

## P1714 HEALTHCARE RESOURCE UTILIZATION IN PATIENTS WITH LIGHT CHAIN AMYLOIDOSIS IN EUROPE

**Topic:** 35. Quality of life, palliative care, ethics and health economics

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**Background:** Systemic light chain (AL) amyloidosis is a rare plasma cell disease characterized by the accumulation of amyloid fibrils in various tissues and organs throughout the body, leading to multiorgan dysfunction. Beyond anti-clonal therapy, this disease treatment requires multidisciplinary teams and resources to manage its multiorgan complications, however, the burden of the disease for health care system and health care resource use (HCRU) remain underexplored.

**Aims:** To assess the HCRU in patients (pts) with AL amyloidosis across several European countries.

**Methods:** EMN23, a retrospective, multicenter study, investigated the demographic and clinical characteristics, the treatment pathways, and the HCRU of adult pts with AL amyloidosis who initiated treatment in 2004–2018 from 13 sites across 10 European countries. The HCRU analysis on the 2011–2018 period included patient data from 7 countries (Greece, France, the Netherlands, Portugal, the Czech Republic, Austria, and Spain [only dialysis information available]). Patients who participated in clinical trials at any line were excluded. HCRU measures included hospitalizations, imaging examinations, adverse events of special interest (AESIs; Intensive Care Unit admission, Heart Failure, Need for pacemaker, Infections requiring hospitalization, Peripheral neuropathy), and dialysis information.

**Results:** In 2011–2018, HCRU data and safety information were available for 462 pts (531 pts. with dialysis data). Most (63.4%) pts were males ≥65 years old (52.4%). At baseline, 41.6% (192/462) pts had 1 organ involved, 36.1% (167/462), had 2 and 20.8% (96/462) pts had ≥3 organs involved. The proportions of pts per the Eastern Cooperative Oncology Group (ECOG) status of 0, 1, 2, and 3 were 20.8% (96/462), 24.9% (115/462), 19.0% (88/462), and 7.8% (36/472), respectively; (not reported for 26.4% (122/462) pts). At diagnosis, Mayo 2004/European cardiac stages I, II, IIIa, and IIIb distribution was 75 (16.2%), 126 (27.3%), 127 (27.5%), and 59 (12.8%), respectively (Table 1) and was unknown for 75 (16.2%) pts. In 2011–2018, the number of pts with ≥1 hospitalization was 280 (60.6%). Duration of hospitalization is longer for patients stage IIIa and IIIb compared to lower cardiac stages (Table). Ultrasound and X-rays were the most common imaging exams across most cardiac stages (Stage I: 45.3%; Stage II: 42.1%, Stage IIIa: 47.2%; Stage IIIb: 39.0%), but MRIs and scintigraphy were also used commonly (see Table). At first-line, the

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proportions of pts treated with immunomodulatory (IMiD)-based regimens, bortezomib-based regimens, chemotherapy, and autologous stem cell transplantation were 2.2% (10/462), 62.3% (288/462), 12.6% (58/426) and 11.5% (53/462), respectively. The proportions of pts with  $\geq 1$  SAE and  $\geq 1$  AESI were 49.4% (228/462) and 28.8% (133/462), respectively. Infectious complication and heart failure were common reasons for hospitalization, with, half of the AESI records for cardiac stage IIIb patients being cardiac failure and  $\sim 1/10$  AESI records being ICU admissions. A median number of 70.5-139.6 dialyses per pt per year were received by 70 (13.2%) pts, across cardiac stages.

## Image:

	Mayo2004/European cardiac staging				
	Stage I	Stage II	Stage IIIa	Stage IIIb	Unknown
Patients with available data	75	126	127	59	75
<b>Hospitalizations</b>					
Patients with $\geq 1$ hospitalization, n	46	79	69	42	44
Hospitalizations/patient/year, n					
Patients, n	46	79	69	42	44
Median	0.7	0.9	1.0	1.0	1.0
Q1-Q3	0.3-1.2	0.5-1.4	0.8-2.0	1.0-1.9	0.4-1.5
<b>Duration of hospitalizations/patient/year, days</b>					
Patients, n	43	73	64	39	42
Median	5.7	8.5	14.5	20	12.1
Q1-Q3	2.5-15.0	2.2-18.3	4.0-31.0	11.0-37.0	3.7-22.0
<b>AESI information</b>					
Patients with $\geq 1$ AESI, n	26 (34.7)	40 (31.8)	33 (26.0)	13 (22.0)	21 (28.0)
AESI records, n	48	92	87	31	40
<b>SOC terms, n (%)*</b>					
Infections requiring hospitalization	14 (29.2)	27 (29.4)	30 (34.5)	7 (22.6)	13 (32.5)
Peripheral neuropathy	25 (52.1)	32 (34.8)	14 (16.1)	5 (16.1)	14 (35.0)
Heart failure	4 (8.3)	22 (23.9)	26 (29.9)	16 (51.6)	11 (27.5)
ICU admittance	6 (12.5)	5 (5.4)	7 (8.1)	3 (9.7)	3 (7.5)
Need for pacemaker	2 (4.2)	6 (6.5)	10 (11.5)	1 (3.2)	1 (2.5)
<b>Imaging exams, n (%)</b>					
X-ray	34 (45.3)	53 (42.1)	60 (47.2)	23 (39.0)	32 (42.7)
Magnetic resonance imaging	26 (34.7)	32 (25.4)	32 (25.2)	7 (11.9)	23 (30.7)
PET-CT scan	18 (24.0)	22 (17.5)	19 (15.0)	3 (5.1)	10 (13.3)
CT scan	22 (29.3)	29 (23.0)	30 (23.6)	11 (18.6)	24 (32.0)
Ultrasound	47 (62.7)	65 (51.6)	60 (47.2)	24 (40.7)	27 (36.0)
Nuclear medicine	8 (10.7)	24 (19.1)	22 (17.3)	12 (20.3)	4 (5.3)
Endoscopy	2 (2.7)	3 (2.4)	3 (2.4)	1 (1.7)	2 (2.7)
Other	-	-	1 (0.8)	1 (1.7)	1 (1.3)
<b>Dialysis information</b>					
Patients with available information, n	99	143	149	62	78
Dialyses/patient/year, n					
Patients, n (%)	10 (10.1)	21 (14.7)	20 (13.4)	8 (12.9)	11 (14.1)
Median	139.6	125.0	129.5	70.5	94.6
Q1-Q3	33.5-156.5	71.9-156.4	37.0-156.6	18.5-122.6	4.9-194.5

AESI, adverse events of special interest; ICU, intensive care unit; n, number of patients or records; PET-CT, positron emission tomography-computed tomography; SOC, system organ class; \*, number refers to number on AESI record and percentages are calculated using as denominator the number of AESIs for each Mayo2004/European cardiac stage.

**Summary/Conclusion:** The current analysis shows that in the recent years (post-2010), the burden of HCRU for pts with AL Amyloidosis was considerable, across all Mayo2004/European cardiac stages. The main burdensome components were hospitalizations and dialysis. A cost-of-illness study from the healthcare perspective will be conducted, to reveal the cost burden on the healthcare system of pts with AL amyloidosis in Europe.

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