The Impact of Congress Abstracts on Overall Publications in Acute Myeloid Leukemia (AML): Results of a Systematic Literature Review

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Background

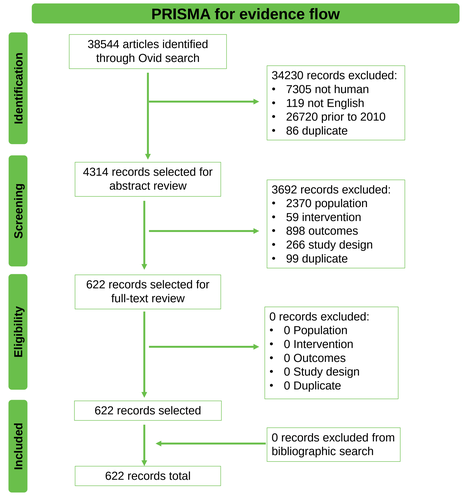
- Acute myeloid leukemia (AML) is a heterogeneous malignancy characterized by the abnormal proliferation of immature myeloid cells that can lead to bone marrow failure.[1]
- Within rapidly evolving therapeutic areas such as AML, traditional systematic literature reviews (SLRs) mainly consist of indexed publications; they are rarely updated, primarily relying on full-text articles to support findings.
- Congress abstracts often represent an expedient route to disseminate preliminary or updated trial results, as well as real-world datasets.

Objective: The objective of this study was to describe recent trends in congress abstract publications within AML through a systematic literature review.

Methods

- An SLR was conducted following the Preferred Reporting Item for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. (**Figure 1**)
- The SLR was a review of all relevant interventional and real-world evidence (RWE) studies presented at congresses describing efficacy/effectiveness and safety, as well as studies reporting health-related quality of life (HRQoL) and economic outcomes in AML.
- The scope of this study was defined in terms of the Patient population, Intervention, Comparators, Outcome measures, and Study design (PICOS) criteria. (**Table 1**)
- The searches were conducted on January 11, 2021, to identify relevant conference abstracts published between January 2019 and December 2020 in biomedical databases through the Ovid platform (EMBASE, MEDLINE, Cochrane).

Figure 1.



Abbreviations: ASBMT, American Society for Blood and Marrow Transplantation; ASCO, Annual Meeting of the American Society of Clinical Oncology; ASH, Annual Meeting of the American Society of Hematology; BSH, Annual Scientific Meeting of the British Society for Hematology; CIBMTR, Center for International Blood & Marrow Transplant Research; EMBT, Annual Meeting of the European Society for Blood and Marrow Transplantation; EHA, Congress of the European Hematology Association; HRQol, health-related quality of life; IMW, International Myeloma Workshop; PRISMA, Preferred Reporting Item for Systematic Reviews and Meta-Analyses; PRO, patient-reported outcome; QALY, quality-adjusted life-year; RCT, randomized control trial; RWE, real-world evidence; SIE, The Italian Society of Hematology National Congress; TCT: Transplantation & Cellular Therapy Meetings of the ASBMT and the CIBMTR.

