Reviewer's report

**Title:** Clinical Symptoms and Chemotherapy Completion in Elderly Patients with Primarily Diagnosed Acute Leukemia: A Retrospective Comparison Study with a Younger Cohort

**Version:** 1  **Date:** 16 December 2010

**Reviewer:** Gabriela Motyckova

**Reviewer's report:**

The authors Hu et al. have focused on a very important patient population of older leukemia patients compared to younger patients to investigate characteristics of leukemia patients, their responses to chemotherapy and reasons for discontinuing treatment.

They performed a retrospective analysis of acute leukemia patients including AML and ALL and selected two patient populations to compare, older and younger patients.

Older patients with acute leukemia may have limited treatment options due to comorbidities and intrinsic disease resistance, therefore improved understanding of patient's or family's reasons to discontinue treatment are important to improve patient care and outcomes.

**Major compulsory revisions:**

1. The authors describe the project and analysis in terms of acute leukemia (AL) which include AML and ALL. It would be helpful to explain AL as containing AML and ALL in Background section, third paragraph.

2. Moreover, it is important to separate the two diseases (AML and ALL) and make conclusions about outcomes separately in AML and ALL comparing the older and younger patient population, including the statistical analysis.

**Table 2**

3. The numbers for younger group do not add up. N=183 but only 67+16 patients in the table. Please clarify.

4. Please focus discussion on AML patients older vs. younger, and ALL patients older vs. younger. Recommend statistical analysis for AML separately from ALL.

**Minor Essential revisions**

1. Abstract

   Background: The phrase “No systemic study was reported on this yet” needs further clarification/change. Consider mentioning prior studies identifying patient variables important in response to chemotherapy, predictors of survival, and then
lead into the questions about the importance of studying the reasons of discontinuing treatment.

2. The of the term abandon could be changed to discontinue throughout the manuscript

Background
3. A definition of elderly would be helpful for reader (e.g. age 60 or 65 or older) in the introduction.

4. First paragraph
Suggest changing “when cancer occurs in older adults, the patients tend to have more comorbidities.
Change “congestive” obstructive pulmonary disease to “chronic” obstructive pulmonary disease

5. Fourth paragraph
The term younger control is a difficult concept. The younger patient population is not an ideal control for older patient population. Perhaps the authors could word the question as comparisons of clinical features and characteristics of older versus younger acute leukemia patients to determine the rate and causes for patient discontinuation of treatment

Patients section
Single paragraph
6. Change to medical record data “were”
7. Inclusion criteria, list would be helpful in this section upfront
Add …..with the diagnostic criteria of acute leukemia “(AML and ALL)”
In the text address problems with using younger patients as “controls” to older patients.

Methods
First paragraph
8. Hemogram and myelogram are not commonly used terms. Consider using complete blood count with white blood cell differential if that is what the authors are referring to in the text

Classification of Disease and Symptoms
First paragraph
9. The terms hematology and degree of proliferation are not clear. Do the authors refer to complete blood count and bone marrow cellularity and blast percentage?
10. The value for platelets appears to be listed incorrectly, did authors mean 10?
11. The term extremely active bone marrow proliferation needs further explanation. Do authors mean blast percentage?
12. Add comparison to what the results are compared to younger patients in the text in the end of the first paragraph.

Remission Status and Complications
First paragraph
13. Consider changing first sentence to Table 3 shows data regarding chemotherapy discontinuation.....
14. Space is missing between chemotherapy and cycle twice in the first paragraph
15. Write out second instead of 2nd
16. Total of 69 (add of)
17. No “the” before chemotherapy
18. The word significant is misspelled
19. Consider discontinuation instead of dropout
20. Consider using “As far as complications” instead of “In the case of complications”.....
21. When listing percentages older vs. younger, please state in that the sentence “compared to younger patients” or any other indication what the comparison is.
22. Please explain what you mean by remission status. Complete remission and partial remission?

