

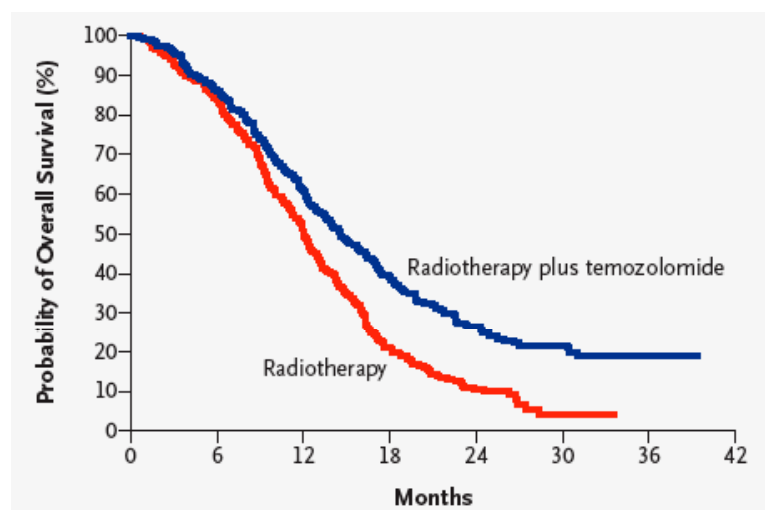
# Vision and Goal: DARTRIX in the Clinic

The British Library, Eliot Room  
January 18<sup>th</sup> 2017 13.00



## Glioblastoma

- Incidence of brain tumour in the UK is approximately 13 cases per 100,000
- Approximately 3,000 cases of glioblastoma a year in the UK
- The median survival with newly diagnosed glioblastoma is still less than a year



## Patients treated with ipilimumab

- Retrospective cohort review of patients with glioblastoma treated with ipilimumab in combination with bevacizumab at a single centre.
- Toxicity data from patients (n=45) with newly diagnosed (n=14) and relapsed (n=31) GBM
- Preliminary efficacy data from relapsed GBM (n=31)

## Treatment Regimen

- Ipilimumab 3mg/kg q3 weeks for 4 doses
- Maintenance Ipilimumab 3mg/kg q12 weeks
- G-CSF or GM-CSF
- Bevacizumab 10mg/kg q2 weeks
- +/- concurrent antitumour therapies

## Patient characteristics

Relapsed GBM, n=31

Male	61% (19/31)
Female	39% (12/31)
Median age, years (range)	45 (23-69)
IDH mutated	14% (4/28)
MGMT methylated	46% (12/26)
Prior RT+TMZ	90% (28/30)
<i>Treatment setting</i>	
First relapse	81% (25/31)
Second relapse	16% (5/31)
Third relapse	3% (1/31)

<i>Baseline PS</i>	
PS 0	3% (1/31)
PS 1	48% (15/31)
PS 2	29% (9/31)
PS 3	13% (4/31)
PS 4	6% (2/31)
<i>Concurrent treatment</i>	
Chemotherapy	64% (20/31)
Lomustine	52% (16/31)
Temozolomide	10% (3/31)
Carboplatin	3% (1/31)
Valganciclovir	100% (31/31)
Dendritic cell therapy	3% (1/31)

## Toxicity

N=45 (first-line = 14, relapsed = 31)

	Grade				Total (%)
	1	2	3	4	
Rash	2	8	4		<b>14 (45)</b>
Diarrhea/Colitis	4	4	4		<b>12 (39)</b>
Fatigue	8	3			<b>11 (35)</b>
Elevated ALT	1		2		<b>3 (10)</b>
PE			2		<b>2 (6)</b>
Low platelets		1		1	<b>2 (6)</b>
LRTI		1	1		<b>2 (6)</b>
Neutropenia				1	<b>1 (3)</b>
Impaired healing		1			<b>1 (3)</b>
Sinusitis		1			<b>1 (3)</b>

