

Cardiology updates for Generalists

2024 Alabama and Mississippi Chapters Annual Scientific Meeting

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Conflicts of Interest

- None (Topic is Cardiology, presenter isn't a Cardiologist)

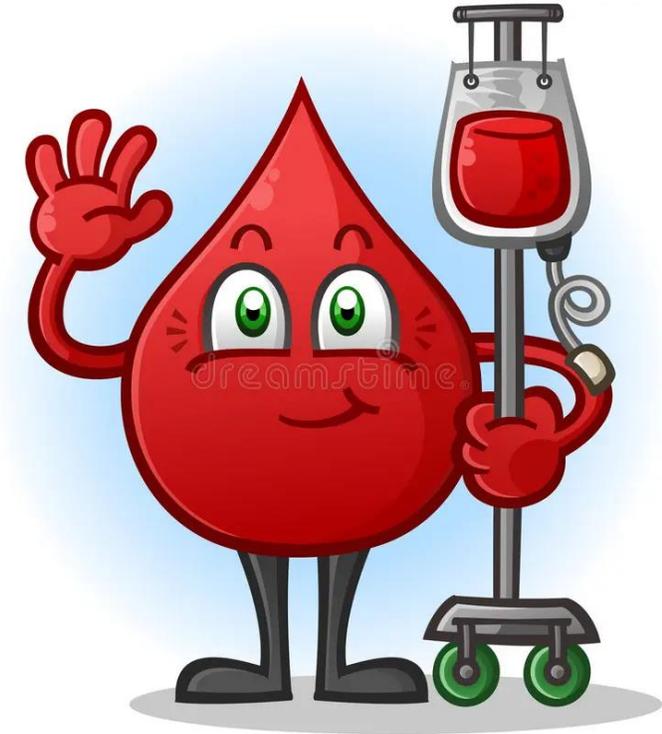
Intended Learning Outcomes

By the conclusion of this session, those in attendance should be able to:

- Highlight impact of Liberal vs restrictive transfusion strategies for Acute Myocardial Infarction
- Add to their existing practice of diuresis in Heart Failure
- Acknowledge and address the importance of Iron supplementation in Anemia with Heart Failure
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Liberal transfusion for acute myocardial infarction – MINT Trial

- Restrictive transfusion (lower hemoglobin threshold, typically 7 or 8 g/dL) is appropriate for most patients
- 3504 patients (follow-up for 30 days) Mean Age: 72 years (Females 22%)
- Restrictive (Hb 8g/dL) or Liberal (Hb threshold 10g/dL)
- **Primary Outcome:** Recurrent MI or Death at 30 days
- No significant difference, but a trend towards improved outcomes noted
- No increased risk of adverse events/ frequency of Heart Failure
- **Consider for patients with Type 1 MI or hemodynamic instability**



Carson, J. L., Brooks, M. M., Hébert, P. C., Goodman, S. G., Bertollet, M., Glynn, S. A., Chaitman, B. R., Simon, T., Lopes, R. D., Goldsweig, A. M., DeFilippis, A. P., Abbott, J. D., Potter, B. J., Carrier, F. M., Rao, S. V., Cooper, H. A., Ghafghazi, S., Fergusson, D. A., Kostis, W. J., ... Kim, S. (2023). Restrictive or Liberal Transfusion Strategy in Myocardial Infarction and Anemia. *The New England Journal of Medicine*, 389(26), 2446–2456. <https://doi.org/10.1056/NEJMoa2307983>

The TRANSFORM-HF Randomized Clinical Trial

- Patients : 2859 patients (fu for 17 months) Mean Age: 64 years (Females 37%)
- Randomized to torsemide or furosemide
- **Primary outcome:** All cause mortality
- No difference in mortality or quality of life or symptoms
- (regardless of ejection fraction, previous loop diuretic use, and baseline health status)

- **Focus on appropriate dosing of loops diuretics rather than the agent**

*Never pass up
an opportunity
to pee.*

Stephen J. Greene, MD, Eric J. Velazquez, MD, Kevin J. Anstrom, PhD, Robert M. Clare, MS, Tracy A. DeWald, PharmD, MHS, Mitchell A. Psotka, MD, Andrew P. Ambrosy, MD, Gerin R. Stevens, MD, PhD, John J. Rommel, MD, Tamas Alexy, MD, PhD, Fassil Ketema, MSc, Dong-Yun Kim, PhD, Patrice Desvigne-Nickens, MD, Bertram Pitt, MD, Eric L. Eisenstein, DBA, Robert J. Mentz, MD, on behalf of the TRANSFORM-HF Investigators

