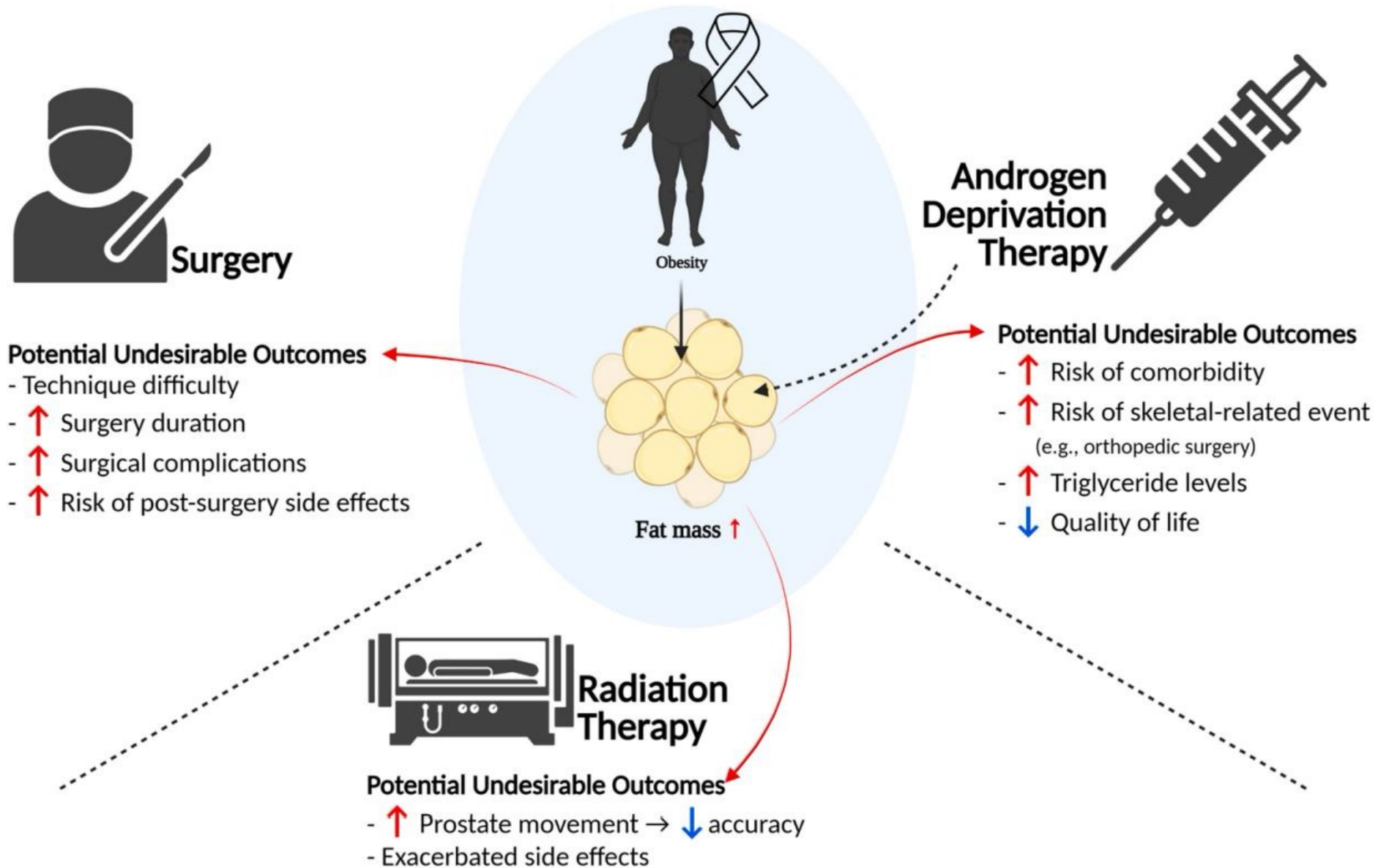
Proposed mechanisms for the association between fat mass and prostate cancer progression



