for Payers in budget impact estimations and is likely to reduce their willingness to pay.

PUK29
RENAL SEVERITY IN PATIENTS WITH LUPUS NEPHRITIS AT DIAGNOSIS FOR SYSTEMIC LUPUS ERYTHEMATOSUS
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**OBJECTIVES:** Systemic lupus erythematosus (SLE) is a multisystem autoimmune inflammatory disease and one of the commonest and serious manifestations is lupus nephritis (LN). Studies say that 5 to 10% of patient with LN progress to end-stage renal disease. The objective of this study is to assess the renal severity in patients with LN at diagnosis for new-onset SLE. **METHODS:** In Japan, SLE has been one of designated diseases for co-payment reduction or exemption. To be eligible for this, a doctor's statement should be submitted. We extracted registration data of new-onset SLE patients with renal biopsy at diagnosis for application from fiscal years 2004 to 2008. Extracted data were analysed and compared in terms of patients' age, gender, urinalysis result, serum creatinine, renal biopsy class, CKD stages and treatment history. **RESULTS:** Of 9190 patients who were diagnosed with SLE and newly submitted application, 1353 patient record were extracted. 786 were with LN, of whom 49 were children and adolescents aged younger than 18 years and 737 were adults. The male/female ratio were 1:2.27 and 1:3.58 respectively. The commonest renal biopsy class was class IV, followed by classes V and III for both. Of 636 adults with LN (101 adults lacked either eGFR data or alubuminuria/proteinuria data), 158 cases fell in GFR category G1 (24.8%), 163 cases fell in G2 (25.6%), 107 cases are fell in G3a (16.8%), 106 cases fell in G3b (16.7%), 68 cases fell in G4 (10.7%) and 34 cases fell in G5 (5.3%). As to CKD risk, 9 (1.4%) were at moderately increased risk, 290 (45.6%) were at high risk and 307 (48.3%) were at very high risk. **CONCLUSIONS:** Considering that 94% of adults with LN at diagnosis for new-onset SLE were at high risk of CKD, appropriate prevention of aggravation is important.

PUK30
THE BURDEN ASSOCIATED WITH COMPLEMENT 3 GLOMERULOPATHY (C3G)
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**OBJECTIVES:** This literature review aimed to gather and narratively synthesize evidence on the clinical, economic and humanistic burden associated with C3G, which encompasses dense deposit disease (DDD) and C3 glomerulonephritis (C3GN). **METHODS:** EMBASE and Medline databases were searched for relevant English-language publications, which were selected based on pre-defined inclusion criteria through a two-step screening process; (i) abstract and (ii) full-text screening. **RESULTS:** The review identified 33 heterogeneous publications, that varied with respect to the number of patients included (5 –168); study settings (single-center [n=22] vs. multi-center [n=10] vs. database [n=1]) and geographies (North America [n=12], Asia and Europe [n=9 each] and other regions [n=3]). Sixteen publications were targeted to DDD patients, 4 to C3GN and the remaining 13 included both types. All publications provided evidence on clinical burden, none had evidence on economic or humanistic burden. At diagnosis, there were no major differences between C3GN and DDD patients. Mean age at presentation was in the range 6.8–36 years and mean proteinuria levels ranged from 1.25– 5.1 g/day. Up to 30% of C3GN (follow-up ~10 years) and 100% of DDD patients (follow-up ~15 years) progressed to end-stage renal disease (ESRD). In both conditions, histological presentations of glomerular crescents and interstitial fibrosis were associated with progression to ESRD, along with complement gene mutation, low glomerular filtration rate at biopsy and no remission in proteinuria (P<0.01 each). Among C3GN and DDD patients with ESRD, renal transplants were as high as 59% and 92% respectively. Disease recurrence was highly prevalent in transplanted patients. **CONCLUSIONS:** The high clinical burden associated with C3G could be attributable to lack of interventions to slow or arrest disease progression. Furthermore, the absence of evidence on the humanistic and economic burden associated with C3G is indicative of a need for further research.

PUK31
THE BURDEN ASSOCIATED WITH IMMUNOGLOBULIN A NEPHROPATHY(IGAN)
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**OBJECTIVES:** This literature review aimed to gather and narratively synthesize evidence on the clinical, economic and humanistic burden associated with IgAN. **METHODS:** EMBASE and Medline databases were searched for relevant English-language publications (2000–2017), which were selected based on pre-defined inclusion criteria through a two-step screening process; (i) abstract and (ii) full-text screening. **RESULTS:** The review identified 52 heterogeneous publications that varied with respect to the number of IgAN patients included (19–11,963); study settings (single-center [n=30] vs. multi-center [n=15] vs. not reported [n=7]) and geographies (Asia [n=32], Europe [n=11], North America [n=4] and not reported [n=5]). While all publications provided evidence on clinical burden, none had evidence on economic or humanistic burden. At diagnosis, the mean age ranged from 25.2–50.3 years, and the mean proteinuria ranged from 0.75–3.04 g/day. Hypertension was the most common comorbid condition. The publications, though heterogeneous, provided information on the disease progression at different time-points of follow-up. Within five years of follow-up, a ≥50% decline in glomerular filtration rate (GFR) was observed in 0.6% (Swedish patients) to 26.9% (Pacific Asian patients). The proportion of patients progressing to end-stage renal disease (ESRD) ranged from 4.0%–11.2% at 5 years; 13.4–22% at 6–10 years and 31.9% at 15 years of follow-up. Histological presentations of tubular atrophy, interstitial fibrosis and high histological disease grade (III/IV) were associated with progression to ESRD (P<0.01 each), along with advanced age, hypertension and Pacific Asian population (P<0.001 each). IgAN patients who underwent renal transplantation was as high as 27.1% at ~5 years of follow-up. **CONCLUSIONS:** The high clinical burden associated with IgAN confirms that there is an unmet need for interventions that can delay the progression of this rare indication. Additionally, there is a necessity to undertake research on the humanistic and economic burden associated with IgAN.

