Heart Failure in Chronic Kidney Disease

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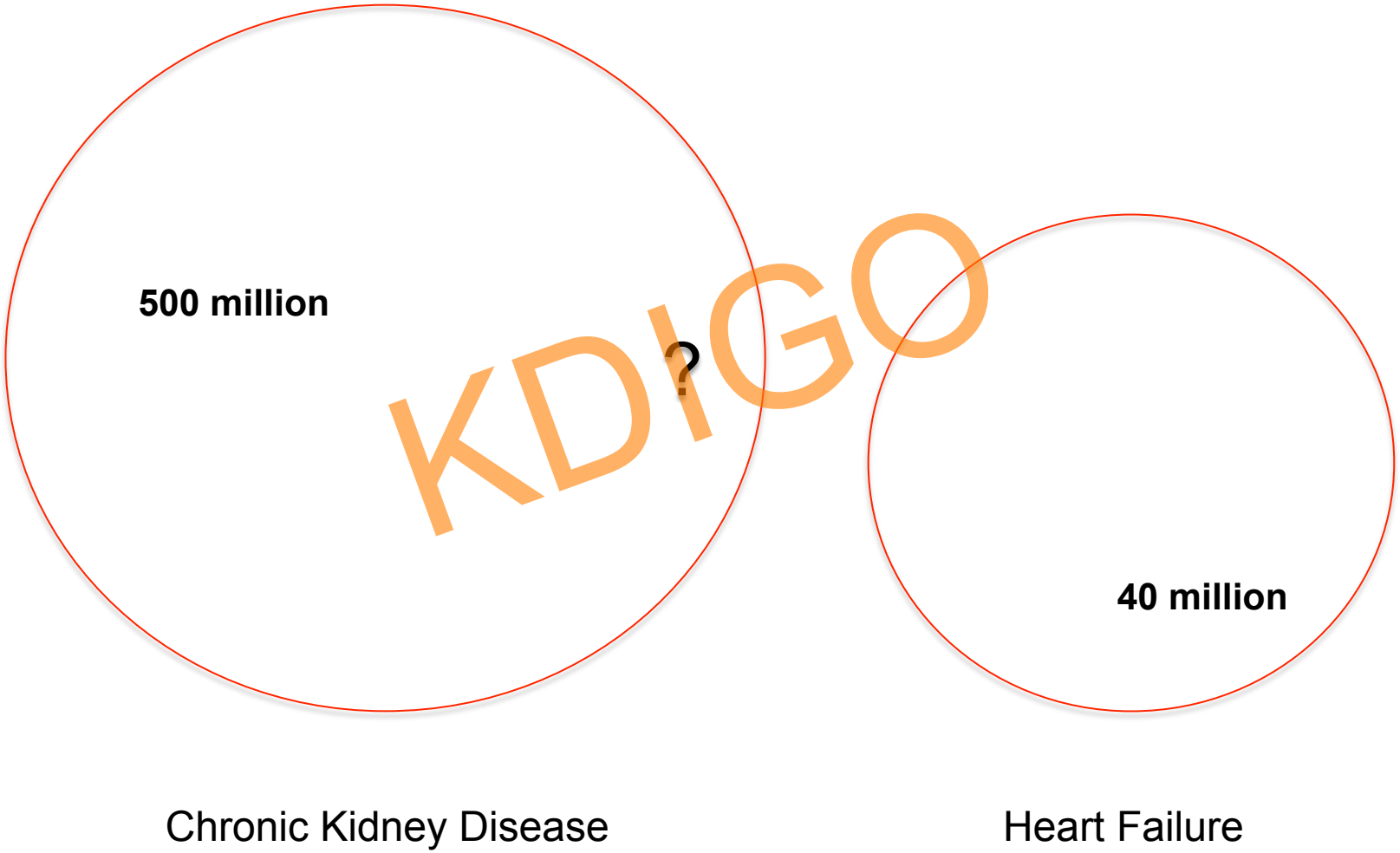
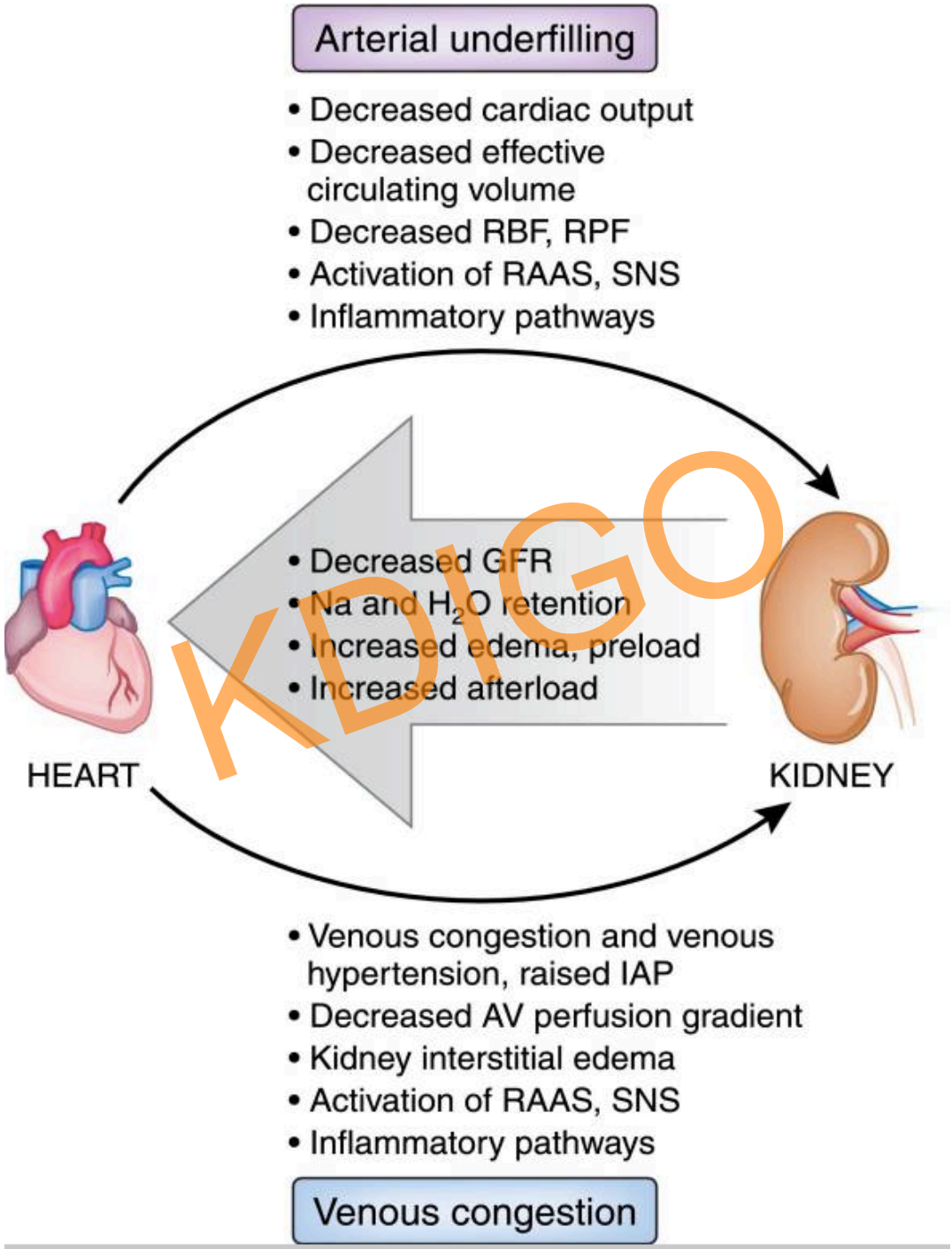
Disclosure of Interests

