IDEAS becoming reality on the roadmap for biomarker validation in Alzheimer's disease

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Abstract:
Amyloid PET has made the dream of dementia specialists come true, enabling visualisation in vivo and with high accuracy of the amyloid deposits that Alois Alzheimer described as senile plaques more than a century ago. Until recently, such visualisation could only be appreciated post mortem—far too late to be of any practical use. As is often the case, enthusiasm on this technological advancement was followed by more sobering observations. A large proportion (20–30%) of people aged 65 years and older who have intact cognitive function have a positive amyloid PET scan, making the exam more suitable to rule out than to rule in the disease (ie, a negative amyloid PET rules out Alzheimer's disease pathology as the cause of cognitive impairment, but a positive scan does not imply Alzheimer's disease pathology as the underlying factor). Additionally, amyloid is just one of two pathophysiological markers of Alzheimer's disease, the other being tau, which is more closely associated with symptom onset and for which PET tracers are emerging. In this apparently grim scenario, how can a diagnostic test of brain amyloidosis improve clinical outcomes?

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