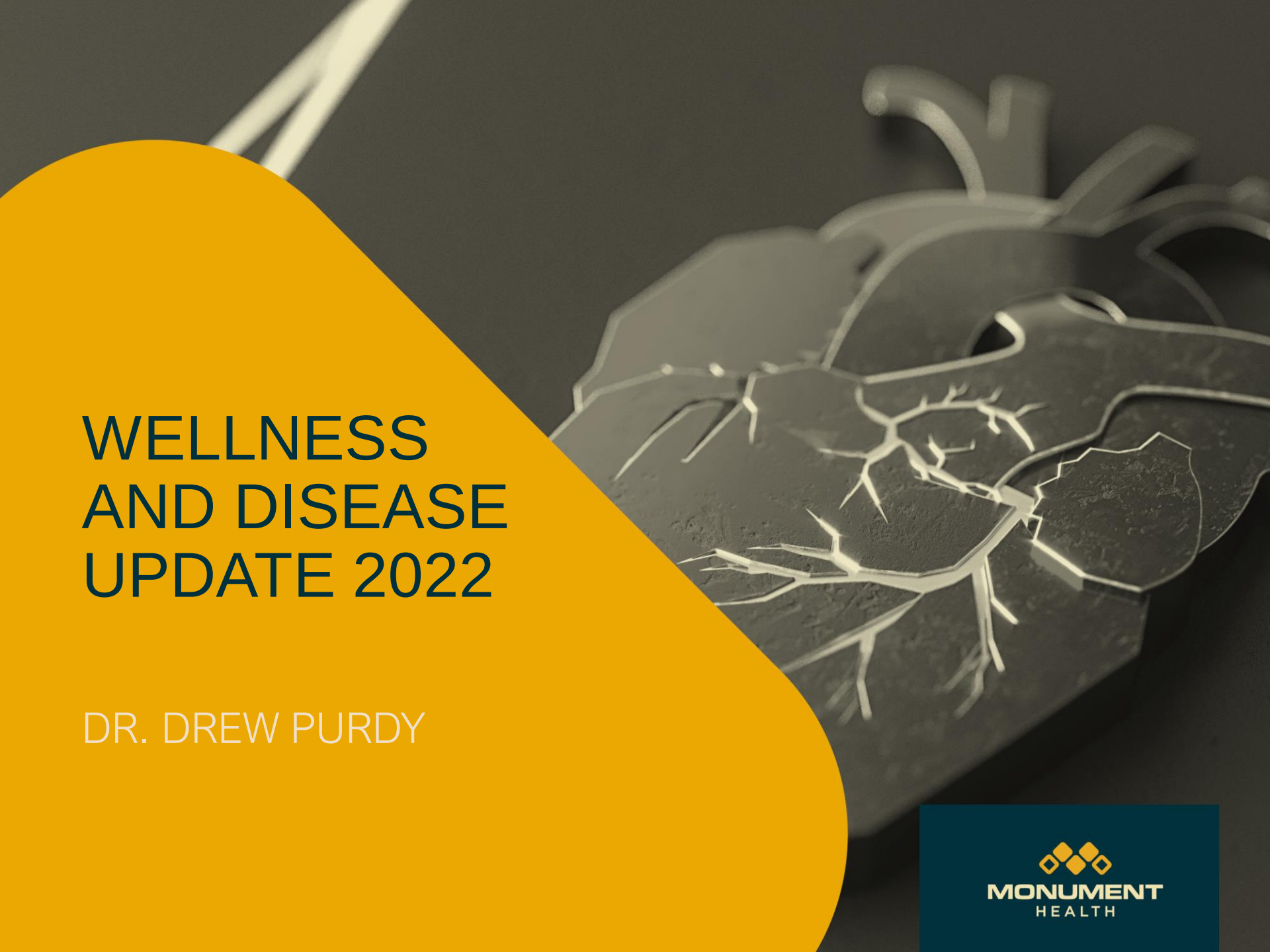

WELLNESS AND DISEASE UPDATE 2022

DR. DREW PURDY

MONUMENT HEALTH

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VISION

It starts with heart.

Our vision is to be one team, to listen, to be inclusive, and to show we care.
To do the right thing. Every time.

VALUES

Trust
Respect
Compassion
Community
Excellence

PRIORITIES

Deliver high-quality care
Provide a caring experience
Be a great place to work
Impact our communities
Be here for generations to come

MISSION

Make a difference. Every day.