Baxter – honoraria and consulting fees re:
Prismaflex / CRRT

(e.g. employment, consultancy, honoraria, stock ownership, sponsored education, research grant, educational grant, expert witness, other relevant funding, etc ...)

Why are we here? Global Problem




Arterial underfilling
• Decreased cardiac output
• Decreased effective circulating volume
• Decreased RBF, RPF
• Activation of RAAS, SNS
• Inflammatory pathways
• Decreased GFR
• Na and H_2O retention
• Increased edema, preload
• Increased afterload
HEART
KIDNEY
• Venous congestion and venous hypertension, raised IAP
• Decreased AV perfusion gradient
• Kidney interstitial edema
• Activation of RAAS, SNS
• Inflammatory pathways
Venous congestion

Why are we here?

- Despite millions of people in the intersection between advancing CKD and CHF, limited high quality data
- It ain't what you don't know that gets you into trouble. It's what you know for sure that just ain't so – Mark Twain
- The only true wisdom is in knowing you know nothing - Socrates

Our Journey

- Friday morning
  - CRS & relationship to heart failure
    - Peter McCullough
  - Epidemiological Insights
    - Colin Baigent
  - Lessons Learned from Nephrology Trials with respect to Heart Failure and vice versa
    - Chris Chan, Javed Butler

The Journey Continues

- Friday afternoon
  - Five breakout groups

	HFpEF	HFrEF
Advancing (NDD) CKD	Grp 1	Grp 2
DD-CKD	Grp 3	Grp 4

  - Group 5 specific to Renal Transplant

The Task

- Each group has reviewed SOW and had opportunities to modify key questions
- Epidemiology, pathophysiology, prognosis, diagnosis
- Treatment
  - Quality of evidence
  - Populations, outcomes

Specific Considerations

- Role of pharmacologic treatment or prevention of heart failure in CKD
  - ACEi / ARB (alone or combination)
  - MRA (spironolactone, eplerenone, finerenone)
  - Beta blockers
  - Nitrates/vasodilators
  - ARNI (valsartan/sacubitril)

Other considerations

- Consider role of therapies not of heart failure itself
  - Hyperkalemia
  - Anemia and parenteral iron
  - CKD-MBD
- What is the role for volume management
  - Diuretics, ultrafiltration
- Dialysis modalities
  - quotidian, peritoneal

Other questions

- When should RAAS blockade be held?
- What role do devices play in management of heart failiure in CKD?
  - CRT, VAD, etc.

Transplant Specific Questions

- "Natural" history of HF following renal transplant
- Are there transplant / graft specific interventions that have effects on HF?
  - Rejection, proteinuria, mTORi
- What does the presence of an unused AVF mean for the heart?
- Role of combined heart-kidney transplant

Day 2 and 3

- Saturday morning
  - HF in Renal Transplant Recipients
    - Greg Knoll
  - Future Diagnostic & Therapeutic Targets in CRS
    - Edgar Lerma
- Preliminary Reports & Discussion
- Breakout Groups reconvene and refine
- Sunday morning “final” reports