Decision-Making Capacity in a Patient with Frontal Anosodiaphoria
in the setting of Invasive Basal Cell Carcinoma

Ekaterina Protsenko[1], Vivek Datta, MD/MPH[2]

1 University of California San Francisco (UCSF) School of Medicine, 2 UCSF Department of Psychiatry

Decision-Making Capacity

- Assessment of patients' medical decision-making capacity (DMC) accounts for as much as 25% of all requests for psychiatric consultation in the hospital setting[1].
- Although the medicolegal criteria for DMC may vary slightly by jurisdiction, those outlined by **Appelbaum and Grisso** in 1998 are considered the gold standard[2] (**Table 1**).

4 Core Abilities Define Decision-Making Capacity	
	The ability to:
1	**Communicate a choice**
2	**Understand the relevant information**
3	**Appreciate the situation and the consequences of the choice for the patient's future**
4	**Reason through the treatment options**

Table 1: Appelbaum & Grisso Criteria for Decision-Making Capacity[2]

- These criteria reflect **a distinctly cognitive approach** to the assessment of DMC.
- Although there has historically been debate about how to adequately define medical DMC, such discussions have limited themselves to the cognitive realm. For instance, published works have explored whether the medical circumstance should be considered, such as the harms the patient might suffer if they refuse treatment[7,8].
- Very few publications have addressed the role of emotion in DMC, and **emotional appraisal is largely irrelevant in the accepted model.**

Frontal Anosodiaphoria

- **Anosodiaphoria**, or *la belle indifférence,* refers to a grossly abnormal indifference to one's illness despite clear evidence of significant disease or deficit.
- In contrast, **anosognosia** refers to a lack of awareness of one's disease, and poses clear obstacles to DMC.
- Meanwhile, anosodiaphoria has received little attention in the literature as an obstacle.

Case Report

A 71-year-old man presented to care with a 30-year history of a progressively enlarging facial skin lesion for which he delayed diagnosis despite **extensive invasion into his orbit and nasal bridge**. On biopsy one year prior, he was found to have basal cell carcinoma with invasion into the cranial vault. He was now admitted for **associated dural breakdown and cerebral abscess.**

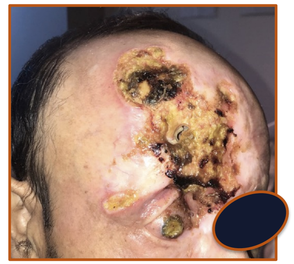
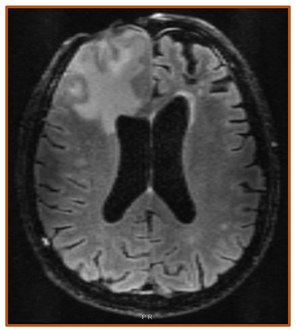


Figure 1: Photograph of Cancerous Lesion at the time of case presentation, approximately 2.5 years after initial diagnosis and 30+ following initial tumor growth per patient report.

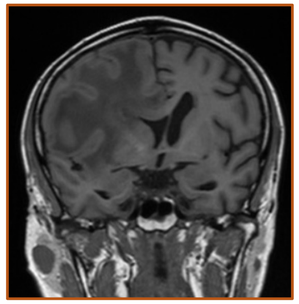


Psychiatry was consulted for **capacity assessment** in the setting of plans for surgical debridement. On assessment, he was found to satisfy the criteria for DMC, but was noted to be incongruently **jovial and unconcerned** with his clinical state.

The patient's presentation was felt to be consistent with **anosodiaphoria**, perhaps as a manifestation of a frontal lobe syndrome caused by right frontal intracerebral abscess and vasogenic edema. However, he was deemed to have DMC based on the widely accepted Appelbaum and Grisso criteria. He was **discharged without surgery** against medical advice, with an extended course of antibiotics.

Figure 2: T2 FLAIR with Contrast on Initial Presentation. Imaging suggests vasogenic edema in the right frontal white matter with a focal subarachnoid area of reduced diffusion concerning for infection/abscess.

The patient returned to inpatient care one month later with new left-sided weakness and urinary incontinence. He was found to have worsening cerebral edema complicated by **subfalcine herniation**, and was deemed **no longer a surgical candidate for debridement**. He was discharged with an extended course of IV antibiotics.



The patient transitioned to care at home, and experienced a complex course including wound infestation. The patient died approximately one year after initial presentation.

Figure 3: Coronal T1 on Representation. There is significant increase in widespread vasogenic edema with new subfalcine herniation. Significant interval growth of right frontal intracerebral abscess, indicating progressive intracranial infection superimposed on invasive tumor.

Discussion

Contemporary Neurobiology of Decision-Making

- **Emotional and cognitive functions** functions of the brain have canonically been thought to arise from distinct anatomic regions. However, recent advances in neuroscience suggest that emotional and cognitive processing are virtually inseparable in the human brain[3-5].
- This new neurobiological understanding has led some to **consider affect as a form of cognition** in its own right[5].

Implications for the Assessment of DMC

- Emotion has often been envisioned as a psychic function **at odds with cognition**. Consistent with this, emotion has also been implicitly regarded as an obstacle to medical decision-making.
- This bias manifests in the strictly cognitive criteria that have been accepted as the standard for DMC. In this framework, a judgment of incapacity is conditional **upon a failure to manipulate the facts of the medical situation**. Emotional appraisal plays little or no role.
- However, neuroscience suggests that the emotional and cognitive functions of the brain **appear to be deeply intertwined.**
- **Patients with anosodiaphoria** highlight the challenge that aberrant emotional processing presents to the assessment of DMC. While the patient clearly satisfied accepted criteria, it remains **unclear to what extent he fully appreciated** the circumstance. However, it is also unclear whether the patient's anosodiaphoria reflects a change due to the invasion of cancer into the cranial vault, or if it represents as stable baseline trait.
- Given the complexities of both the science and clinical practice, we feel that **new emotion-based criteria should be operationalized and included** in guidelines for the assessment of DMC.

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