

# Vaccination by Homologous Antigenic Loading as Adjuvant Therapy for Glioblastoma: Analysis of Phase I Results

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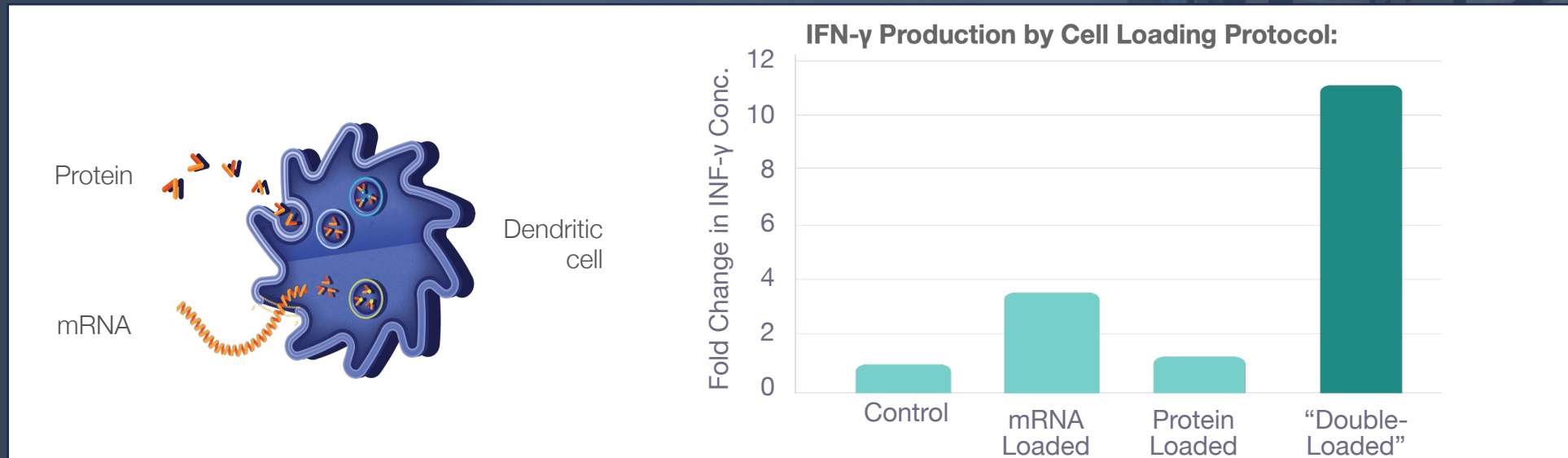


# Dendritic Cell Vaccines

- DC vaccines have been explored in GBM since 2000
- To date, 25 phase 1 clinical trials have been completed, enrolling 660 patients.
- Trials show a trend towards increased survival
- Double-loaded dendritic cell vaccine and route of administration.

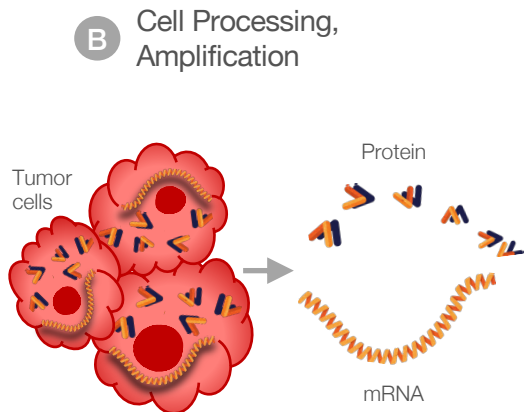
# Double-Loaded Dendritic Cells

- Dendritic cells double-loaded with tumor lysate and mRNA
  - Allows targeting of multiple tumor-associated antigens
- Double loaded DCs generate 10-fold greater cytotoxic T cell activation.