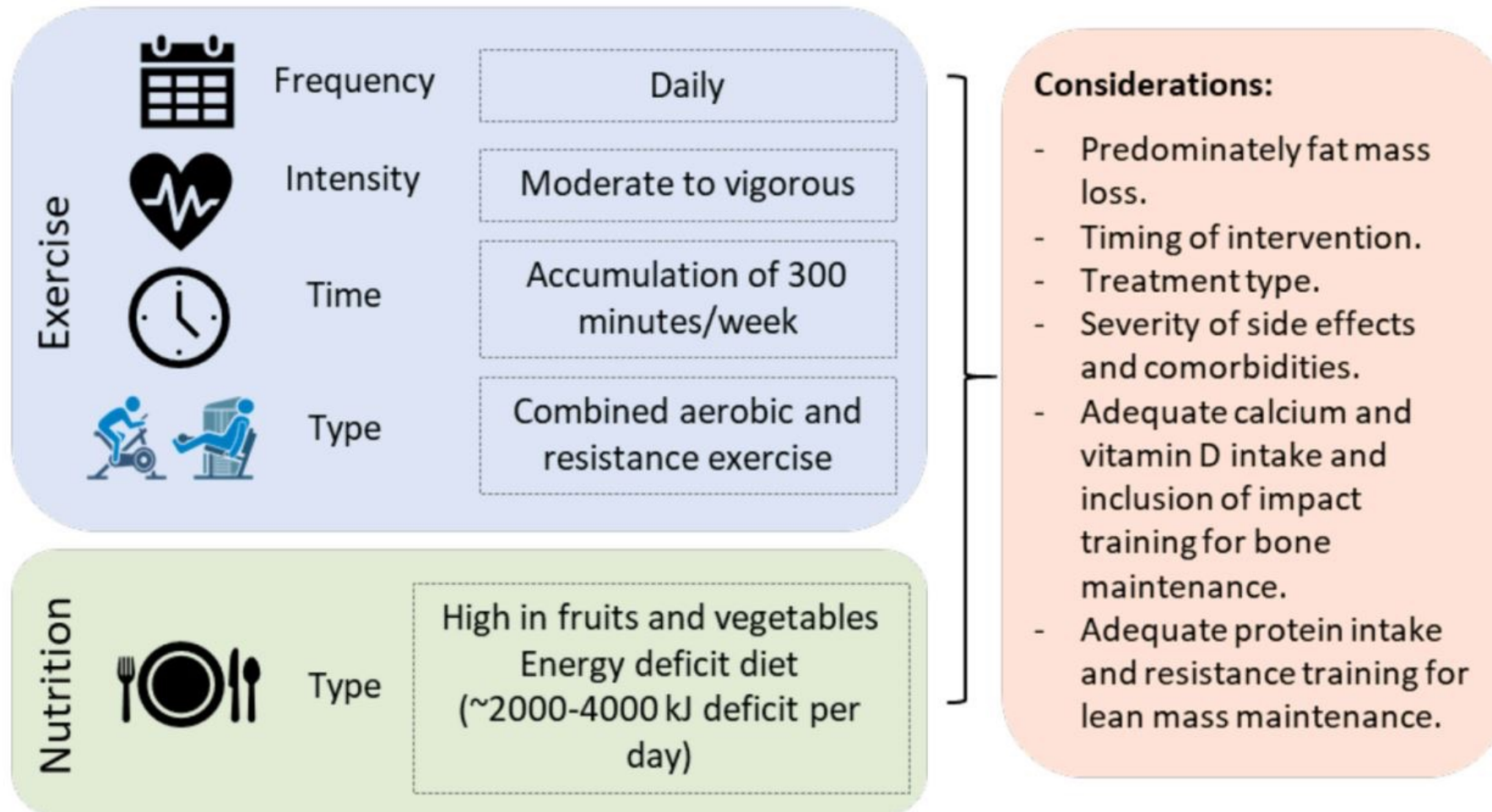
Men with obesity and prostate cancer: at increased risk of poor prognosis and general health



Undesirable outcomes of prostate cancer treatment



Exercise and nutrition weight loss recommendations for prostate cancer patients



Does Sugar Feed Cancer? Maybe!

Diabetes and Cancer

- Epidemiology studies suggest that diabetes is strongly associated with several cancers
- High insulin, fat cell hormones, growth factors, changes of diabetes all contribute to the increase
- Metformin, a diabetes treatment, reduces the risk of cancer in people with diabetes

