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|  | **The Hong Kong Neurosurgical Society Limited****& Hong Kong Neurosurgical Society****28th Annual Scientific Meeting****26th & 27th November 2021** |  |
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***ABSTRACT FORM***

Abstract submission deadline: 10th September 2021

Please submit your abstract by e-mail to hoht@ha.org.hk using the format as in the sample.

**<PRESENTING AUTHOR>**

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**Form of presentation desired:**

🗹 Oral presentation

□ Poster presentation

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□ Video presentation (submit an abstract with a video (≤ 3 minutes))

**Date:** \_19th September 2021\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **Title:**Does Repeat Resection for Recurrent Glioblastoma Improve Overall Survival? A Multi-Centre Review  **Authors:** Tiffany HP LAW­­1, Peter YM WOO1, Kelsey KY LEE1, Joyce SW CHOW2, LF LI3, Tony KT CHAN4, ST WONG5, Michael WY LEE6, Jenny KS Pu3, Danny TM CHAN7, KY CHAN1, WS POON7**Institution(s):**1Department of Neurosurgery, Kwong Wah Hospital, Hong Kong 2Department of Neurosurgery, Queen Elizabeth Hospital, Hong Kong3Division of Neurosurgery, Department of Surgery, Queen Mary Hospital, Hong Kong 4Department of Neurosurgery, Princess Margaret Hospital, Hong Kong 5Department of Neurosurgery, Tuen Mun Hospital, Hong Kong 6Department of Neurosurgery, Pamela Youde Nethersole Eastern Hospital, Hong Kong7Division of Neurosurgery, Department of Surgery, Prince of Wales Hospital, Hong Kong **Abstract:** ***Objective*:**To investigate whether repeat surgery for recurrent glioblastoma improve overall survival. ***Method:***This is a multi-centre, retrospective study of patients admitted to all of the Hong Kong Hospital Authority’s neurosurgical units for the treatment of glioblastoma (GBM) from 2006 to 2020. Data was broadly classified into patient-related: age, pre-operative Karnofsky Performance Scale (KPS); treatment-related: temozolomide concomitant chemoradiotherapy (CCRT) treatment, extent of resection and tumor-related: isocitrate dehydrogenase-1 (IDH-1) mutation and O(6)-methylguanine-DNA methyltransferase (*MGMT*) promoter methylation status. For patients with repeat resective surgery, overall survival (OS) was compared according to tumour size, location, extent of resection and the type of adjuvant oncologic treatment provided after the second resection. Patients that had cerebrospinal fluid surgery or other cranial procedures other than tumor resection were excluded. The NIH-Recurrent GBM Scale was determined patients that underwent further resection. ***Result:***A total of 1033 patients with a histological diagnosis of glioblastoma were analyzed. Predictors for overall survival (OS) benefit were age < 50 years (p<0.001), a pre-operative KPS of 80 to 100 (p<0.001), temozolomide CCRT treatment (p<0.001), gross or subtotal tumor resection (p=0.023), IDH-1 mutation (p<0.001) and methylated p*MGMT* (p<0.001). Other than age and IDH-1 mutation status, all the other factors were independent predictors for OS. 302 patients (29%) underwent repeat resective surgery and their median OS was 15.0 months (IQR: 8.4-26.4) compared to 9.4 months (IQR: 4.3-17.0) for those that underwent only a single procedure. Repeat resective surgery was noted to be an independent predictor with an adjusted OR of 0.70 (95% CI: 0.55-0.90). ***Conclusion:***Repeat resective surgery is a predictor for OS among GBM patients. Factors that contribute to better survival in this patient group will be discussed. |

(270 words)