Acetazolamide in Decompen. Heart Failure - ADVOR

- Patients: 519 (fu for 3 months) Mean Age: 78 years (37.4% Females)
- Acetazolamide 500mg iv Daily
- **Primary outcome:** successful decongestion within 3 days after randomization
- Acetazolamide (42.2%) vs. placebo (30.5%) (irrespective of baseline LVEF and renal function)
- Better response when HCO₃ > 27

- Diuresis and achieving optimal volume can be challenging
- Residual congestion >>> **higher post-discharge adverse outcomes.**
- **Shorter stay**
- **Small study, Belgium – limits generalizability**

Mullens W, Dauw J, Martens P, Verbrugge FH, Nijst P, Meekers E, Tartaglia K, Chenot F, Moubayed S, Dierckx R, Blouard P, Troisfontaines P, Derthoo D, Smolders W, Bruckers L, Droogne W, Ter Maaten JM, Damman K, Lassus J, Mebazaa A, Filippatos G, Ruschitzka F, Dupont M; ADVOR Study Group. Acetazolamide in Acute Decompensated Heart Failure with Volume Overload. *N Engl J Med.* 2022 Sep 29;387(13):1185-1195. doi: 10.1056/NEJMoa2203094. Epub 2022 Aug 27. PMID: 36027559.

IV Iron in Heart Failure- Meta-analysis

3 RCTs – adults with HF and Iron deficiency > 52 weeks (4501 patients)

Co-primary efficacy endpoints:

- composite of total/recurrent cardiovascular hospitalizations and cardiovascular death
- composite of total HF hospitalizations and cardiovascular death, through 52 weeks.

Ferric carboxymaltose significantly reduced hospitalizations for HF and cardiovascular causes

Higher benefit for ischemic HF

Piotr Ponikowski, Robert J Mentz, Adrian F Hernandez, Javed Butler, Muhammad Shahzeb Khan, Dirk J van Veldhuisen, Bernard Roubert, Nicole Blackman, Tim Friede, Ewa A Jankowska, Stefan D Anker, Efficacy of ferric carboxymaltose in heart failure with iron deficiency: an individual patient data meta-analysis, *European Heart Journal*, Volume 44, Issue 48, 21 December 2023, Pages 5077–5091, <https://doi.org/10.1093/eurheartj/ehad586>

IRONMAN Study

Patients : 1,137 (fu for 2.7 years) Mean patient age: 73 years (females 27%)

Primary outcome: cardiovascular death or HF hospitalization

Iron infusion is not superior to usual care

No changes in quality of life measures or walk distance

- Serum Ferritin < 100ug/L and/or a TSAT <20% : most likely to benefit from IV iron (Reduced risk of the primary outcome)
- IV Iron- Class IIa recommendation - 2022 AHA/ACC/HSA HF guideline
- Ferric derisomaltose : rapid, high-dose infusion

Kalra PR, Cleland JGF, Petrie MC, Thomson EA, Kalra PA, Squire IB, Ahmed FZ, Al-Mohammad A, Cowburn PJ, Foley PWX, Graham FJ, Japp AG, Lane RE, Lang NN, Ludman AJ, Macdougall IC, Pellicori P, Ray R, Robertson M, Seed A, Ford I; IRONMAN Study Group. Intravenous ferric derisomaltose in patients with heart failure and iron deficiency in the UK (IRONMAN): an investigator-initiated, prospective, randomised, open-label, blinded-endpoint trial. *Lancet*. 2022 Dec 17;400(10369):2199-2209. doi: 10.1016/S0140-6736(22)02083-9. Epub 2022 Nov 5. PMID: 36347265.

SELECT Trial – GLP1 in adults with ASCVD and BMI > 27

- Patients: 17,604 (fu 39 months) Age: 45 and more (27.7% females)
- Semaglutide - 2.4 mg sc weekly, uptitrated from 0.24 mg over 16 weeks
- **Primary outcome:** CV mortality, nonfatal MI, or nonfatal stroke
- **6.5% vs. 8.0% (HR 0.80; 95% CI 0.72-0.90; P<0.001; NNT=67)**
- Decreases in body weight and waist circumference
- The estimated global prevalence of diabetes is approximately 30% among patients with chronic coronary syndromes
- **Included only patients with preexisting cardiovascular disease.**



Lincoff AM, Brown-Frandsen K, Colhoun HM, Deanfield J, Emerson SS, Esbjerg S, Hardt-Lindberg S, Hovingh GK, Kahn SE, Kushner RF, Lingvay I, Oral TK, Michelsen MM, Plutzky J, Tornøe CW, Ryan DH; SELECT Trial Investigators. Semaglutide and Cardiovascular Outcomes in Obesity without Diabetes. N Engl J Med. 2023 Dec 14;389(24):2221-2232. doi: 10.1056/NEJMoa2307563. Epub 2023 Nov 11. PMID: 37952131.

