

## To reviewer 1

1. Thank you very much. It has been modified as required
2. Thank you very much. It has been modified as required.
3. Thank you very much. It has been modified as required.
4. Thank you. Coherent optical tomography was not performed in this study.

We also found differences in ONSD and ONSD/ETD between survival and death groups in the same type of stroke population. See the following table for details.

Comparison of ONSD between the death group and the survival group

Stroke type	Death group	Survival group	T value	P -value
ACI	6.48	5.42	3.037	0.011
CH	6.24	5.66	2.751	0.014
SAH	6.30	6.20	0.162	0.873

ACI=acute cerebral infarction, CH=cerebral hemorrhage, SAH=subarachnoid hemorrhage.

Comparison of ONSD/ETD between the death group and the survival group

Stroke type	Death group	Survival group	T value	P -value
ACI	0.28	0.24	3.396	0.006
CH	0.28	0.25	3.300	0.02
SAH	0.28	0.28	-0.017	0.987

ACI=acute cerebral infarction, CH=cerebral hemorrhage, SAH=subarachnoid hemorrhage.

The reason there was no difference between the survival group and the death group was that only one person survived in the SAH group. See Table 1 of the article. So, we group them together.

We have added the baseline table and listed the causes of stroke in the baseline table. As shown in the table below.

Table 1 Baseline characteristics of Study Subjects

Characteristic	value
Age [years, mean (SD)]	59.72(16.72)
Gender, male [n (%)]	32 (47.76)
Height [cm, mean (SD)]	164.88 (7.93)
Body weight [kg, mean (SD)]	65.86(13.59)
BMI [mean (SD)]	23.62(4.43)
MAP [mean (SD)]	89.03(23.25)
Stroke type [n (%)]	6(4,7)
ACI	13(19.4)
CH	39(58.2)
SAH	15(22.4)
Stroke causes	
ACI [n (%)]	
Atherosclerosis	6 (46.2)
cardiogenic cerebral embolism	4 (30.8)
Moyamoya disease	3 (23.1)
CH [n (%)]	
Hypertension	24 (61.5)

Vascular malformation	13 (33.3)
Amyloidosis	2 (5.1)
SAH [n (%)]	
Aneurysm	11 (73.3)
Vascular malformation	4 (26.7)
Mortality [n (%)]	42(62.69)
ACI	10(76.92)
CH	18(46.2)
SAH	14(93.3)
Surgery [n (%)]	19(28.36)
ACI	3 (23%)
CH	15 (38%)
SAH	1 (7%)

SD=standard deviation, BMI=body mass index, MAP=mean arterial pressure, ACI=acute cerebral infarction, CH=cerebral hemorrhage, SAH=subarachnoid hemorrhage.

IRB number has provided in the methodology section.

5. Thank you very much for your valuable advice. We added Logistic regression to adjust for confounders. We found that ONSD and ONSD/ETD ratio were still significant after adjusting for confounding variables such as age, GCS score, MAP, stroke type, and surgery, but there are some confounding factors that may not be considered or unknown, which are limitations of the study. Since logistic regression was added, we deleted the correlation analysis.

In the study, the test level  $\alpha$  was set as 0.05 (two-sided), and the power  $1-\beta$  was set as 0.90. The required sample size was calculated when the ratio of death group and survival group was 2:1. After calculation, the sample size of the survival group was 16 cases, and the sample size of the death group was 32 cases. Our actual sample size exceeded the estimated one.

Because MedCalc software can directly compare the area under the two ROC curves and obtain the P value, while SPSS does not have this function.

ONSD and ONSD/ETD ratio were in line with normal distribution after normality test.

6. Thanks for your valuable advice, we have added the baseline table in the article. The description has been removed as you suggested.

In addition to ONSD and ONSD/ETD, there are still significant P values of other variables in the table, but clinically, they may be concomitant. For example, the lower the GCS score, the higher the risk of death. And their relationship has been confirmed. But the focus of this study is the predictive value of ONSD and ONSD/ETD ratio on the risk of death.

7. Sorry, I didn't get it. In the discussion section, we discuss ONSD and ONSD / ETD respectively.
8. Thank you for giving me an opportunity to supplement the rationality of ONSD / ETD and its relationship with intracranial pressure (see the introduction section). The ONSD of normal and sick individuals usually has a large variability, indicating a large SD range. In subsequent studies, it was found that ONSD is strongly correlated with ETD in healthy individuals. The ratio of ONSD to ETD, has a smaller variability, indicating a small SD range. Therefore, the ONSD/ETD ratio has a smaller variability and higher stability and may be more suitable for ICP monitoring. Actually, many studies have shown that the ONSD/ETD ratio is more related to ICP than ONSD. Therefore, it is reasonable to speculate that ONSD/ETD has a higher value in predicting the prognosis of neurological function. We have added this description in

the introduction section. This study is a preliminary study on the ONSD / ETD ratio to predict the prognosis of coma, but there have been some previous studies on the impact of this index on intracranial pressure.

To reviewer 2

We have added a background description in the introduction section