ELIGIBILITY FOR DAPAGLIFLOZIN IN A REAL-LIFE HEART FAILURE CLINIC
C. Powell, K. Kavanagh, J. Morgan, N. Stakelum Byrne, P. Keelan, N. Murphy. Our Lady of Lourdes Hospital, Drogheda, Co. Louth, Ireland

Introduction The rising prevalence of heart failure due to an aging population, higher post-myocardial infarction survival and the increasing burden of cardio-metabolic diseases, presents public health and economic challenges. Optimisation of heart failure therapy is essential in preventing the morbidity and mortality associated with this disease. The landmark DAPA-HF trial identified a 26% relative reduction in a composite primary outcome of worsening heart failure or death with use of dapagliflozin in patients with heart failure and reduced ejection fraction (HFrEF), irrespective of diabetic status. Although this class of drug is not yet incorporated into ESC guidelines, such a marked benefit may prompt consideration. The objective of this study is to determine the proportion of patients eligible for dapagliflozin at our site, based on inclusion and exclusion criteria of the DAPA–HF trial.

Methods This retrospective observational study was conducted at Our Lady of Lourdes Hospital, Heart Failure Clinic. Data was collected on all patients referred from January 2018 to December 2019. We employed four data sources: CELLMa, a programme used to record clinical information; PACS (radiology); WinPath (blood work); and patient charts. This multi-pronged approach served to limit missing data. Eligibility required: EF ≤40%; NYHA >II; absence of type 1 diabetes mellitus (T1DM); SBP ≥95 mmHg; eGFR ≥30 ml/min; commensurate elevated BNP levels; and taking at least an ACE inhibitor, ARB or sacubitril/valsartan combined with a beta blocker (BB). Complete case analysis was used, as data was complete for >90% patients.

Results In all, there were 587 referrals during this period, of which 278 (47.4%) had HFrEF and 130 (22.1%) had an EF <40% (DAPA–HF inclusion). 31% were female with a mean age of 69±12. Of the subset of interest (EF ≤40%), comorbid T2DM was identified in 38 (29.2%) and AF in 62 (47.7%). Mean EF was 30.4±7% and median BNP was 419 pg/ml. 102 (78.5%) were receiving at least minimum pharmacological therapy as stated above. 12 (9.2%) were prescribed fully titrated dosages of ACE inhibitor, BB and mineralocorticoid receptor antagonists. The DAPA–HF inclusion criteria were not met in 68/130 (52.3%). Of these, 25 were not on minimum pharmacological therapy, 24 were below the BNP threshold, 11 were NYHA I, 10 had an eGFR <30, 14 were hypotensive and 2 had T1DM. Exclusion criteria overlapped in 17 cases. In total, 62 patients were eligible for dapagliflozin, equating to 10.6% of the full 587 sample, rising to 22.3% when we focus on the 278 HFrEF patients.

Conclusion In a real-life Heart Failure Clinic almost one quarter of HFrEF patients fulfilled the DAPA–HF inclusion criteria. These patients may stand to benefit from dapagliflozin in terms of reduced hospitalisations and mortality, were this drug prescribed in addition to guideline-recommended heart failure therapies.
indicators for ordering a TTE and used BSE Guidance to classify the indications as appropriate, inappropriate, or unclear.

**Results** Thirty-two requests for TTE were received over the study period. The median patient age was 74 years [range 32–93 years]. Just over half of the patients 17/32 (52%) were male. The most common indications for TTE were to evaluate valvular pathology 11/32 (34%); either initial assessment 5/32 (16%) or surveillance of known valvular disease 6/32 (19%). The second most common indication was to assess cardiomyopathy 8/32 (25%), followed by evaluation of arrhythmias, palpitations or syncope 4/32 (13%). When compared with BSE Guidance, 18 (56%) requests were appropriate and 11 (34%) were inappropriate. Three (9%) requests were deemed unclear due to the lack of information contained in the request.

**Conclusion** An almost equal number of females and males were referred for TTE. The median age reflects the older cohort of patients at our hospital. Valvular pathology; either for diagnostic assessment or repeat evaluation was the most common indication for echocardiography. More than one-third of TTE requests received were not clinically indicated and combined with unclear requests, this amounted to more than 40% of requests. We would recommend implementation of BSE Guidance at our hospital to provide guidance for physicians making requests and ensure appropriate utilisation of limited resources for clinically indicated echocardiograms.

