**VASARI MR Feature KEY**

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**Edited by John Freymann based on Review of Consistency across reads by Lori Dodd**

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| **Feature number** | **Name** | **Description** | **Options** |
| --- | --- | --- | --- |
| **F1** | **Tumor Location** | Location of lesion epicenter | 0 = -1 = Frontal2 =Temporal3=Insular4=Parietal5=Occipital6=Brainstem7=Cerebellum |
| **F2** | **Side of Tumor Epicenter** | Side of lesion epicenter | 0= -1=Right2=Center3=Left |
| **F4** | **Enhancement Quality**: | [None, Mild, Moderate, Marked]Qualitative degree of contrast enhancement is defined as having all or portions of the tumor that demonstrate significantly higher signal on the postcontrast T1W images compared to precontrast T1W images | 0= -1=None2=Mild/Minimal3=Marked/Avid |
| **F5**  | **Proportion Enhancing**: | [indeterminate, none (0%), <5%, 6-33%,  34-67%, 68-95%, >95%, All (100%)]. What proportion of the entire tumor is enhancing. (Assuming thatthe entire abnormality may be comprised of: (1) an enhancing component, (2) a non-enhancing component, (3) a necrotic component and (4) a edema component.) | 0= -1= n/a2=None (0%)3= <5%4= 6-33%5= 34-67%6= 68-95%7= >95%8=All (100%)9= Indeterminate |
| **F7**  | **Proportion Necrosis** | [indeterminate, none (0%), <5%, 6-33% , 34-67%, 68-95%, >95%, All (100%)]. (Necrosis is defined as a region within the tumor that does not enhance or shows markedly diminished enhancement, is high on T2W and proton density images, is low on T1W images, and has an irregular border). (Assumingthat the the entire abnormality may be comprised of: (1) an enhancing component, (2) a non-enhancing component, (3) a necrotic component and (4) a edemacomponent.) | 0= -1= n/a2=None (0%)3= <5%4= 6-33%5= 34-67%6= 68-95%7= >95%8=All (100%)9= Indeterminate |
| **F8** | **Cyst(s)** | Cysts are well defined, rounded, often eccentric regions of very bright T2W signal and low T1W signal essentially matching CSF signal intensity, with very thin, regular, smooth, nonenhancing or regularly enhancing walls, possibly with thin, regular, internal septations.</ | 0= -1= No2= Yes |
| **F9** | **Multifocal or Multicentric** | Multifocal is defined as having at least one region of tumor, either enhancing or nonenhancing, which is not contiguous with the dominant lesion and is outside the region of signal abnormality (edema) surrounding the dominant mass. This can be defined as those resulting from dissemination or growth by an established route, spread via commissural or other pathways, or via CSF channels or local metastases, whereas Multicentric are widely separated lesions in different lobes or different hemispheres that cannot be attributed to one of the previously mentioned pathways. Gliomatosis refers to generalized neoplastic transformation of the white matter ofmost of a hemisphere. | 0 = -1= n/a2= Multifocal3= Multicentric4= Gliomatosis  |
| **F11** | **Thickness of enhancing margin** | The scoring is not applicable if there is no contrast enhancement. If most of the enhancing rimIs thin, regular, and has homogenous enhancement the grade is thin. If most of the rim demonstrates nodular and/or thick enhancement, the grade is thick. If there is only solid enhancement and no rim, the grade is None. | 0= -1= n/a2= None3= Thin4= Thick |
| **F12** | **Definition of the enhancing margin** | The scoring is not applicable (NA) if there is no contrast enhancement. Assess if most of the outside margin of the enhancement is well defined or poorly defined. | 0= -1= n/a2= Well-defined3= Poorly-defined |
| **F14** | **Proportion of Edema** | [indeterminate, none (0%), <5%, 6-33%, 34-67%, 68-95%, >95%, All (100%)].What proportion of the entire abnormality is vasogenic edema? (Assuming that the the entire abnormality may be comprised of: (1) an enhancing component, (2) a non-enhancing component, (3) a necrotic component and (4) a edema component.) | 0= -1= n/a2=None (0%)3= <5%4= 6-33%5= 34-67%6= 68-95%7= >95%8=All (100%)9= Indeterminate |
| **F22** | **nCET tumor Crosses Midline:** | nCET crosses into contralateral hemisphere through white matter commissures (exclusive of herniated ipsilateral tissue). | **0= -****1= n/a (no nCET)****2= No****3= Yes** |
| **F23** | **Enhancing tumor Crosses Midline:** | Enhancing tissue crosses into contralateral hemisphere through white matter commisures (exclusive of herniated ipsilateral tissue). | **0= -****1= n/a****2= No****3= Yes** |
| **F24** | **Satellites:** | A satellite lesion is an area of enhancement within the region of signal abnormality surrounding the dominant lesion but not contiguous in any part with the major tumor mass. | **0= -****1= No****2= Yes** |
| **F25** | **Calvarial remodeling:** | Erosion of inner table of skull(possibly a secondary sign of slow growth) | **0= -****1= No****2= Yes** |