HEART FAILURE THERAPY

- MULTIPLE NEW TRIAL S
- OLD MEDICATIONS AS NEW STRATEGY
- NEW MEDICATIONS i.e. SGLPT2 INHIBITORS
- HFrEF
- HFmrEF
- HFpEF
- IS EF EVEN A THING ANYMORE?

PARADIGM SHIFT

ENTRESTO SUPERIOR TO ENALAPRIL 10 mg BID

HAD TO REACH MAXIMUM DOSES

NOT REACHING AND SUSTAINING MAXIMAL DOSES ASSOCIATED WITH WORSE OUTCOMES

SIGNIFICANT MORTALITY AND REDUCED HOSPITALIZATIONS AND QOL SCORES

DIFFICULTIES WITH GDMT

BLOOD PRESSURE

KIDNEY FUNCTION

HYPERKALEMIA

COST

FAMILY AND PATIENT CONCERNS

HEART RATE

PROVE -HF

794 PATIENTS

EF <40%

INITIATED ON MAXIMALLY TOLERATED DOSES OF ENTRESTO

MONITORED ECHO (LVEDV,E wave velocity,E/e' ratio,LAV Index, EF, LV Mass Index)

BIOMARKERS (proBtype BNP,hsTroponin,Urinary cyclic guanasine monophosphate)

KCCQ scores

PROVE - HF

12 MONTHS OF TREATMENT

AVERAGE DOSES BROKEN DOWN INTO TERTILES

112 mg DAILY APP. 24/26 BID

342 mg DAILY AT LEAST 49/51 mg BID

379 mg DAILY CLOSE TO MAX DOSE EVERY DAY

PROVE - HF

ALL TERTILES DEMONSTRATED SIMILAR IMPROVEMENT IN BIOMARKERS, ECHO FINDINGS, AND QUALITY OF LIFE SCORES

SIMILAR FINDINGS HAVE BEEN SEEN WITH CARVEDILOL THAT THE MAXIMUM DOSE DID NOT PRODUCE SUPERIOR BENEFIT

IT MOSTLY MATTERS THAT YOU TRY TO GET TO GDMT

BTW. PDR RECOMMENDED STARTING DOSE OF ENTRESTO IS 49/51 mg BID

ADVOR STUDY
NEJM 387:13 SEPT 29, 2022

ACETAZOLAMIDE IV IN PATIENTS WITH ACUTE DECOMPENSATED HEART FAILURE (edema, ascites, rales)

BNP > 250

N-TERMINAL –PRO-TYPE BNP > 1000

RANDOMIZATION STRATIFIED BY EF <40% OR >40%

ADVOR STUDY

519 PATIENTS RANDOMIZED

ACETAZOLAMIDE 500 md IV DAILY VRS PLACEBO

ALL PATIENTS RECEIVED IV LOOP DIURETICS AT A DOSE EQUAL TO 2X THEIR USUAL HOME DOSE

MONITORED FOR 72 HOURS

PRIMARY END-POINT WAS SUCCESSFUL DECONGESTION, DEATH, REHOSPITALIZATION IN 3 MONTHS

ACETAZOLAMIDE

- CARBONIC ANHYDRASE INHIBITOR
- REDUCES PROXIMAL TUBULAR REABSORPTION OF SODIUM

ADVOR STUDY

- DECONGESTION IN 42.2%IN TREATMENT ARM
- 30.5% IN PLACEBO ARM
- HIGHER URINE OUTPUT IN TREATED ARM
- NO WORSENING OF KIDNEY FUNCTION, HYPOKALEMIA, HYPOTENSION, AND OTHER ADVERSE EVENTS IN THE TWO GROUPS

PACTOLA EVENING

DELIVER TRIAL

- SGLT2 INHIBITORS IN PATIENTS WITH MILDLY REDUCED OR PRESERVED EF
- NEJM 387;12 SEPT 22 2022
- SGLT2 INHIBITORS HAVE BEEN SHOWN TO REDUCE THE RISK OF CV DEATH AND HOSPITALIZATION IN PATIENTS WITH REDUCED EF NEJM 2019;381
- RECOMMENDED IN 2022 AHA/ACC/HFSA CLINICAL PRACTICE GUIDELINES

DELIVER - DAPAGLIFLOZIN

- PATIENTS > 40 YEARS OLD
- STABLE CHF
- WITH OR WITHOUT T2DM
- ELEVATED BNP
- EF > 40%
- DAPAGLIFLOZIN 10 mg DAILY VRS PLACEBO

