

# Management of Glioblastoma at Safety-Net Hospitals

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## Introduction

- Safety-net hospitals (SNHs) provide disproportionate care for underserved patients.
- Prior studies have identified poor outcomes, increased costs, and reduced access to certain complex, elective surgeries at SNHs.
- However, it is unknown whether similar patterns exist for the management of glioblastoma (GBM). We sought to determine if patients treated at HBHs receive equitable care for GBM, and if safety-net burden status impacts post-treatment survival.

## Methods

- The National Cancer Database was queried for GBM patients diagnosed between 2010 and 2015.
- Safety-net burden was defined as the proportion of Medicaid and uninsured patients treated at each hospital, and stratified as low (LBH), medium (MBH), and highburden (HBH) hospitals.
- The impact of safety-net burden on the receipt of any treatment, trimodality therapy, gross total resection (GTR), radiation, or chemotherapy was investigated.
- Secondary outcomes included post-treatment 30-day mortality, 90-day mortality, and overall survival. Univariate and multivariable analyses were utilized.

# 268, 363 patients with Central Nervous System Cancers in the National Cancer Database 2010-2015 | Non-Glioblastoma Histology (n=208,112) | | Glioblastoma Patients Diagnosed Between 2010-2015 (n=60,251) | | Unknown Extent of Resection (n=7,688) | | Unknown Receipt of Fadiation (n=416) | | Unknown Receipt of Fadiation (n=416) | | Unknown Receipt of Temotherapy (n=2,113) | | Glioblastoma Patients Diagnosed Between 2010-2015 with Complete Treatment Information (n=50,586) | | Did Not Undergo Biopsy/Resection (n=10,504) | | Glioblastoma Patients Diagnosed Between 2010-2015 with Complete | | Treatment Information Who Underwent Biopsy/Resection (n=40,082)

# Results

- Overall, 40,082 GBM patients at 1,202 hospitals (352 LBHs, 553 MBHs, and 297 HBHs) were identified.
- Patients treated at HBHs were significantly less likely to receive trimodality therapy (OR=0.75, p<0.001), GTR (OR=0.84, p<0.001), radiation (OR=0.73, p<0.001), and chemotherapy (OR=0.78, p<0.001) than those treated at LBHs.
- Patients treated at HBHs had significantly increased 30-day (OR=1.25, p=0.031) and 90-day mortality (OR=1.24, p=0.001), and reduced overall survival (HR=1.05, p=0.039).

# Conclusions

Glioblastoma patients treated at SNHs are less likely to receive standard-of-care therapies and have increased short- and long-term mortality.

Additional research is needed to evaluate barriers to providing equitable care for GBM patients at SNHs.

# **Learning Objectives**

By the conclusion of this session, participants should be able to:

- 1) Describe the potential impact of safety net status on a hospital's ability to provide care,
- 2) Discuss, in small groups, disparities observed for glioblastoma patients treated at hospitals with different levels of safety-net burden, and
- 3) Consider potential mechanisms by which this disparity may be addressed at the hospital level and the public policy level.