METHODS: The aim of this study is to estimate cost-effectiveness of Florbetaben PET imaging.

OBJECTIVES: To assess the cost-effectiveness of cardiac resynchronisation therapy (CRT) both with CRT-P (biventricular pacemaker only) and CRT-D (biventricular pacing) in patients with NYHA class III/IV from a Belgian health care payer perspective.

RESULTS: Compared with optimal medical treatment, on average 3.1 quality-adjusted life-years (QALYs) are gained with CRT-P at an additional cost of €14,700, resulting in an incremental cost-effectiveness ratio (ICER) of about €11,200/QALY. As compared to CRT-D, CRT-P was found to be dominant: 0.5 QALYs at an additional cost of €30,900 resulting in an ICER of €57,000/QALY. This result was very sensitive to the incremental clinical benefit of the defibrillator function on top of CRT.

CONCLUSIONS: Based on efficiency arguments, CRT-P can be recommended for NYHA class III/IV and CRT-D if there is willingness to pay more than €52,700 for 0.5 QALY. Even though CRT-D may offer a survival benefit over CRT-P, the incremental clinical benefit appears to be too marginal to warrant a three times higher device price for CRT-D. Further clinical research should focus on the added value of CRT-D over CRT-P.

PMD50 COST-EFFECTIVENESS OF CARDIAC RESYNCHRONISATION THERAPY FOR PATIENTS WITH MODERATE-TO-SEVERE HEART FAILURE

OBJECTIVES: To assess the cost-effectiveness of cardiac resynchronisation therapy (CRT) in patients with NYHA class III/IV from a Belgian health care payer perspective.

RESULTS: Compared with optimal medical treatment, on average 3.1 quality-adjusted life-years (QALYs) are gained with CRT-P at an additional cost of €14,700, resulting in an incremental cost-effectiveness ratio (ICER) of about €11,200/QALY. As compared to CRT-D, CRT-P was found to be dominant: 0.5 QALYs at an additional cost of €30,900 resulting in an ICER of €57,000/QALY. This result was very sensitive to the incremental clinical benefit of the defibrillator function on top of CRT.

CONCLUSIONS: Based on efficiency arguments, CRT-P can be recommended for NYHA class III/IV and CRT-D if there is willingness to pay more than €52,700 for 0.5 QALY. Even though CRT-D may offer a survival benefit over CRT-P, the incremental clinical benefit appears to be too marginal to warrant a three times higher device price for CRT-D. Further clinical research should focus on the added value of CRT-D over CRT-P.

PMD51 COST SAVINGS AND IMPROVED UTILITY THROUGH THE USE OF FLORBETABEN BETA-AMYLOID PET IMAGING IN DEMENTIA DIAGNOSIS

OBJECTIVES: Early diagnosis of Alzheimer’s disease may allow early for appropriate treatement, delayed symptom aggravation, delayed nursing home placement, and reduced care costs. The use of Amyloid-specific Positron Emission Tomogra-phy (PET) scanning might complement routine clinical diagnostic procedures and reduced care costs. The use of Amyloid-specific PET techniques, including USPIO (ultrasmall superparamagnetic iron oxide con- trast agent)-enhanced and gadolinium-enhanced MRI exist, however diagnostic accuracy of these techniques may be lower than for surgical techniques. An economics model was designed to calculate the cost-utility of both interven- tions. In the reference case, the treatment effect is based on the COMBINATION trial. Costs are based on real-world data. Pharmacoeconomic guidelines were applied, including probabilistic modelling and sensitivity analy- ses.

RESULTS: Compared with optimal medical treatment, on average 3.1 quality-adjusted life-years (QALYs) are gained with CRT-P at an additional cost of €14,700, resulting in an incremental cost-effectiveness ratio (ICER) of about €11,200/QALY. As compared to CRT-D, CRT-P was found to be dominant: 0.5 QALYs at an additional cost of €30,900 resulting in an ICER of €57,000/QALY. This result was very sensitive to the incremental clinical benefit of the defibrillator function on top of CRT.

CONCLUSIONS: Based on efficiency arguments, CRT-P can be recommended for NYHA class III/IV and CRT-D if there is willingness to pay more than €52,700 for 0.5 QALY. Even though CRT-D may offer a survival benefit over CRT-P, the incremental clinical benefit appears to be too marginal to warrant a three times higher device price for CRT-D. Further clinical research should focus on the added value of CRT-D over CRT-P.

PMD52 WORKLOAD IN GERMAN HOSPITALS CAUSED BY ROUTINE FOLLOW-UP SERVICES FOR CARDIAC IMPLANTABLE ELECTRICAL DEVICES (CIED)

OBJECTIVES: Regular follow-up (FU) of CIED patients is mandatory to monitor de- vice functionality and device status. Demand for this highly specialised service increases continuously. However, most calendar based visits do not need further action and could safely be replaced by remote monitoring. This model aims to quantify hospital workload associated with calendar based FU between 2011 and 2015, and 2) to identify opportunity costs if monitoring services would be performed remotely.

METHODS: The estimated number of prevalent CIED patients in Germany was combined with modelled FU rates and associated costs. Professional resource burden related to FU. Opportunity costs were identified considering 2011 DRG payments for frequent cardiology procedures.

