Glioblastoma WHO grade 4

IDH-wildtype - MGMT methylated - suspected recurrence - DC-vaccine evidence discussion

MUSTER-05 - 54 years - male - ECOG 1

SYNTHETIC SAMPLE CASE - for platform demonstration only. No real person, no documented treatment success and no individual treatment instruction.

Executive Summary

This sample report demonstrates how Medical Evidence AI converts clinical baseline information, pathology, molecular biomarkers, organ function and supportive immune/tumour-dynamics data into a structured evidence discussion. Validated treatment-relevant findings are explicitly separated from exploratory additional findings.

Core clinical question

How should suspected recurrence be distinguished from treatment effect, and how should standard recurrent-disease options and dendritic-cell vaccine evidence be presented without overstating certainty?

Clinical Review Required

Medical Evidence AI provides structured evidence synthesis as a basis for professional discussion. This sample report is not a diagnosis, prescription or individual treatment instruction. Treatment decisions remain with the qualified treating team/tumour board. Current approvals, guidelines and trial availability must be checked for every live case.

1. Clinical course & structured diagnostics

Glioblastoma WHO grade 4

Clinical course

• Maximal safe resection.

• Radiotherapy with concomitant and adjuvant temozolomide.

• Nine months later: new contrast-enhancing lesion; progression versus treatment effect remains uncertain.

Diagnostics & biomarkers

• Integrated neuropathology: glioblastoma, IDH-wildtype; MGMT promoter methylated.

• MRI with perfusion/diffusion; follow-up or centre-specific additional imaging when uncertainty remains.

• Steroid requirement, neurological status, seizure control and performance status.

• TBNK can be supportive context but is especially difficult to interpret under corticosteroids.

• If re-operation is performed, renewed tissue sampling can support pathology, molecular profiling and trial screening.

Why these diagnostics matter

The purpose is not to collect the maximum number of laboratory values. The report separates findings that can select an established treatment, findings that affect safety or dosing, and measurements that provide supportive or exploratory longitudinal context. This distinction reduces the risk that immune-cell counts or CTC measurements are treated as stand-alone treatment indications.

2. Evidence Interpretation

• True progression should be distinguished from pseudoprogression or other treatment effects before changing therapy where clinically feasible.

• MGMT and integrated molecular pathology provide context but do not alone determine every recurrent-disease decision.

• Dendritic-cell vaccine approaches have clinical research data, but interpretation is limited by study design, comparator methodology and product-specific differences.

Options for professional discussion

• Multidisciplinary assessment of re-resection, focal treatment and systemic recurrent-disease options according to location, symptoms and prior therapy.

• Clinical-trial screening at a neuro-oncology centre.

• Dendritic-cell vaccine strategy only as an experimental/trial-oriented option with transparent evidence limitations.

Interpretation limits

Temporal association between treatment, immune status, CTC trajectory and imaging does not establish causality. In a live report, assay method, reference ranges, treatment timing, imaging and clinical course must be assessed together. No option is automatically ranked as the correct treatment.

3. Evidence Matches - study comparison

Medical Evidence AI does not present study titles alone. The relevant elements are population, intervention, clinically relevant outcome, match to the case and limitations of transferability.

Stupp regimen evidence

Population / evidence: Newly diagnosed glioblastoma treated with radiotherapy plus temozolomide after surgery.

Match to this sample case: Directly relevant to the documented initial treatment course.

Limitation: Does not determine management of a suspected recurrence by itself.

EANO / contemporary neuro-oncology guidance

Population / evidence: Integrated histomolecular diagnostics and multidisciplinary recurrent-disease planning.

Match to this sample case: Directly relevant to the need to confirm progression and reassess local/systemic options.

Limitation: Recommendations depend on current imaging, symptoms, resectability and prior therapy.

DCVax-L publication / dendritic-cell vaccine literature

Population / evidence: Clinical research evaluating autologous dendritic-cell vaccination in glioblastoma.

Match to this sample case: Relevant to explaining why DC-vaccine strategies may appear in an Evidence Report.

Limitation: Methodological issues, external controls, product specificity and lack of simple cross-study transfer require explicit caution.

4. Applicability & evidence gaps

Evidence gaps

• Radiologic confirmation of progression versus treatment effect.

• Current steroid dose, neurological function and seizure status.

• Resectability and value of renewed tissue sampling.

• Current trial availability and exact eligibility criteria.

• For any DC-vaccine approach: manufacturing method, antigen source, protocol and evidence must match the specific product.

Exploratory / immunological context

Immune-cell counts do not prove dendritic-cell function or predict benefit from a DC vaccine. Any dendritic-cell strategy must be discussed as product- and protocol-specific experimental evidence, not inferred from a TBNK profile.

The report prioritises unresolved issues that may change the treatment sequence before purely exploratory additional testing. A live analysis would additionally verify the current guideline version, regional approval status and active clinical trials at the time of assessment.

5. Tumour-board questions, sources & final assessment

Questions for the treating team / tumour board

• Is the new lesion sufficiently characterised as true progression?

• Is repeat surgery feasible and diagnostically/therapeutically useful?

• Which recurrent-disease study populations match this patient most closely?

• If a DC-vaccine approach is considered, what exact product, protocol and prospective evidence apply?

Selected evidence anchors

• Current EANO/international neuro-oncology guidance.

• Stupp-regimen evidence for initial standard therapy.

• Peer-reviewed dendritic-cell vaccine literature, including DCVax-L, with explicit methodological limitations.

Final assessment

The value of the report lies not in an automated treatment recommendation, but in a transparent connection between diagnostics, patient context and evidence. It shows where an option matches well, where important differences from the study population remain, and which information is still required before a medical decision.

Clinical Review Required

Medical Evidence AI provides evidence synthesis and decision support. It does not replace diagnosis, prescribing, multidisciplinary review or treatment decisions by qualified medical professionals.