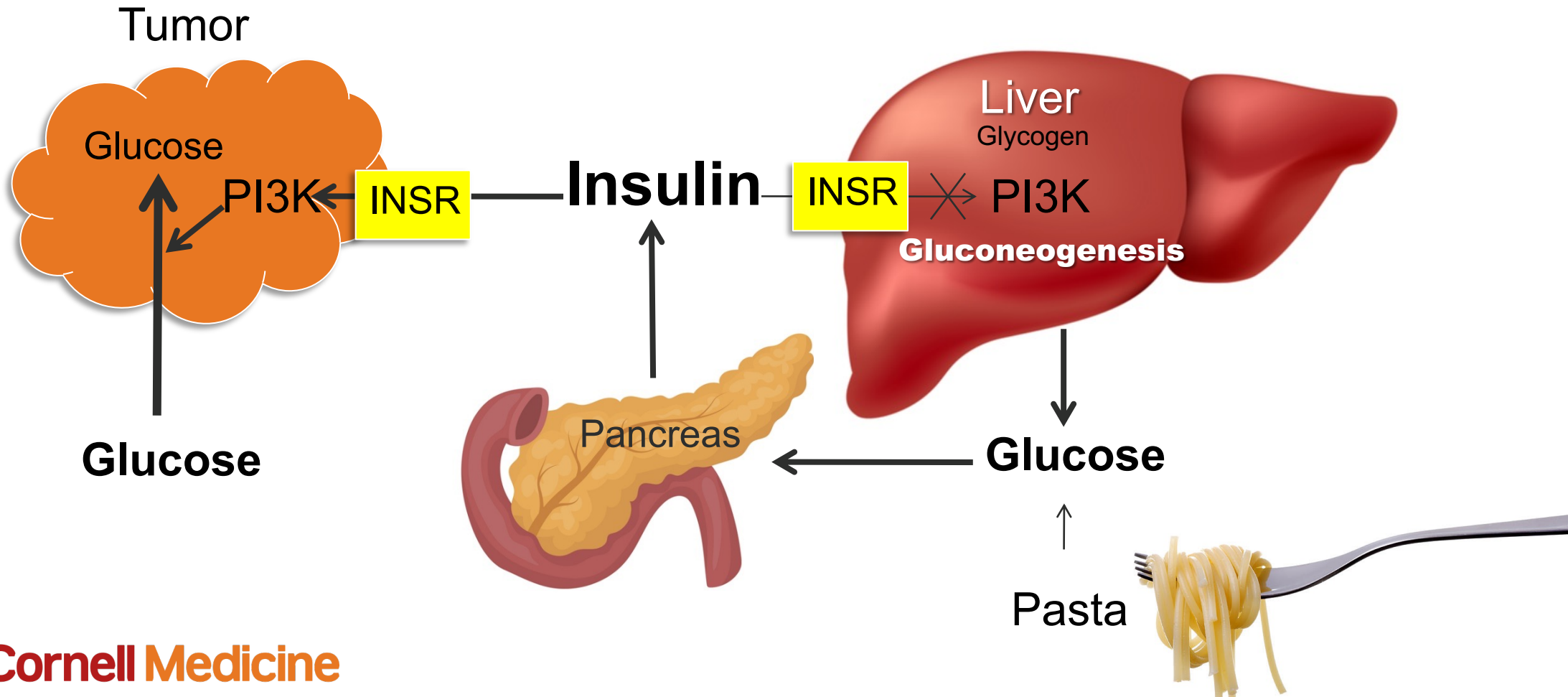


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T.A. Chowdhury Dept of Diabetes and Metabolism, Barts and the London School of Medicine and Dentistry, London E1 1BB, UK.

Insulin Resistance and Tumor Growth

The liver, muscle and fat are insulin resistant... but the tumor is insulin sensitive!!
It sucks up all the sugar!



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Slide: After Dr Lew Cantley



Q: “Doctor, I get the overwhelming urge to eat carbs.”

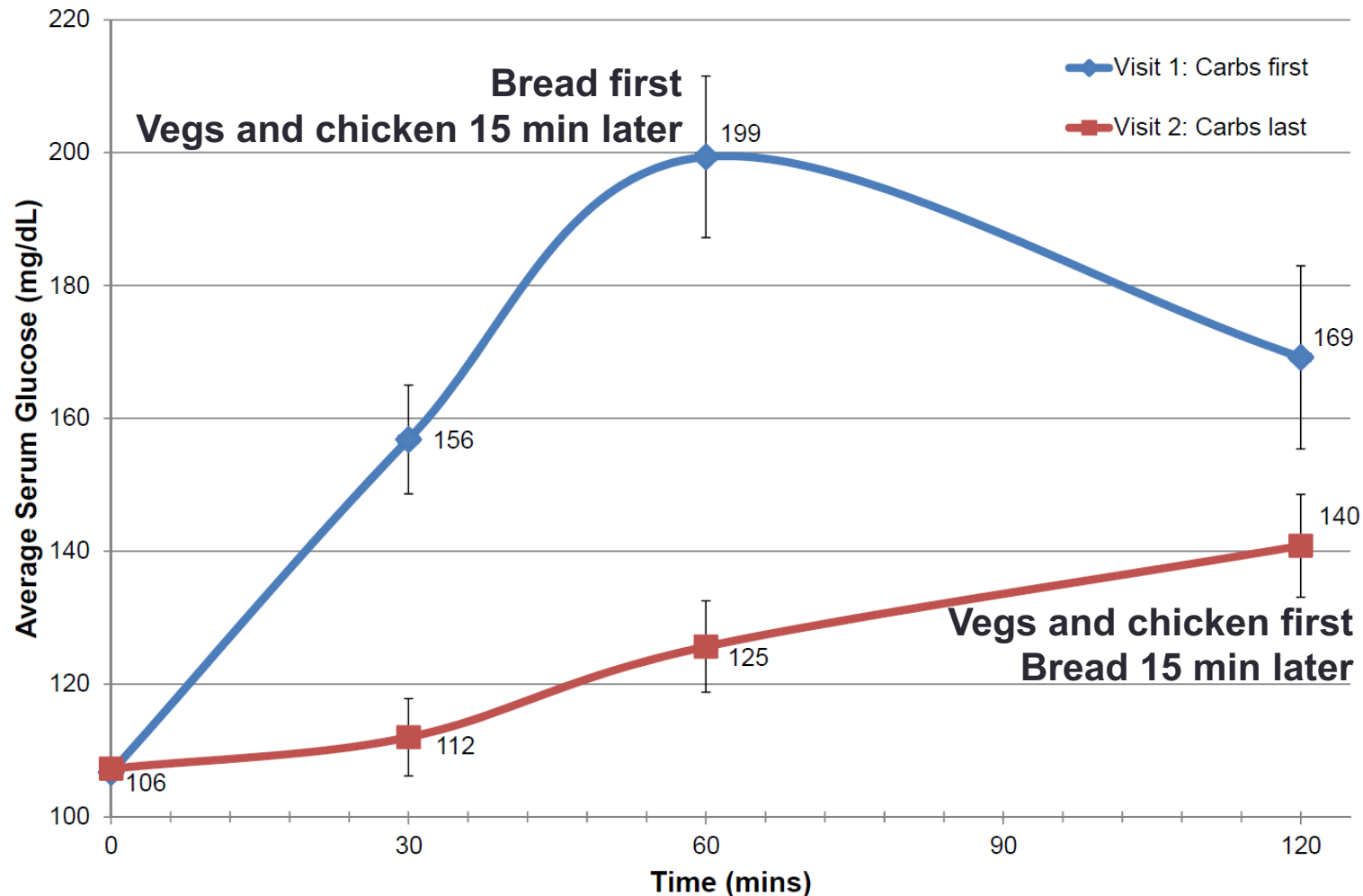
A: “The order in which you consume food has a significant impact on blood sugar. So...
...eat your vegetables and protein first!”