PUK33
COMPARISON OF TREATMENT PATTERN IN UROLITHIASIS : A POPULATION STUDY USING KOREAN HEALTH INSURANCE REVIEW AND ASSESSMENT SERVICE DATABASE
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**OBJECTIVES:** According to the current guideline for urolithiasis, Extracorporeal Shock Wave Lithotripsy (ESWL), which is non-invasive and convenient, is recommended as first-line treatment when the stone size is less than 10mm or stone larger than 10mm is located in the proximal ureter. If not in these cases, other invasive treatments, such as Retrograde Intrarenal Surgery (RIRS), Percutaneous Nephrolithotomy (PCNL), or Ureteroscopic Lithotripsy (URSL), should be considered. So far, a few studies has evaluated outcomes of each treatment for urolithiasis in the real-world. This study assessed treatment patterns among urolithiasis patients using claim data. **METHODS:** Using the Korean Health Insurance Review and Assessment Service (HIRA) database, we recruited patients who were diagnosed with urinary stones and had undergone urolithiasis treatments in 2016, excluding those with the history of urolithiasis treatments within 6 months. Claim data for 6 months, defined as a single episode, after the initial treatment were analyzed. **RESULTS:** Among 96,863 patients, 87,844 (90.7%), 916 (0.9%), 1,055 (1.1%), 7,048 (7.3%) were initially treated with ESWL, RIRS, PCNL, and URSL, respectively. Of the patients who underwent ESWL first, 61.4% were treated in the clinics, while other treatments were performed mostly at hospitals. ESWL showed the lowest success rate for initial treatment (67.7% for ESWL; 90.8% for RIRS; 84.1% for PCNL; 94.9% for URSL; p<0.0001). The total number of treatments per one episode was highest in patients initially treated with ESWL (2.49 for ESWL; 1.14 for RIRS; 1.32 for PCNL; 2.08 for URSL; p<0.0001). Among patients initially treated with ESWL, 86.4% received treatments for the maximum twice per episode, which means that 13.4% still had to undergo retreatments because of repeated failure. **CONCLUSIONS:** ESWL, largely performed in the clinic, has lower success rate than other treatments and requires several retreatments. Physicians should precisely assess patients' status beforehand to decide appropriate treatment which best fits for them.

## URINARY/KIDNEY DISORDERS - Patient-Reported Outcomes & Patient Preference Studies

PUK35
WORK PRODUCTIVITY AND EQ-5D UTILITY OF PATIENTS WITH CHRONIC KIDNEY DISEASE BY ANEMIA SEVERITY: POOLED RESULTS FROM THREE CROSS-SECTIONAL INTERNATIONAL SURVEYS
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**OBJECTIVES:** Patients with chronic kidney disease (CKD) frequently suffer from the low hemoglobin (Hb) levels that define anemia, which is associated with reduced quality of life (QOL). This study aims to determine the association between anemia and work productivity and derive health state utility values for various Hb levels in patients with CKD. **METHODS:** Data were extracted from the 2012, 2015 and 2018 Adelphi CKD Disease Specific Programmes; point-in-time surveys with physicians and a random sample of their CKD patients across France, Germany, Italy, Spain, United Kingdom (EU5), USA and China. Demographics and disease characteristics (including Hb levels) were provided by the physicians. Patients completed the Work Productivity and Activity Impairment (WPAI) and the EuroQol-5D-3L (EQ-5D) questionnaires. Descriptive analyses were performed on WPAI and EQ-5D utilities, and the latter was dichotomized (<0.8 or ≥0.8) and additionally analyzed through logistic regression, with Hb level as a continuous variable and adjusting for age, sex, CKD stage, common comorbidities and CV risk. **RESULTS:** WPAI and EQ-5D results were available for 4248 and 4538 patients, respectively, and 38% were dialysis dependent (DD). Mean population age was 61.1 (SD 14.29) and 16% were working full-time. Overall work and activity impairment was higher in patients with lower Hb levels. In non-DD patients, 38.2% of patients with Hb<10g/dL versus 22.5% with Hb>12g/dL reported work impairment. A similar pattern was observed in DD patients and across WPAI domains. EQ-5D utilities for Hb<10, 10-12 and >12 g/dL were 0.74, 0.79 and 0.85 for non-DD patients and 0.7, 0.73 and 0.77 for DD patients. Higher Hb levels were significantly associated with the probability of a utility score of ≥0.8 (p<0.0001). **CONCLUSIONS:** In this large population