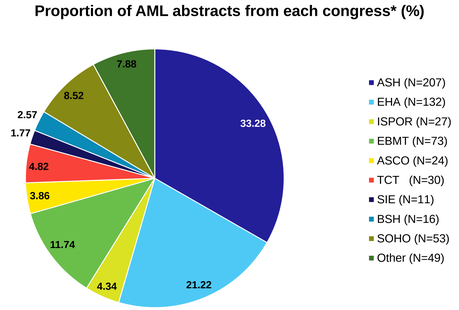
Table 1: PICOS criteria for SLR

PICOS	
Patient population	Patients diagnosed with AML
	Patients diagnosed with non-intensive chemotherapy AML
	Patients diagnosed with intensive chemotherapy AML
	Patients diagnosed newly diagnosed AML
	Patients diagnosed relapsed/refractory AML
Intervention and Comparators	Any treatments or managements for AML
	No treatment for disease status studies
Outcome measures	Any efficacy or safety outcomes
	HRQoL
	Any patient-reported outcomes including caregivers
	Utilities/disutilities /QALYs for health states or adverse events
	Economic evaluation
	Budget impact analysis
	Burden of illness studies
	Measures of costs or resource use
	Epidemiologic studies
	Treatment patterns
Study design	RCTs (including extension studies)
	Single-arm interventional trials
	Sub-group analyses of previously published studies
	Reports of randomized clinical trials assessing HRQoL
	Development and/or validation of HRQoL measures
	Observational studies measuring PROs
	Retrospective chart audits and database analyses reporting PROs
	Patient surveys reporting PROs
	Reports of mapping exercises for any outcome measure to utility
	Reports of utility elicitation or validation exercises
	Reports of economic evaluations using utility measures elicited during the studies
	Budget impact analyses
	Resource use studies
	Cost/economic burden-of-illness studies
	Cost-benefit, cost-effectiveness, cost-minimization, or cost-utility analyses
	Cost analyses
	RWE studies
	Systematic reviews and meta-analyses (for cross-checking only)
	Pooled analyses (for cross-checking only)

Results

- In the past two years, of a total of 4312 citations published within AML, 622 congress abstracts were selected for data extraction.
- They were most frequently presented at ASH (33.3%), EHA (21.2%), EBMT (11.7%), SOHO (8.5%), TCT (4.8%), ISPOR (4.3%), ASCO (3.9%), BSH (2.57%), SIE (1.8%), and other congresses (7.9%).
- Three times as many abstracts were published in 2019 (75.1%) compared to 2020 (24.9%), likely due to the COVID-19 pandemic, as congresses were either cancelled or shifted to virtual meetings.
- Most of the selected publications (63.5%) were real-world studies, followed by interventional studies (25.9%) reporting the effectiveness or efficacy and/or safety outcomes.
- Of relevant congress abstracts, 6.4% and 4.2% reported economic and HRQoL outcomes, respectively.
- Studies were most commonly conducted in the United States (39.4%), and 5.3% were multinational.

Results: Figure 2.



*Congresses shown had 10 or more citations.

Results: Figure 3.

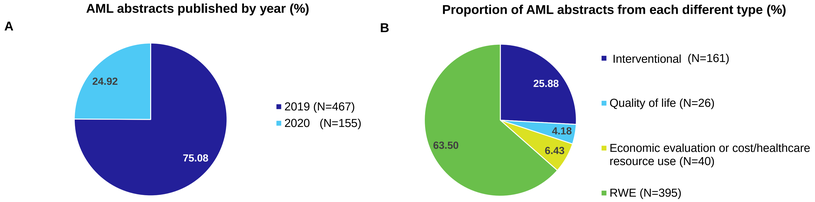


Table 2. Countries represented in AML abstracts for the years 2019 and 2020

Country	Percentage (%) of abstracts from each country
Canada	2.4
China	5.1
France	3.9
Germany	3.2
Italy	5.6
Japan	1.5
Spain	3.2
United Kingdom	2.9
United States	39.4
Multinational	5.3
Other	27.5

Conclusions and limitations

Conclusion: Congress abstracts are an important source of evidence within the dynamic landscape of AML, notably in the real-world setting. Almost half of all identified congress abstracts within AML were presented at ASH, EHA, and EBMT, demonstrating the need for these congresses to be actively monitored.

Limitations:

- Selected abstracts were limited to 2019 and 2020 and to those published in the English language.
- The quality of studies presented in the included abstracts was not evaluated.
- The SLR was limited to abstracts and no full texts were considered due to the nature of the project.

References

1. **Saultz JN, Garzon R. Acute Myeloid Leukemia: A Concise Review. J Clin Med. 2016; 5(3). https://doi.org/10.3390/jcm5030033**