Eating protein and vegetables before carbs lowers glycemic index!!

The order in which food is consumed impacts blood sugar and insulin after the meal!

POST-PRANDIAL GLUCOSE RESPONSE



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Shukla AP, Iliescu RG, Thomas CE, Aronne LJ. *Diabetes Care* 2015;38:e98–e99 | DOI: 10.2337/dc15-0429

Food Order has a Significant Impact on Post-prandial Glucose Levels. Late Breaking Abstract. The Obesity Society's 2014 Annual Scientific Meeting, Obesity Week. Boston, MA.

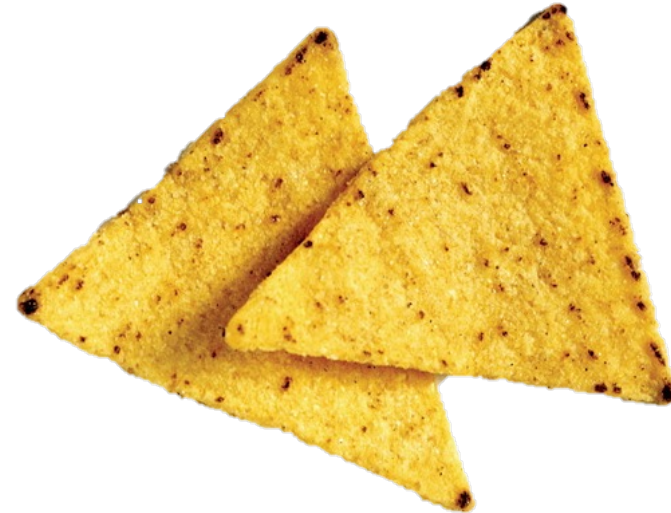
Caloric Density of Fresh vs Processed Foods



Fresh Corn
88kcal/100g



Corn Tortilla
222kcal/100g



Corn Chips
488kcal/100g



What's the best exercise?

Interval Training/Resistance Training



Strength Training

Examples: weight-lifting, Pilates, other activities (besides aerobics)

Twice per week provides greatest weight loss

Interval Training: Intensity of activity varies

Provides greatest weight loss

Examples: hill climbing program on bike or cross trainer

The highest level of exercise intensity sets your “metabolism”

You can maintain twice the weight loss exercising for just one-half the time if you increase the intensity



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What is Metformin, and should I be taking it?

