oligoclonal IgG in patients with multiple sclerosis is probably not directed against myelin antigens.

The pursuit of the intrathecal B-cell response in multiple sclerosis has been ongoing for decades, but important secrets like specificity and significance remain hidden. The reports of clinical responses to treatment aimed at B cells indicate the significance of this task. The discovery of crosstalk between T cells and B cells mediated by variable regions on IgG draws attention to the complexity of the interplay between the immune and nervous systems, where depletion of one player is likely to affect the other. Although this idea might oppose the proposed mechanism by which B-cell depletion works,[2] it lends support to the need for an individualised approach to treat patients with multiple sclerosis.

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We have no conflicts of interest.

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The neuroanatomy of very remote memory

In a recent publication,[1] we reported that two patients with substantial memory impairment and extensive bilateral medial temporal lobe lesions, as well as three more modestly impaired patients with limited (hippocampal) damage, recalled detailed autobiographical memories from their early life as well as did healthy individuals. Recollection was impaired only in patients with damage that also affected the lateral temporal or frontal lobes. This work was summarised in Newsdesk in the August, 2005, issue of *The Lancet Neurology*.[2] A comment on this work appeared in the December, 2005, issue.[3]

Unaccountably, the performance of our two most severely amnesic patients is described as "only mildly impaired" on standard memory tests. In fact, these two patients (EP and GP) are among the most profoundly impaired patients ever characterised. They score at chance on standard tests of recognition, they have shown virtually no learning of factual information since they became amnesic, and during repeated testing over many weeks do not recognise that they have been tested before.[4]

Their large lesions of nearly the whole medial temporal lobe have been described in enormous detail.[1] Accordingly, when one recognises that EP and GP obtain normal scores on a standard test of remote autobiographical memory (the autobiographical memory interview),[5] it should be apparent that to do worse than these two patients on the same test implies that damage is present beyond the medial temporal lobe.

The Newsdesk article also contains an important misunderstanding about the implications of our work. Our work does not imply that "only recent autobiographical memories should be impaired" after medial-temporal-lobe lesions. We show only that very remote memories are intact from early life. Patients like EP and GP have decades of retrograde amnesia.

Cipolotti and Moscovitch consider two patients (VC and NT), who they suppose make a case that hippocampal damage itself is sufficient to impair remote autobiographical memory. But NT had a right temporal lobectomy for epilepsy and had consequent damage to right temporal cortex, beyond the medial temporal lobe. Moreover, NT's autobiographical memory was assessed only anecdotally and, so far as we can determine from

published reports, not at all for her life before the age of 30 years.[6] The fact that VC does very poorly on the autobiographical-memory interview, whereas EP and GP do very well, as do the six hippocampal patients we have tested,[5] raises strong doubts that VC's damage could be limited to the hippocampus. Additionally, VC's amnesia, as described by test scores and by his reported failure to remember the recent death of his wife,[7] is far more severe than that we have found in patients with hippocampal damage, including two patients whose nearly complete hippocampal damage was documented by neurohistology.[8]

In summary, our work provides conclusive evidence that the capacity for remote autobiographical recollections is independent of the medial-temporal-lobe structures important for declarative memory. Very remote autobiographical memory is impaired after more extensive damage that includes the lateral temporal and frontal lobes.

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We have no conflicts of interest.

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Erratum

Geert Jan Biessels, Salka Staekenborg, Eric Brunner, Carol Brayne, Philip Scheltens. Risk of dementia in diabetes mellitus: a systematic review. Lancet Neurol *2005*; **5:** *65–74.* On page 70, under the heading "Changes in insulin and amyloid metabolism", line 19, reference 88 should be reference 82 and the sentence should read "Within the brain, insulin is a modulator of food intake and energy homoeostasis,[82] . . ." All references thereafter should be minus one—ie, references 89–95 should be 88–94 in the text and in the reference list.