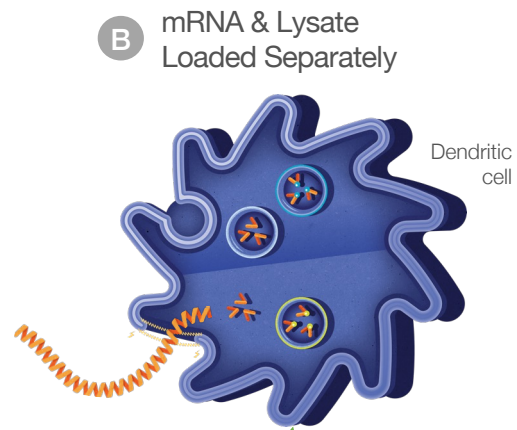


# Protocol

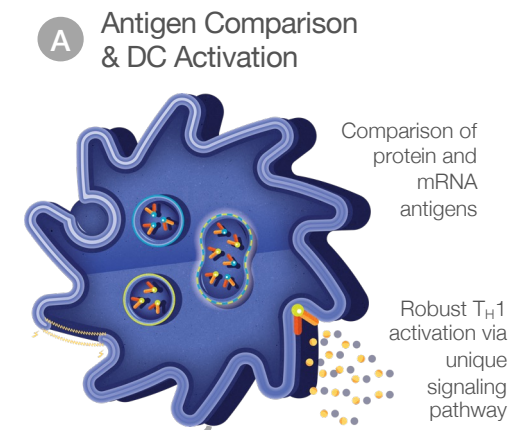
## Step 1 Surgical Resection & Tumor Prep



## Step 2 Apheresis & DC Double Loading



## Step 3 DC Activation & Vaccine Administration





# Protocol

## Dendritic Cell Vaccination with Standard Postoperative Chemoradiation for the Treatment of Adult Glioblastoma

MD Anderson Cooper, UTHealth Houston  
NCT04552886

**Enrollment Completed: 16 newly diagnosed (nGBM) & 2 recurrent (rGBM)**

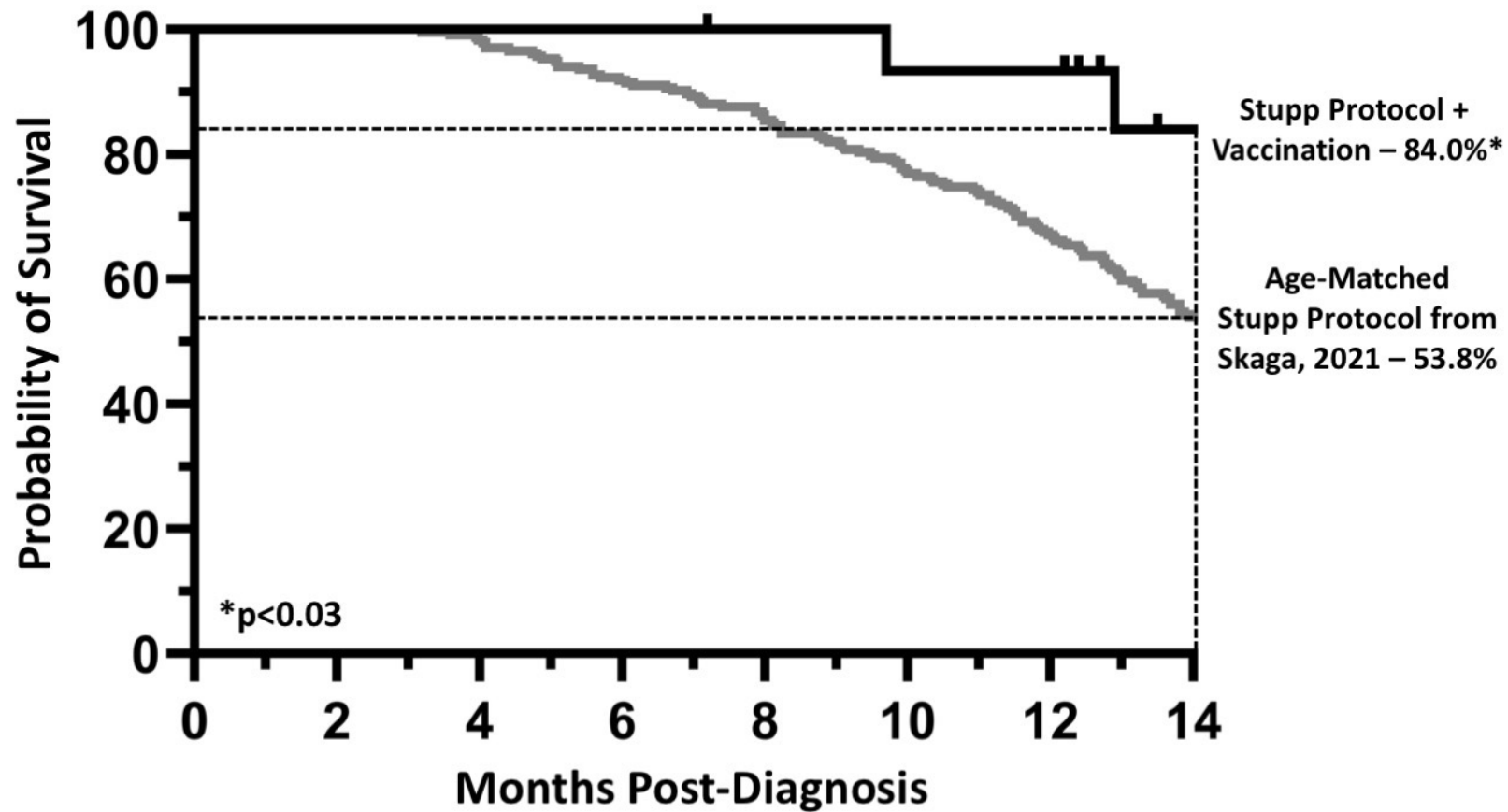
Dose Level	Patients
Dose Level 1 (3.5M Cells)	4
Dose Level 2 (7M Cells)	4
Dose Level 3 (14M Cells)	5
Dose Level 4 (36M Cells)	5