Metformin: first-line drug for treating diabetes⁵

There is increasing consensus that metformin has an anti-cancer activity

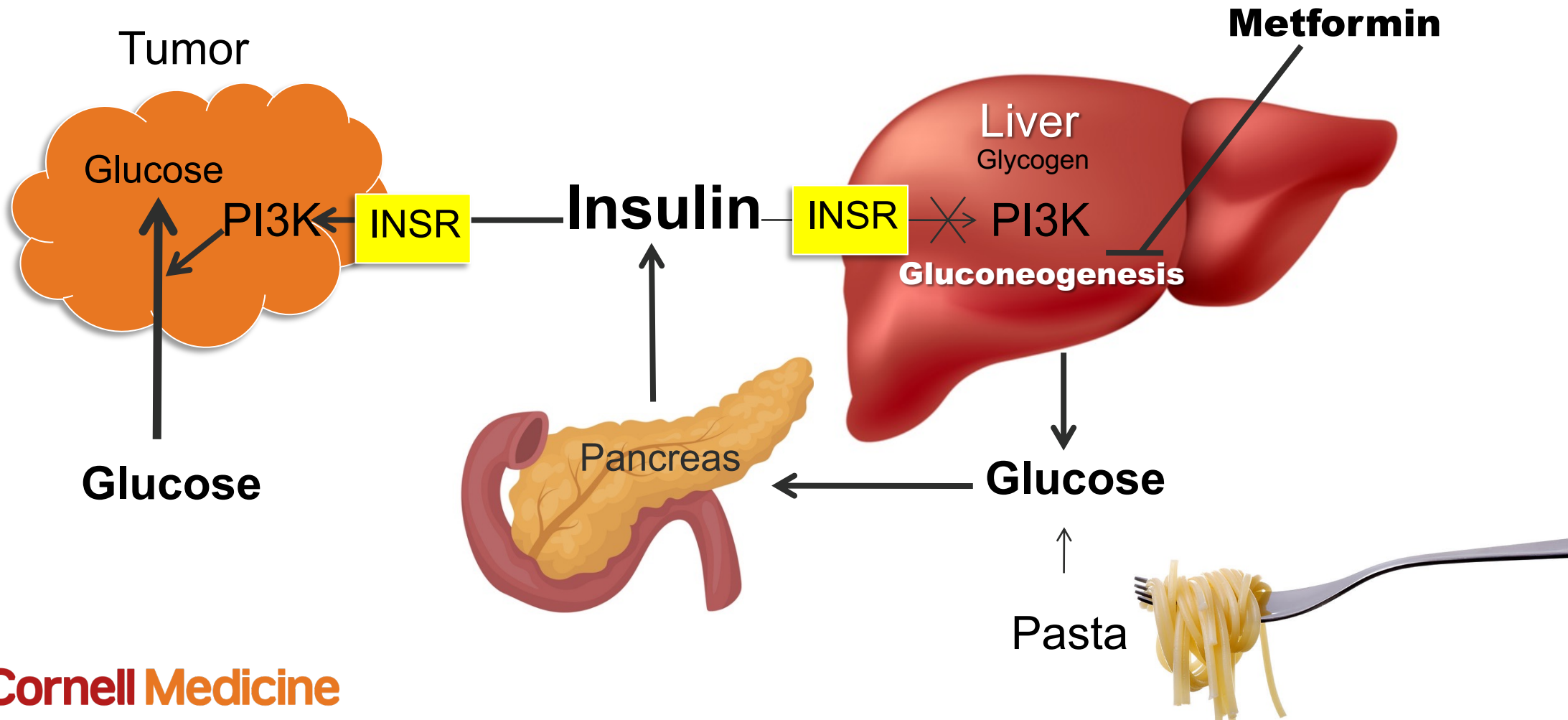
- Inhibits cellular transformation and selectively kills cancer stem cells in breast cancer cell lines⁵
- As metformin alters energy metabolism in diabetics, we speculate that metformin may block a metabolic stress response that stimulates the inflammatory pathway associated with a wide variety of cancers⁵
- “Our findings suggest that metformin could be a useful adjuvant agent, with the greatest benefits seen in colorectal and prostate cancer, particularly in those receiving radical radiotherapy, and randomised, controlled trials which investigate dose and duration, alongside efficacy, are advocated.”⁶



Insulin Resistance and Tumor Growth

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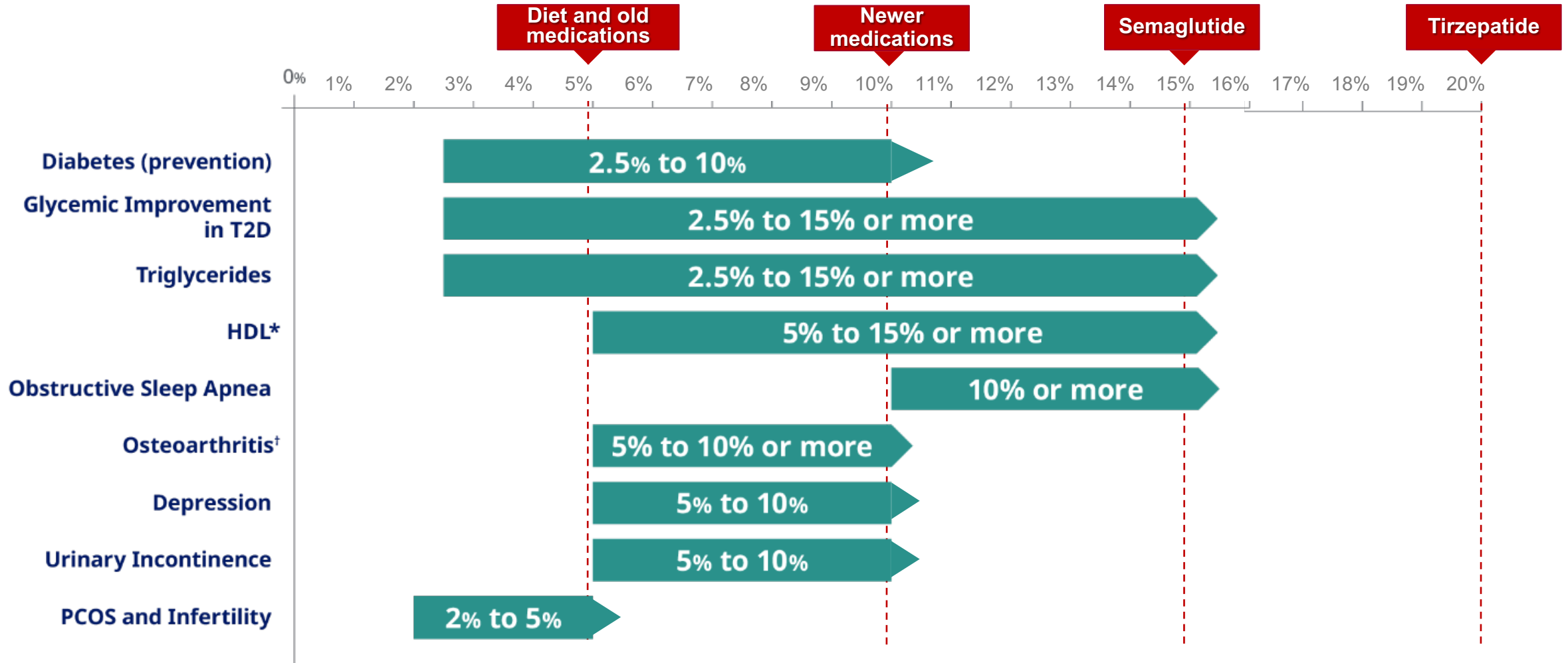