Causes of Chemotherapy Abandonment
23. Consider using discontinuation instead of abandonment
24. Delete hyphen between one-half
25. Change Withdrawal or stoppage to discontinuation
26. Please explain what the term severe leukemia means.
27. In a sentence with ... in part because they are not offered aggressive therapies in clinical trials,.....
Consider adding often or usually, since some elderly patients do participate in chemotherapy trials.
28. As the age of acute leukemia patients increases (instead of the patient)

Discussion
29. Please refer to table numbers in the text when making statements about the differences in the two groups in the discussion to make it easier for reader to navigate though the results.

Discussion
Second paragraph
30. …supportive care without chance of remission is the only option...
Please consider revising this point to include options for low intensity chemotherapy or investigational agents in additional to supportive care.

Discussion

Third paragraph
31. “Hemogram”, do authors mean complete blood count
32. “Is necessary” term could be changed to “is important”
33. Insert patients “with platelets” lower 10x109/L
34. Degree of bone marrow hyperplasia..... do authors mean blast percentage or cellularity?

Fourth paragraph
35. Insert…. Accounting for 48.63% “of cases”.

Fifth paragraph
36. Add literature reference when stating “This was consistent with most reports in the literature
37. What do authors mean by elderly patients have less immunity? Please clarify.

Sixth paragraph Discontinued instead of abandoned
38. The section starting with…The primary reason elderly patients abandoned chemotherapy was due to..... and ending…… coronary heart disease, and lung infection…… appears redundant and is repeated one page later. Would delete this section in the sixth paragraph.

Seventh paragraph
39. Taiwan is mentioned. Prior methods mentioned China, please clarify.

Ninth paragraph
40. Consider changing sentence to
The percentage of elderly patients who discontinued chemotherapy was significantly higher then in younger patients.

Eleventh paragraph
41. Please clarify the statement “Acute monocytic leukemia if the most common acute leukemia” (perhaps mention most common type of AML?)
42. Please add literature references to statements about disease onset, and statements about low proliferative activity.
43. Regimen selection “with attention” to potential toxicity....

Table 1
44. Change drinking to alcohol use
45. Please clarify “history of carcinoma”, does that mean any prior malignancy or
malignancy treatment or carcinoma only?

Table 2
46. Tumor infiltration, please explain what the term means
47. Bone marrow proliferation, please explain

Table 3
48. Please explain the terms uncompleted and completed, do authors mean complete and partial remission?
49. Liver is misspelled
50. Fungal infection instead of fungus

Table 4
51. Please explain the terms uncompleted and completed, do authors mean complete and partial remission?
52. Consider alcohol use instead of drinking (also how many drinks a day…or any measure)

Table 5
53. Please clarify the term severe leukemia

Discretionary revisions
Title page (page 1)
insert periods after M.S. and M.D.
insert space P.R. China
delete extra spaces before Fujian

Abstract
Methods
-change “affiliated to” to “affiliated with”

Abstract
Results
-insert “age” before 60 and older
change to “and intolerance to adverse reactions to chemotherapy”

Keywords
Capitalize key words consistently

Background
Second paragraph
Change to ….., and rare early manifestations.
Background
Third paragraph
Change compliance to adherence

Background
Fourth paragraph
Consider changing first sentence to …..influencing treatment of AL in the elderly.

Patients and Methods section
First paragraph
Consider insertion: consent was required “per Ethics Committee Decision.
Delete extra space between Fujian and Medical University

Methods
First paragraph
Delete extra spaces before and after commas in the paragraph

Results
Characteristics and presentation
The authors mention that the younger patients had a greater incidence of Hepatitis B. Could they offer an explanation if one is known?

Discussion
Ninth paragraph
Consider changing compliance to adherence

Table 2
Lower limb edema, usually referred to as lower extremity edema
Muscle soreness usually referred to as myalgias
Platelets (plural)

Table 5
Consider using “Could not tolerate adverse effects”

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published
Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests.