ON-LINE FIG 1. Flowchart of screening process and summary of histopathologic examination of tissue specimen in the final cohort.

Initial screening (n=211)
HGG diagnosis with DSC-MRI
1/2007 to 6/2018

Assessed for eligibility (n=59)

Final cohort (n=47)

Histopathology Examination

Treatment effect (n=17)
- No tumor cells (n=4)
- Scattered infiltrating atypical cells (n=13)

Inclusion criteria
- ≥18 years of age
- Diagnosis of primary HGG initially treated with surgery, radiation, and temozolomide
- DSC-MRI with contrast-enhancing mass suspicious for recurrence
- Resection/biopsy of the recurrent contrast-enhancing mass
- Availability of tissue specimen for analysis

Excluded (n=12)
- Tissue specimen not available (n=11)
- Marked susceptibility on raw pre-contrast DSC images due to blood products (n=1)

Tumor (n=30)
ON-LINE FIG 2. Sample slides from the PowerPoint file given to each physician rater. The file consists of sample patients with histopathologically confirmed recurrent tumor (A) and treatment effect (B) and unknown patients, one of which is shown in C. Each case consists of 2 representative axial images of the contrast-enhancing mass on T1-weighted images, 2 corresponding axial images of the color FTB class map, a histogram with all voxels of the contrast-enhancing volume classified within each FTB class, and the corresponding FTB percentage values. Raters were asked to record whether they thought that the provided data represented treatment effect or tumor and whether they would hypothetically change treatment on the basis of the image data.