### Abstract 51

**NEOINTIMAL TISSUE COVERAGE AND CHARACTERIZATION ASSESSMENT USING OPTICAL COHERENCE TOMOGRAPHY SURVEILLANCE SIX MONTHS AFTER IMPLANTATION OF BIORESORBABLE SCAFFOLDS VERSUS CONVENTIONAL EVEROLIMUS ELUTING STENTS IN ISAR-ABSORB MI TRIAL**

1H Rai, 2F Alfonso, 3M Maeng, 4C Bradaric, 1J Wiebe, 2J Cuesta, 3E-H Christiansen, 1F Hanzer, 3S Cisse, 6P Hoppmann, 4R Collier, 3S Schneider, 4K-L Laugwitz, 1A Kastrati, 1R Byrne. 1Deutsches Herzzentrum München, Technische Universität München, Munich, Germany; 2Hospital Universitario de La Princesa Madrid, Madrid, Spain; 3Aarhus University Hospital, Aarhus, Denmark; 4Klinikum rechts der Isar, Technische Universität München, Munich, Germany; 5DZHK (German Centre for Cardiovascular Research), partner site Munich Heart Alliance, Munich, Germany

**Background** Bioresorbable scaffolds (BRS) were introduced to overcome the limitations of permanent metallic stent implantation. Optical coherence tomography (OCT) can provide important insights on vessel wall healing at follow-up. We compared OCT-assessed healing at 6 months after implantation of everolimus-eluting BRS and everolimus-eluting metallic stents (EES) in patients treated for acute myocardial infarction (AMI).

**Methods** ISAR-Absorb MI is a multicentre, 2:1 randomized trial comparing outcomes of patients with AMI stented with BRS or conventional EES. Angiographic surveillance was planned for all patients at 6–8 months follow-up; surveillance with OCT at follow-up was discretionary. For the present analysis, patients with OCT follow-up were included and images analyzed at a core laboratory. Tissue characterization using grey-scale signal intensity (GSI) analysis was done for neointimal regions of interest (ROI) with thickness of 100 to 400 μm. ROI’s were classified as mature using a cut-off GSI score of 109.7. Generalized linear mixed model was used as appropriate.

**Results** 70 patients in the BRS arm and 32 patients in the EES arm had OCT available for analysis at a median follow-up of 216 days. Minimum lumen area [5.13 (3.95, 6.70) vs. 4.93 (3.84, 6.99) mm²] and minimum stent area [5.78 (4.88, 7.34) vs. 6.39 (4.77, 7.45) mm²] were comparable between BRS and EES. In total, 2,237 frames with 19,827 struts were assessed. Overall strut coverage was better with BRS compared to EES (97.5% vs. 90.9%, p<0.001), while malapposed struts (1.1% vs. 0.5%, p=0.51) were more common with EES. Neo-intimal coverage was comparable in both stent groups [85.5 (61.9, 124.1) vs. 69.5 (32.7, 127.5) μm in BRS and EES groups, p=0.20]. GSI analysis in 95 cases showed that immature ROIs were numerically more common in the EES group as compared to the BRS group (75.4 vs. 57.0%; p=0.35).

**Conclusions** In selected patients undergoing OCT imaging at 6–8 months after implantation of BRS and conventional EES for AMI, we observed generally favorable healing characteristics with high rates of strut coverage and fewer areas of immature neointimal areas with BRS in comparison to EES.

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### Abstract 52

**OUT OF HOSPITAL CARDIAC ARRESTS IN YOUNG ADULTS (16–35 YEARS); A SIX-YEAR REVIEW OF THE IRISH OUT-OF-HOSPITAL CARDIARREST REGISTER**

1R Tanner, 2S Materson, 3J Galvin, 1C Deasy. 1Cork University Hospital, Cork, Ireland; 2National Ambulance Service Lead, Clinical Strategy and Evaluation, National Ambulance Service, HSE, Ireland; 3Mater Misericordiae University Hospital, Dublin, Ireland

**Introduction** Out-of-hospital cardiac arrests (OHCA) in the young population have only been examined in a limited number of regional studies. Hence, we sought to describe OHCA characteristics and predictors of survival to hospital discharge for young Irish adults.

**Methods** An observational analysis of the national Irish out-of-hospital cardiac arrest register for all OHCA aged 16 to ≤33 years between January 2012 and December 2017 was performed. Multivariable logistic regression was used to determine the independent predictors of survival to hospital discharge.

**Results** A total of 1,005 OHCA aged 16 to ≤35 years (24.3% female, median age 27 years [IQR 23–32]) had resuscitation attempted over the study period. OHCA location was most common in the home (61.3%, n=616) and a minority of OHCA occurred in areas of sport or recreation (3.5%, n=35). A non-medical aetiology was most prevalent (59%, n=593) with asphyxiation, trauma and drug overdoses being next most common.

**Abstract 52 Figure 1** Survival to hospital discharge based on OHCA aetiology (n=1,005)