DELIVER – PRIMARY AND SECONDARY OUTCOMES

- COMPOSITE OF WORSENING CHF OR CV DEATH

- SECONDARY
- DEATH FROM ANY CAUSE
- CHANGE FROM BASELINE IN KCCQ AT 8 MONTHS

DELIVER

- 10418 PATIENTS SCREENED
- 6263 RANDOMIZED
- 353 CENTERS
- 20 COUNTRIES
- EQUAL # OF PATIENTS QUIT DAPA VRS PLACEBO (14%)

DELIVER - RESULTS

- 512 PATIENTS (16.4%) WITH PRIMARY OUTCOME WITH DAPA VRS 610 (19.5%) WITH PLACEBO
- RESULTS SIMILAR WITH EF 60% OR LESS
- 21% REDUCTION IN CHF
- 12% REDUCTION IN DEATH FROM CV CAUSE
- IMPROVED KCCQ SYMPTOM SCORE AT 8 MONTHS
- SERIOUS ADVERSE EVENTS IN 1361 PATIENTS WITH DAPA VRS 1423 IN PLACEBO GROUP

SGLT2 – CURRENT RECOMENDATIONS

- CLASS 2A LEVEL B FOR CHF WITH MILD OR PRESERVED EF
- THIS WILL LIKELY CHANGE WHEN NEWER GUIDELINES COME OUT
- SURE WISH THEY WERE FREE AS MANY PATIENTS MAY ALREADY BE ON EXPENSIVE NAME BRAND DRUGS WITH THEIR CV DISEASE i.e. NOACs

REVIVED-BCIS2 TRIAL

- THE STICH TRIAL LOOKING AT REVASCULARIZATION WITH CABG FOR PATIENTS WITH IMPAIRED LVEF <35% DID NOT DEMONSTRATE ANY SURVIVAL BENEFIT VRS OPTIMAL MEDICAL THERAPY (OMT)
- THIS WAS IN PART DUE TO A NUMBER OF EARLY SURGICAL RELATED DEATHS
- THIS TRIAL WAS PERFORMED TO SEE IF SIMILAR PATIENTS TREATED WITH PCI WITH NO EARLY DEATHS AND KNOWN VIABILITY BY MRI OR DSE WOULD BENEFIT FROM REVASCULARIZATION

REVIVED

- EF 35% OR LESS
- DEMONSTRATED MYOCARDIAL VIABILITY IN AT LEAST 4 DYSFUNCTIONAL MYOCARDIAL SEGMENTS
- EXTENSIVE CAD (COULD INCLUDE LEFT MAIN OR 2-3 VESSEL DISEASE) BCIS SCORE OF > OR = TO 6
- PCI OF ALL PROXIMAL SEGMENTS PLUS OMT VRS OMT

REVIVED

- PRIMARY COMPOSITE OUTCOME OF DEATH FROM ANY CAUSE
- HOSPITALIZATION FOR CHF
- LVEF AT 6 AND 12 MONTHS
- KCCQ
- NYHA FUNCTIONAL CLASS

REVIVED - SECONDARY OUTCOMES

- DEATH FROM CV CAUSE
- APPROPRIATE ICD SHOCKS FOR VT OR VF
- ACUTE MI
- UNPLANNED REVASCULARIZATION
- NT-PROBNP LEVELS
- CCS ANGINAL CLASS
- MAJOR BLEEDING

REVIVED

- AUGUST 2013 THROUGH MARCH 2020
- 700 PATIENTS
- 40 CENTERS IN THE UK
- PCI TOOK PLACE MEDIAN OF 35 DAYS POST RANDOMIZATION
- MEDIAN DURATION OF FOLLOW-UP WAS 41 MONTHS
- DATA AVAILABLE FOR 99.1% OF PATIENTS

REVIVED

- ALL OMT GUIDED BY HF SPECIALIST AND SIMILAR APPROPRIATE USE OF ICD AND RESYNCHRONIZATION THERAPY IN THE TWO GROUPS
- USE OF ACE/ARB, BETA BLOCKERS, ALDOSTERONE INHIBITORS, STATINS AND ASA WERE SIMILAR
- PATIENTS HAD SIMILAR ANGINA SCORES BUT FEW PATIENTS HAD ANGINA AT RANDOMIZATION