# Primary Outcomes

	Grade 2	Grade 3	Grade 4
<b>Cohort 1 – Total</b>	<b>7</b>	<b>0</b>	<b>0</b>
<i>Fatigue</i>	6	-	-
<i>Nausea</i>	1	-	-
<b>Cohort 2 – Total</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Cohort 3 – Total</b>	<b>1</b>	<b>0</b>	<b>0</b>
<i>Fatigue</i>	1	-	-
<i>Urticaria</i>	1	-	0
<b>Cohort 4 – Total</b>	<b>0</b>	<b>0</b>	<b>0</b>

# Secondary Outcome



# Patient Demographics and Status

Newly Diagnosed Patients Receiving DOC1021							
Dose Level	Patient ID	Age & Sex at Diagnosis	Baseline ECOG	Extent of Resection*	MGMT Status	Survival Status	Overall Survival (Mo.)
DL1 (3.5M)	GBM-MDAC-001	66 / F	1	NTR	Unmethylated	Deceased	23.8
	GBM-MDAC-003	64 / F	0	Partial	Unmethylated	Deceased	17.2
	GBM-MDAC-006	73 / M	1	GTR	Unmethylated	Alive	24.9
DL2 (7M)	GBM-UT-011	58 / M	0	NTR	Unmethylated	Deceased	19.7
	GBM-UT-012	67 / F	1	NTR	Unmethylated	Deceased	14.9
	GBM-MDAC-014	64 / F	0	Partial	Methylated	Alive	18.0
	GBM-UT-015	58 / M	1	NTR	Unmethylated	Deceased	17.4
DL3 (14M)	GBM-UT-017	63 / F	1	Subtotal	Unmethylated	Deceased	9.7
	GBM-UT-018	59 / F	0	NTR	Unmethylated	Alive	16.0
	GBM-UT-019	63 / M	1	NTR	Unmethylated	Deceased	12.9
	GBM-UT-021	51 / M	0	NTR	Unmethylated	Alive	14.8
	GBM-UT-022	59 / M	1	NTR	Unmethylated	Alive	14.1
DL4 (36M)	GBM-UT-023	54 / M	1	NTR	Unmethylated	Alive	13.8
	GBM-UT-024	58 / F	2	GTR	Unmethylated	Alive	13.6
	GBM-UT-025	73 / F	1	GTR	Unmethylated	Alive	13.7
	GBM-UT-028	65 / M	1	Subtotal	Unmethylated	Alive	8.6
Recurrent GBM Patients Receiving DOC1021							
Dose Level	Patient ID	Age & Sex at Diagnosis			MGMT Status	Survival Status	Overall Survival (Mo.)
DL1	GBM-UT-008	47 / F			Unmethylated	Deceased	10.4
DL4	GBM-MDAC-027	66 / F			Unmethylated	Alive	10.1



# Collaborators

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## Diakonon Oncology

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and Team

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Texans for Cures  
Diakonon Oncology, Corp.