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Slide: After Dr Lew Cantley

What about Weight Loss:

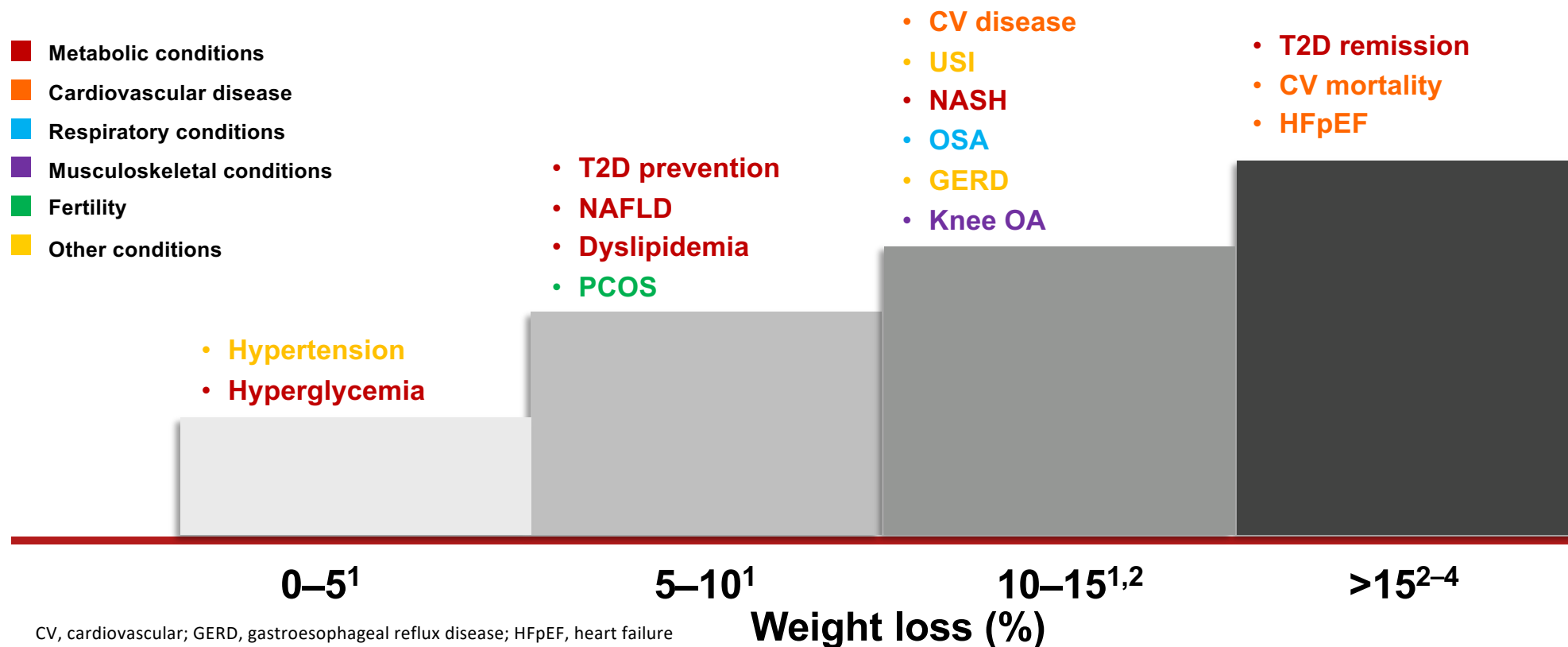
More Weight Loss Provides More Clinical Benefit²



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1. Ryan DH, Yockey SR. *Curr Obes Rep.* 2017;6(2):187-194.
2. Garvey WT, Mechanick JL, Brett EM, et al. *Endocr Pract.* 2016;22(suppl 3):1-203.
3. Wing RR, Lang W, Wadden TA, et al. *Diabetes Care.* 2011;34(7):1481-1486.

Greater weight loss improves obesity-related complications: Goal is 15% or greater weight loss



