Background: AML is a cluster of hematopoietic syndromes characterized by proliferation of immature myeloid cells in the bone marrow resulting in cytopenias. While prognostic indices may predict therapy response, no consensus exists regarding optimal therapy for elderly AML pts.

Methods: Newly diagnosed AML pts aged ≥60 years were retrospectively identified from a large US electronic medical record from 1/1/2008-7/31/2015. AML diagnosis included ≥1 inpatient or ≥2 outpatient claims with an AML ICD-9/10 code (the first record was the index date). First-line therapy (1LT) was defined as an AML-specific treatment initiated on/after the index date; a switch in agent triggered second-line therapy (2LT). Pts were followed until death, end of follow-up, or end of study (9/31/2015).

Results: Of 704 eligible AML pts, 398 received 1LT. Mean age was 70.6 years, 55.5% were male, and 19.1% had a Charlson comorbidity index score of ≥2. 1LT regimens included cytarabine-based induction 1LT (C-IC) in 54.3% (n = 216, combined with an anthracycline [ie, 7+3 or 7+3-like] in 87.5% of these), hypomethylating agents (HMAs) (azacitidine and decitabine) in 30.2% (n = 110), other cytotoxic IC (other-IC) in 8.5% (n = 34), and sorafenib in 1.0% (n = 4). 44 pts (11.1%) had record of stem cell transplant during 1LT for AML. A higher proportion of pts who received HMAs (67.3%) were ≥75 years of age compared to those receiving C-IC or other-IC (18.5%; 23.5%). Overall, 84 pts (23%) received 2LT, with C-IC still predominating (n = 37; 44.9%), followed by HMAs (n = 31; 36.9%) and other-IC (n = 15; 17.9%). At a median follow-up of 8.5 months (interquartile range: 3.2, 20.1) for all pts with 1LT, 59.6% (n = 237) had died. During follow-up for all treated pts, 78.6% (n = 313) received erythrocyte or platelet transfusion support with a mean number of unique transfusion service dates per patient of 12.3 (standard deviation: 15.9), and 38.9% (n = 155) received colony-stimulating factors.

Conclusions: Overall, the majority of AML pts who are ≥60 years of age are treated with C-IC. Age ≥75 years may influence choice of 1LT between HMAs vs IC. More research is needed to evaluate other factors in therapy selection and prognosis for the elderly AML population.

Legal entity responsible for the study: Takeda Pharmaceuticals

Funding: Takeda Pharmaceuticals

Disclosure: J.A. Bell, A. Galaznik, D.V. Faller: Employment by and stock ownership in Takeda Pharmaceuticals. E. Farrelly, M. Pollack, A. Raju, A. Ogbonnaya, M. Eaddy: Employee at Xcenda, a healthcare consulting firm that received funding from Takeda Pharmaceuticals to conduct this study. R. Fram: Consultant for Takeda Pharmaceuticals.

Volume 28 | Supplement 5 | September 2017
doi:10.1093/annonc/mdx373 | 361