REVIVED – OUTCOMES

- DEATH OR HOSPITALIZATION 129 PTS (37.2%) IN PCI GROUP
- 134 (38.0%) IN OMT GROUP
- LVEF SIMILAR IN BOTH GROUPS AT 6 AND 12 MO
- KCCQ BETTER IN PCI GROUP AT 6 AND 12 MO, BUT MINIMAL DIFFERENCE AT 24 MONTHS
- MI SIMILAR IN BOTH GROUPS
- FEWER REVASCULARIZATION PROCEEDURES IN PCI GROUP 10 VRS 37
- NO DIFFERENCE IN BLEEDING OR NTPROBNP LEVEL

REVIVED – TAKE HOME

- DID NOT INCLUDE PATIENTS WITH SIGNIFICANT ANGINA SO PCI IS STILL A VIABLE OPTION FOR THOSE PATIENTS
- MORTALITY WITH OMT WILL ONLY GET BETTER WITH SGLT2 INHIBITORS
- LIKELY NO CHANGE IN THE GUIDELINES
- DETAILS NEEDED REGARDING VESSELS FIXED VRS SEGMENTS OF VIABILITY, DFR OR IVUS DATA, AND COMPLETENESS OF REVASCULARIZATION

EYE OF THE STORM

INVICTUS TRIAL

- RIVAROXABAN VRS WARFARIN IN PATIENTS WITH RHEUMATIC HEART DISEASE-ASSOCIATED ATRIAL FIBRILLATION
- CHA2DS2VASC SCORE OF 2 OR GREATER, MV AREA OF < 2 cm2
- LEFT ATRIAL THROMBUS OR LEFT ATRIAL SPONTANEOUS ECHO CONTRAST

INVICTUS
NEJM 387:11 SEPT 15 2022

- 4565 PATIENTS
- MEAN AGE 50.5 yrs
- 72.3% WOMEN
- PRIMARY OUTCOME WAS CVA, SYSTEMIC EMBOLUS,MI, DEATH FROM VASCULAR OR UNKNOWN CAUSES
- PRIMARY SAFETY OUTCOME WAS MAJOR BLEEDING BY ISTH

INVICTUS

- 560 PATIENTS IN THE RIVAROXABAN GROUP HAD AN EVENT VRS 446 IN VKA GROUP
- HIGHER RATE OF DEATH IN RIVAROXABAN GROUP 72 DAYS EARLIER THAN THE VKA GROUP
- NO SIGNIFICANT DIFFERENCES IN MAJOR BLEEDING
- CONTINUE TO RECOMMEND VKA IN RHEUMATIC DISEASE PATIENTS PER CURRENT GUIDELINES

CLOSE ENCOUNTERS OF SOME KIND

TIME STUDY – AM VRS PM DOSING OF MEDICATIONS FOR BP

- HYGIA CHRONOTHERAPY TRIAL SHOWED A LARGE PROTECTIVE EFFECT OF TAKING BP MEDS AT PM
- EU HEART JOURNAL OCT 22, 2020
- HOWEVER ADHERANCE IS WORSE AT NIGHT
- THE VAST MAJORITY OF BP TREATMENT OUTCOME TRIALS HAVE ALL DOSED IN THE AM
- PATIENTS WITH NOCTURNAL HYPERTENSION (NONDIPPERS) HAVE POORER OUTCOMES

TIME

- 21104 PATIENTS
- AVERAGE AGE 65
- 14% WITH T2DM
- 4% SMOKERS
- 13% PRIOR CARDIAC EVENT
- MEAN BP AT ENTRY 135/79

TIME

- FOLLOW-UP 5 YEARS
- 1:1 RANDOMIZATION TO ALL AM OR ALL PM DOSING
- 60% COMPLIANCE WITH ALL DOSING (GOOD?)
- PRIMARY OUTCOME WAS CV DEATH, NON-FATAL MI, NON-FATAL CVA, HOSPITALIZATIONS

TIME

- PRIMARY ENDPOINT IN PM DOSING WAS 3.4%
- PRIMARY ENDPOINT IN AM DOSING WAS 3.7%
- NO DIFFERENCE IN BP CONTROL
- FALLS OR FRACTURES (CONCERN ABOUT LOW bp AT NIGHT)
- DIZZINESS MORE OFTEN DURING THE DAY WITH AM DOSING
- BOTTOM LINE- JUST TAKE THE MEDICINE!!

SOMETIMES THE RIGHT WINE TURNS YOUR WORLD UPSIDE DOWN

ABOUT THAT TIME

HEART

- MULTIPL
- OLD ME
- NEW MI
- HFrEF
- HFmrEF
- HFpEF
- IS EF EV

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