RESULTS: Assuming in-office FU twice annually for pacemaker patients, and four times annually for implantable cardioverter defibrillator or cardiac resynchronisation therapy patients, hospitals will have to provide about 2.2 mio FU services in 2015, to about 856,000 patients. These services will bind about 411,000 physician hours, 392,000 nurse hours and 280,000 technician hours, at total costs of EURO 44.8 m to hospitals. Using remote monitoring to replace all but one in-office FU visit per year could free up to 126,700 to 376,000 physician hours (2015). In theory, this physician time would be allocated to other cardiology procedures. Possible cost overestimation due to not considering unscheduled FU visits exists in scenarios where more than one FU per year is performed.

CONCLUSIONS: Monitoring to safely replace in-office FU visits has been proven in clinical trials. While continuously monitoring all patients, it is possible to identify patients in need to attend in clinic FU in person. Remote monitoring technologies can support hospitals in focusing their availabe staff and room capacities and optimise operative income while providing patient care at potentially improved outcomes.

PMD53 PULMONARY VEIN ISOLATION FOR THE TREATMENT OF PAROXYSMAL ATRIAL FIBRILLATION (PAF): TIME REDUCTION AND PRODUCTIVITY GAIN WITH “ANATOMICALLY- DESIGNED” CATHETERS COMPARED TO “POINT BY POINT” CATHETERS

OBJECTIVES: Electrical Pulmonary Vein (PV) Isolation (PVI) is regarded as effective as a technique of Symptomatic Drug Refractory Paroxysmal Atrial Fibrillation (PAF). Traditionally, apparently circumferential lesions were created point-by-point, using single tip catheters guided by navigation systems, and generally employing radiofrequency (RF) source. “Anatomically-Designed” catheters were introduced recently and are pre-shaped to create the appropriate lesions with a single application on each PV. We hypothesised that the shape of these catheters is associated with reduced procedure times and Operating Room (OR) productivity gains. In this study, catheters employing cryo (Arctic Front, Medtronic) and duty cycled bipolar radiofrequency (PVAC, Medtronic) energy sources were examined.

METHODS: Using a retrospective approach, 158 procedures were included [85 with “anatomically-designed” catheters, 73 “point-by-point”) across 7 diversified French centres. Selection criteria were used to ensure comparability of procedures. In parallel an analysis was performed to estimate the budgetary impact in terms of DRG net results for hospitals, resulting from potential increased OR activity.

RESULTS: Reduced procedure time was observed in six out of seven participating centres. The difference in median times was 35 minutes (p=0.0192). There was significant variability of procedures times depending on hospital status (public or private), the experience of electrophysiologists involved and the annual volume. Based on the DRG case mix produced in the orthopaedics OR and the current tariffs, the mean revenue for the centre was estimated between 1100€ (private) and, 400€ (public) per hour of total OR time. CONCLUSIONS: Use of “Anatomically-Designed” PVI Catheters has the potential to substantially reduce procedure time and in- crease procedure capacity of radiotherapy labs. Shorter procedure times allow better management of OR and treatment of more patients with potential productivity gains to hospitals that may offset the extra cost of the new techniques.

PMD54 RESOURCE UTILISATION RELATIONSHIP CATHETER-ASSOCIATED URINARY TRACT INFECTIONS IN SWEDISH SPINAL INJURY PATIENTS

OBJECTIVES: To collect real-life data on costs and resource use, in order to under- stand the economic burden and provide information on primary tract infection (UTI) amongst people with spinal injury, who are in need of chronic, intermittent catheterisation. METHODOLOGY: We used the CEBRxa database, which combines data from a public claims database for the South-West region of Sweden, comparing approximately 500 individuals with spinal injury across the years 2000 to 2015. We identified UTI and discharges related to catheterisation and mortality. We identified a population of spinal injury patients (ICD-10 S14.0, S14.2, S34.0, and T31.3) in which we had admitted diagnosis of a neurogenic bladder (ICD-10 N31), anytime during the years 2000 to 2009. UTIs were identified through the following ICD-10 codes: N11.0, N30.0’, N30.0, N39.0’, N12.2, and N30.2. A cost per UTI was calculated through considering UTI-related care contacts that could be related to UTI, adding MRI before the surgical techniques (addition strategy) were modelled using discrete-event simulation in SIMUL8®.

RESULTS: A systematic review was undertaken to obtain effectiveness outcomes of the MDR strategies, whilst resource use data and health related utilities were obtained from the literature. RESULTS: Our results predict that a replacement strategy for MRI, based on the pooled estimate of all MDR techniques, dominates the baseline SLNB and 4-NS strategies, as a result of avoiding AE from surgical techniques. However this strategy leads to more false-posi- tive and false-negative cases. The MDR addition strategy may also be cost-effective, but is subject to greater uncertainty. URSI-enhanced MRI produces the most fa- vorable cost effectiveness ratio, but the evidence is based on studies with small patient numbers.

CONCLUSIONS: These results suggest that there is a potential role for MRI in a replacement strategy of MRI, however further research is needed to assess the added value of MRI, for instance USPIO-enhanced MRI offers the most cost effective option, but further large studies are required to obtain high quality evidence on diagnostic accuracy.