RECURRENT GLIOBLASTOMA:
INITIAL EXPERIENCES WITH COMPASSIONATE-USE CUSP9v3/v4

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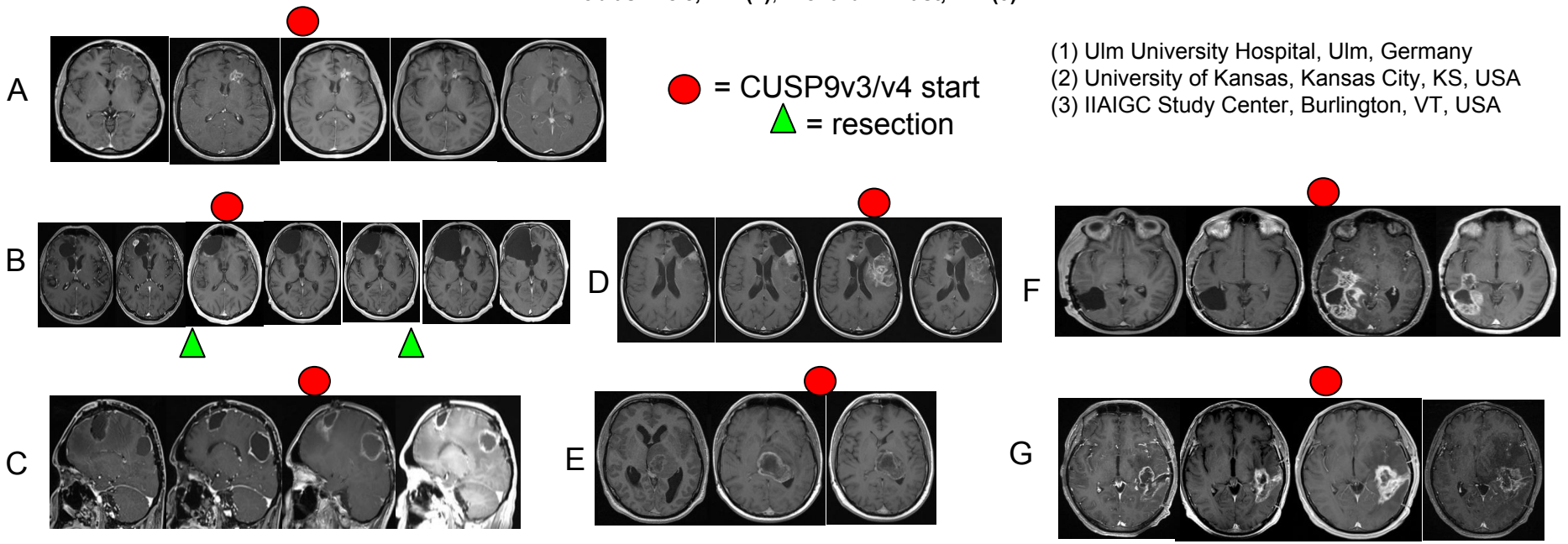

Rationale: We must fight today's illness with today's tools. All CUSP9v3/v4 drugs inhibit a previously identified glioblastoma growth element. **The data presented in this poster were retrospectively collected from German compassionate use (*individuelle Heilversuche*).**

CUSP9v3 stands for Coordinated Undermining of Survival Paths with 9 repurposed drugs version 3. It consists of **aprepitant** to inhibit NK-1 (Substance P), **auranofin** to inhibit thioredoxin reductase, **captopril** to inhibit angiotensin signaling, **celecoxib** to inhibit COX2, **disulfiram** to inhibit ALDH and stem cell function, **itraconazole** to inhibit Hedgehog, **minocycline** to inhibit MMP-9 and glial activation**, ritonavir** to increase ER stress, **sertraline** on empirical evidence, and low-dose **temozolomide**. In CUSP9v4 (patient A) ritonavir was deleted, **quetiapine** to inhibit RANKL put in its place.

We intended to treat nine low-Karnofsky recurrent glioblastoma patients. Two Karnofsky 40 patients died before follow-up MRI. All 7 remaining patients showed radiological responses as above. Tolerability was reasonable. There were 9 grade 3 (6 elevated LFTs, 1 each thrombocytopenia, leukopenia, anemia) and 2 grade 4 (pneumonia) adverse events with CUSP9v3. No adverse events with CUSP9v4 (patient A). CUSP9v3/v4 require careful adjustments to each individual. Preliminary results warrant clinical trial currently recruiting in Ulm (NCT02770378).

CONCLUSION:

CUSP9v3/v4 showed enough MRI evidence of potential activity in heavily pre-treated patients with low enough adverse events to warrant further study.