ADAPT Trial

- Impact of telehealth nurse and social worker palliative care team on QOL
- 306 Patients: Outpatients with COPD, HF, or ILD at high risk of hospitalization or death who reported poor quality of life
- Age : 68.9 years (Females 9.8%)
- 6 phone calls with a nurse to (symptom management) and 6 phone calls with a social worker (psychosocial care)
- Primary outcome : change in quality of life from baseline to 6 months
- FACT-G score range, 0-100, with higher scores indicating better quality of life, clinically meaningful change ≥ 4 points
- FACT-G score improved 6.0 points vs 1.4 points (difference, 4.6 points [95% CI, 1.8-7.4]; P = .001; standardized mean difference, 0.41).

Bekelman DB, Feser W, Morgan B, Welsh CH, Parsons EC, Paden G, Baron A, Hattler B, McBryde C, Cheng A, Lange AV, Au DH. Nurse and Social Worker Palliative Telecare Team and Quality of Life in Patients With COPD, Heart Failure, or Interstitial Lung Disease: The ADAPT Randomized Clinical Trial. JAMA. 2024 Jan 16;331(3):212-223. doi: 10.1001/jama.2023.24035. PMID: 38227034; PMCID: PMC10792473.

Some other Interesting Reads

- PREVENT CALCULATOR
- BAXDROSTAT Trial
- B-Blockers for Heart rate control in septic shock
- Triglycerides and cardiovascular risk in rheumatoid arthritis

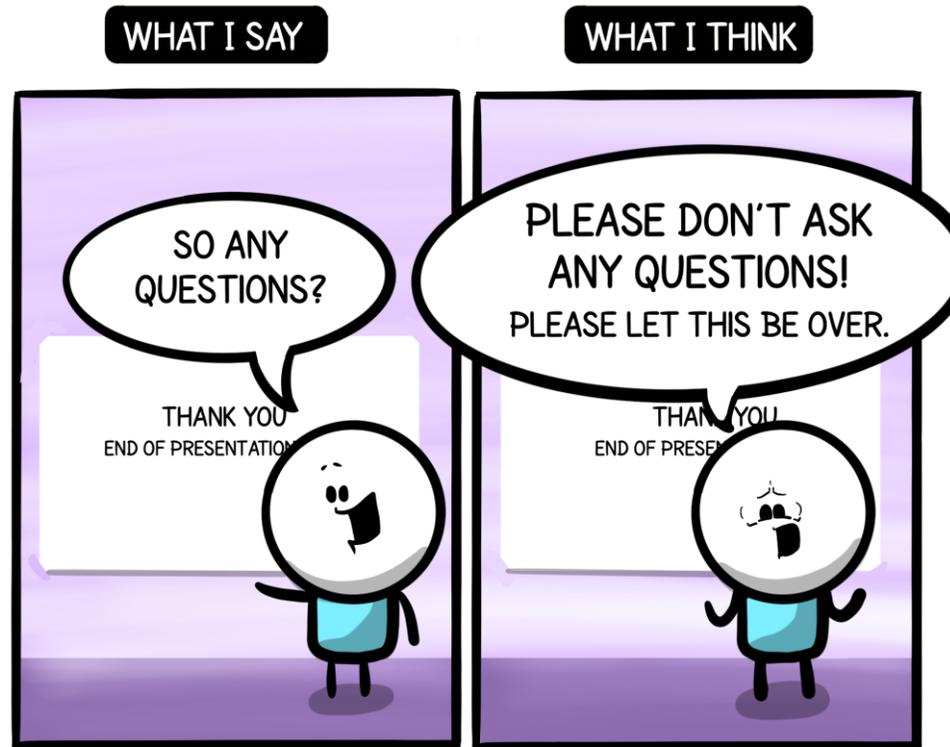
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Questions

Please Direct questions to:



Your Friendly Cardiologist or
Dr. Allison Rogers!!!

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