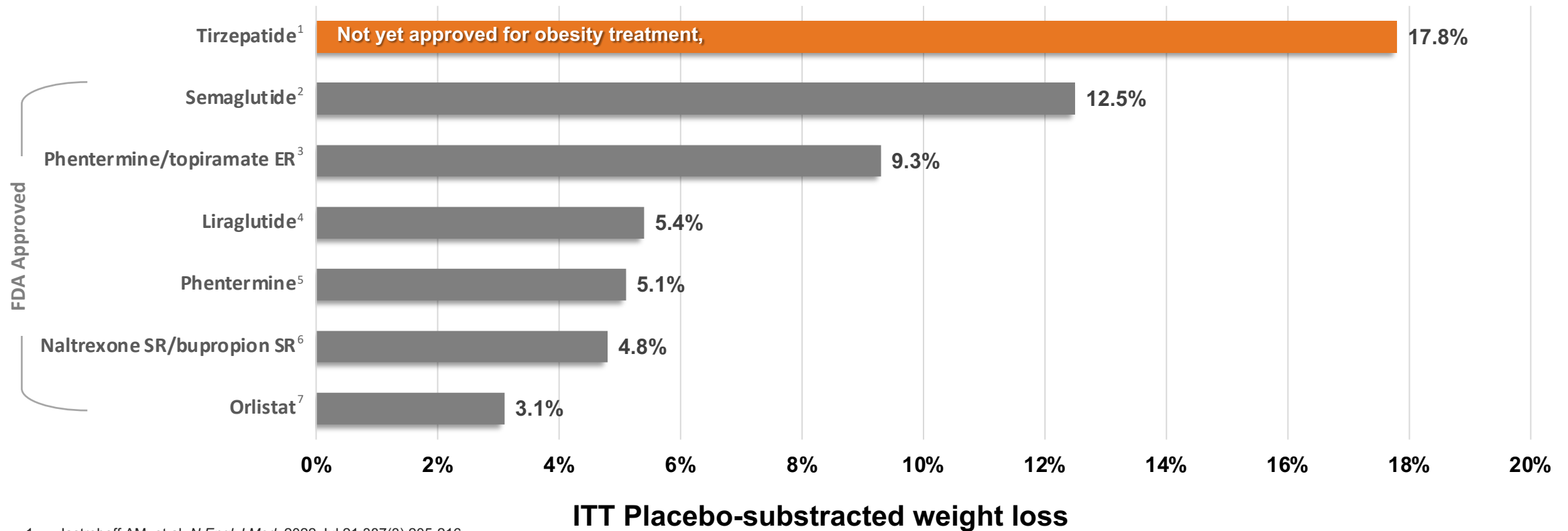
CV, cardiovascular; GERD, gastroesophageal reflux disease; HFpEF, heart failure with preserved ejection fraction; NAFLD, non-alcoholic fatty liver disease; NASH, non-alcoholic steatohepatitis; OA, osteoarthritis; OSA, obstructive sleep apnea; PCOS, polycystic ovary syndrome; T2D, type 2 diabetes; USI, urinary stress incontinence.



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1. Garvey WT et al. Endocr Pract 2016;22(Suppl. 3):1–203; 2. Look AHEAD Research Group. Lancet Diabetes Endocrinol 2016;4:913–21; 3. Lean ME et al. Lancet 2018;391:541–51; 4. Benraoune F and Litwin SE. Curr Opin Cardiol 2011;26:555–61.

Placebo-subtracted Efficacy of Current and Pending Anti-obesity Medications



Add 3-4% for a behavioral intervention

1. Jastreboff AM, et al. *N Engl J Med*. 2022 Jul 21;387(3):205-216.
2. Wilding JPH, et al. *N Engl J Med*. 2021 Mar 18;384(11):989.
3. Allison DB, et al. EQUIP Trial. *Obesity (Silver Spring)*. 2012 Feb;20(2):330-42.
4. Pi-Sunyer X, et al. *N Engl J Med*. 2015 Jul 2;373(1):11-22.
5. Aronne LJ, et al. *Obesity (Silver Spring)*. 2013 Nov;21(11):2163-71.
6. Greenway FL, et al. COR-I Trial. *Lancet*. 2010 Aug 21;376(9741):595-605.
7. Finer N, et al. *Int J Obes Relat Metab Disord*. 2000 Mar;24(3):306-13.

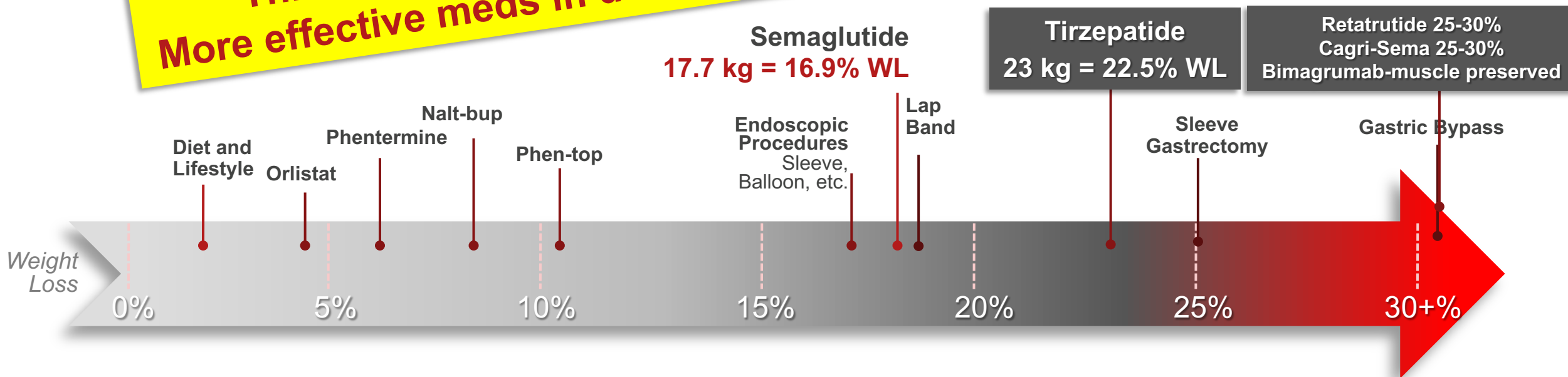


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Current Treatment Landscape with Tirzepatide

New drugs and devices can reduce weight and weight-related comorbidities

This is not the grand finale
More effective meds in development



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After Aronne LJ. FDA VI-0521 EMDAC 2010.

What should you do?

- Maintain a healthy body weight
- If overweight, lose some weight
- If higher and no progress, consider medical treatment
- Maintain or increase muscle mass
- Limit sugar and starch intake
- Limit alcohol to 5-7 drinks per week
- You may want to talk to your doctor about whether metformin is appropriate





Flyte is a unique combination of medical guidance and behavior-change support that leads to significant and sustainable weight loss.

The Flyte program includes:

- A dedicated team of medical weight-loss experts who understand you
- Tools to track your progress and connect to your team every step of the way
- Medications and eating plans tailored to your unique biology and weight-loss goals

For more information, visit joinflyte.com

Our approach works.

Flyte clinicians help you set attainable goals that lead to major improvements to your health and well-being.

200+

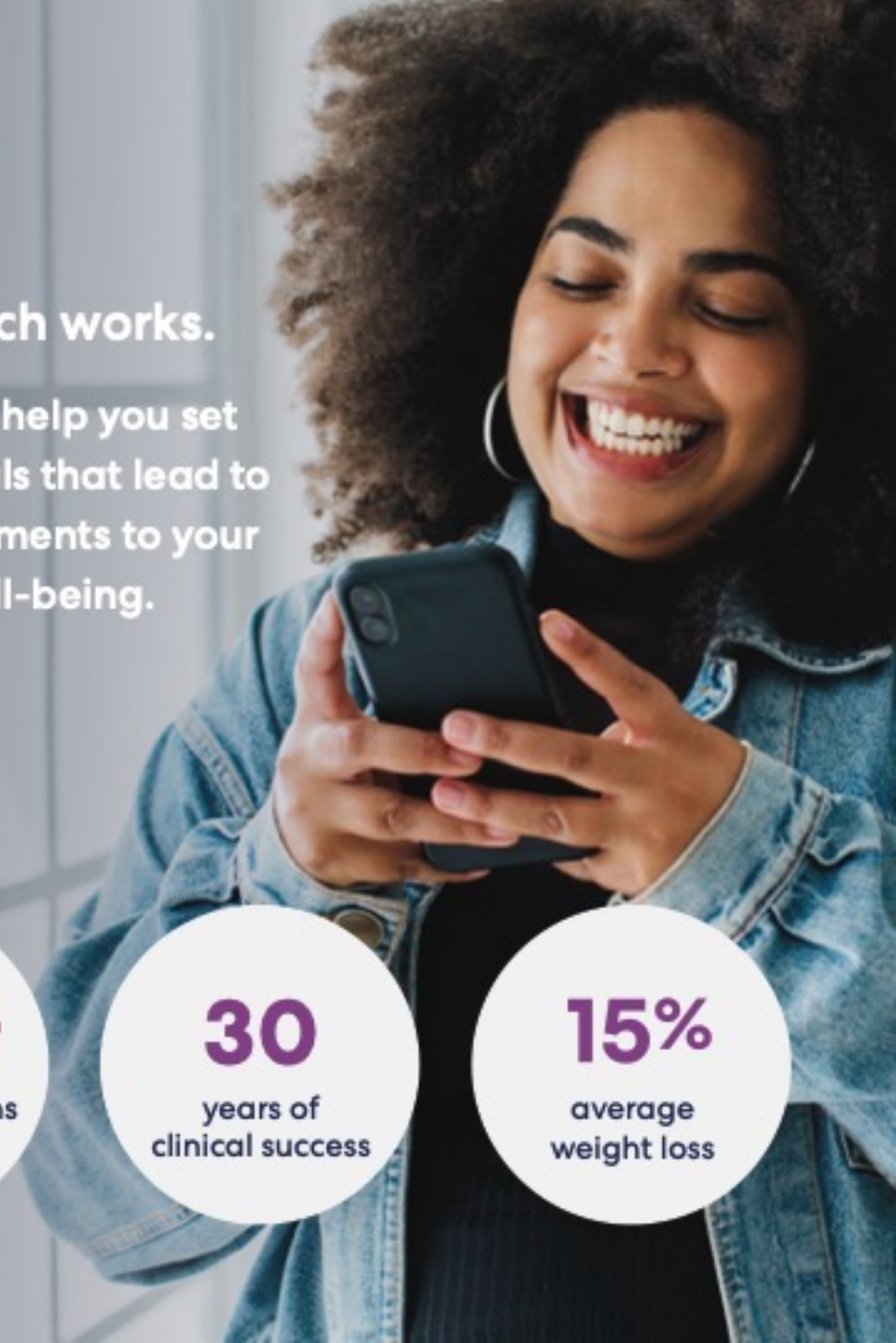
health conditions
improved

30

years of
clinical success

15%

average
weight loss





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Thank you!