We sincerely thank the editor and all reviewers for their valuable feedback that we have used to improve the quality of our manuscript. The reviewer comments are laid out below in italicized font and specific concerns have been numbered. Our response is given in normal font and changes/additions to the manuscript are highlighted with yellow color.

Reviewer #1:

1. *The authors did not mention if they conducted immunohistochemical studies on B-cell lines including CD20 as an example to show on histopathological level the case presented is T cell lymphoma.*

Thanks for your good advice. Actually we have done immunohistochemical markers of B-cell lines as usual including CD20, PAX5,CD10,BCL6. We added these markers in paper page 8, line 1. They were all negative. Because the limited number of figures, we did not show them. We focused more on the expression of ALK, CD30, Ki67 as figures showed.

2. *No control slides were shown either for staining purposes or disease purposes.*

As you recommended, figures of CD20 and PAX5 to distinguish B cell lymphoma were added for diagnosis purpose in figure 1.

3. *Figures are not well prepared and arrows should be integrated with figures.*

We are sorry for that although we have tried our best to exhibit these figures. We revised the figures more carefully including arrows added.

4. *Figures are not well inegrated in the text.*

Thanks for your kind suggestion. we integrated the figures carefully in the text. Page 6, line 3 for example.

5. *Language needs better editing.*

We tried our best to improve the manuscript and made some changes to the manuscript. These changes will not influence the content and framework of the paper. And here we did not list the changes but marked in yellow in the revised paper. And we had International Science Editing edited this manuscript again with a editing certification.

Reviewer #2:

1. *none of the figures are mentioned in the text! This requires correction.*

Thanks for your kind advice. We corrected this mistake with figures integrated in the text. Page 4, line 3 for example. This is so important to explain our results and make the idea reached to the readers. We are grateful you pointed it out.

2. *Four figures are far too many for such a brief report. Recommend combining to make one figure out of current Figure 1A, B and F; Figure 2 2A, B, and F; Figure 3A (can say ALK and IRF4 staining second relapse was similar to previous relapse); and Figure 4A and E.*

Thanks for your good advice to make the report more concise. We integrated the four figures into two figures finally. Figures 1 and 2 in old version were remained. To show the important changes, ki67 and IRF4 were remained in Figure 3 and the others were deleted.

3. Page 4, line 4: Recommend deleting "and CT scan" as this is a histologic diagnosis.

Thanks for your advice. We know one of the ways to differentiate the primary cutaneous ALCL from systemic ALCL with skin involved, was CT scan besides the body examination. This was our original meaning. Based on the point of histologic diagnosis and our mainly discussion in this paper, we deleted the "and CT scan" as your recommend.

4. Page 5, line 1: What do the authors mean by "medium texture"? This is unclear.

We intended to describe the sense of touching the tumor. "medium texture" may be not precise.To avoid confusing the readers, we deleted it without influence on the description of the nodule.

5. Page 5, line 11: Please provide the upper limit of normal for LDH at your institution.

We added the upper limit of normal for LDH at our institution.

6. Page 6, line 2: Do the authors mean BEAM preparative regimen (progenitor is not the correct term)?

We corrected the "BEAM progenitor"into "BEAM preparative regimen" .

7. Page 6, lines 4 and 5: Recommend revising the text to something like "neutrophil engraftment occurred on Day +11 and platelet engraftment occurred on Day +14".

Thanks for your kind suggestion. We revised the text into "neutrophil engraftment occurred on Day +11 and platelet engraftment occurred on Day +14".

8. Page 6, lines 10-12: It is not clear whether the authors mean that the patient had been in remission for 12 months with the last follow up in November 2021, or if the patient relapsed after 12 months. The second half of the sentence is likewise unclear; does this mean that the literature reports that most patients relapse by 12 months?

We mean that the patient have been in remission for 12 months until the last follow up in November 2021. With HDAC inhibitor as maintenance therapy like we did, a reported patient of PTCL acquired 12 months of progression-free survival (PFS).

9. Page 7, top paragraph: The authors state in some places that they examined DUSP22 expression, and in others IRF4 rearrangement. The authors should clarify what was examined.

we examined IRF4 rearrangement by FISH. It can represent the DUSP22 rearrangement somehow. Because the location of DUSP22 is very close to IRF4 as known.

10.The authors should change C-ALCL to PC-ALCL in this paragraph to be consistent with the rest of the manuscript.

We changed C-ALCL to PC-ALCL in this paragraph for the consistency.

11.The last sentence in this paragraph should be revised; ALCL has been extensively studied and, as the authors note with reference 11, DUSP22-IRF4 rearrangements have been found to confer a favorable prognosis in ALK-negative ALCL. See also Parilla Castellar ER et al., Blood 2014, Pedersen MB et al., Blood 2017, and multiple other publications.

As you said, the effect of DUSP22-IRF4 rearrangements on prognosis was extensively studied in systemic ALCL. Some articles also studied the DUSP22-IRF4

rearrangements in primary cutaneous ALCL. However we know little about its influence on prognosis in primary cutaneous ALCL. The poor outcome of rearrangement of TP63 was reported in PC-ALCL, Vasmatzis G et al, Blood 2012.

12. The favorable prognosis of DUSP22-IRF4 rearrangement should be discussed in more details with additional references added.

Thanks for your advice. Page 7 line 13, we discussed the effect of DUSP22-IRF4 rearrangement on prognosis both in sALCL and PC-ALCL with added reference 11-14.

13. Question: Since this patient's ALCL was strongly CD30 positive, was treatment with brentuximab considered, especially in light of the treatment of the similar Bulgarian patient? This is a question readers will have, and should be discussed in the manuscript.

This is a very good question. The readers may also had such a question. We explained this in Page 4, line 15. A treatment with brentuximab was considered when this patient relapsed firstly. But he couldn't have it because the high price-about 20000 yuan for 50 mg in 2020 and he need 180 mg for each cycle of chemotherapy. This drug was not in health insurance until 1st Mar. 2023. When this patient relapsed second time, as we know his economic conditions and the overwhelming importance of ASCT, we advised him the HDAC inhibitor chidamide instead of brentuximab, combined with DICE regimen as induced treatment(Page 6, line 1). We offered another choice beyond brentuximab under this circumstance. This is different from the case reported by Popova TN with a treatment of brentuximab.

We tried our best to improve the manuscript and made some changes marked in yellow in revised paper which will not influence the content and framework of the paper. We appreciate for Editors/Reviewers' warm work earnestly, and hope the correction will meet with approval. Once again, thank you very much for your comments and suggestions.