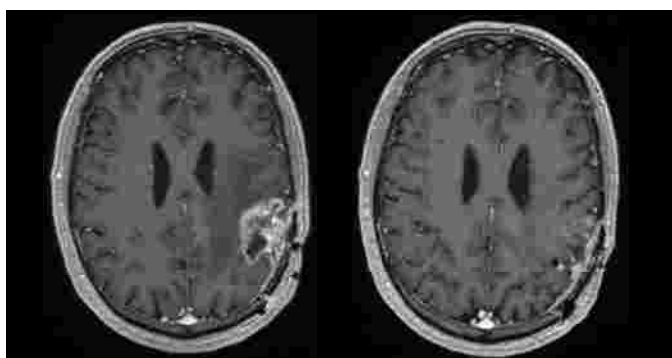
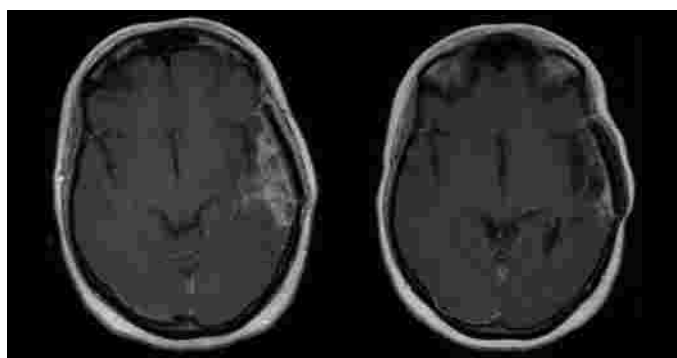
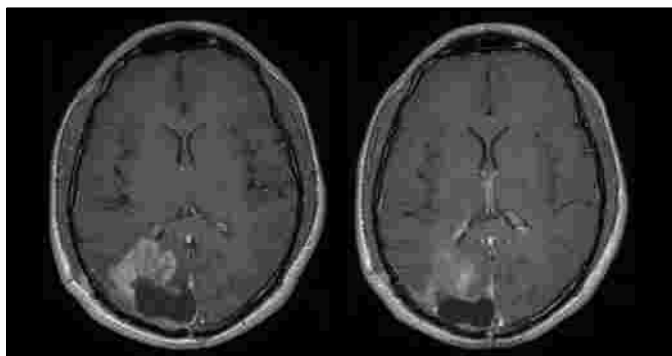
	Grade				Total (%)
	1	2	3	4	
Diverticular Abscess			1		<b>1 (3)</b>
Dental Abscess			1		<b>1 (3)</b>
Infected folliculitis		1			<b>1 (3)</b>
Endocrine dysfunction		1			<b>1 (3)</b>
Arthritis		1			<b>1 (3)</b>
Perianal fistula		1			<b>1 (3)</b>
Uterine infection			1		<b>1 (3)</b>
Cerebral bleed			1		<b>1 (3)</b>
Mucositis			1		<b>1 (3)</b>
Epistaxis		1			<b>1 (3)</b>
Nausea		1			<b>1 (3)</b>

## Radiological Responses

Relapsed GBM, n=31

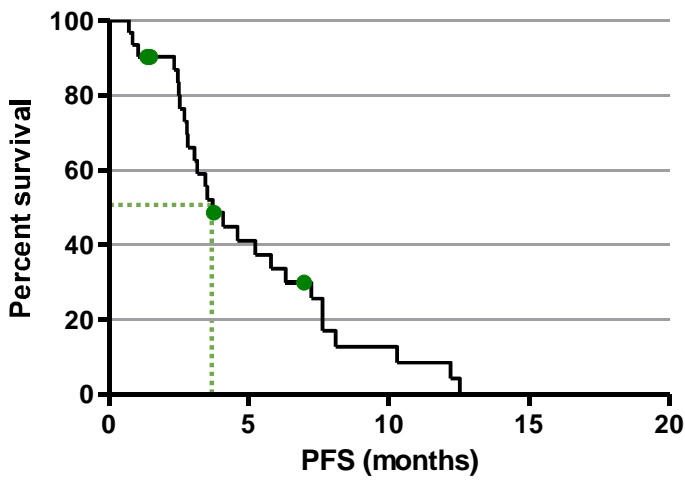
### Best Response

Response	29% (9)
Stable	45% (14)
Progression	26% (8)

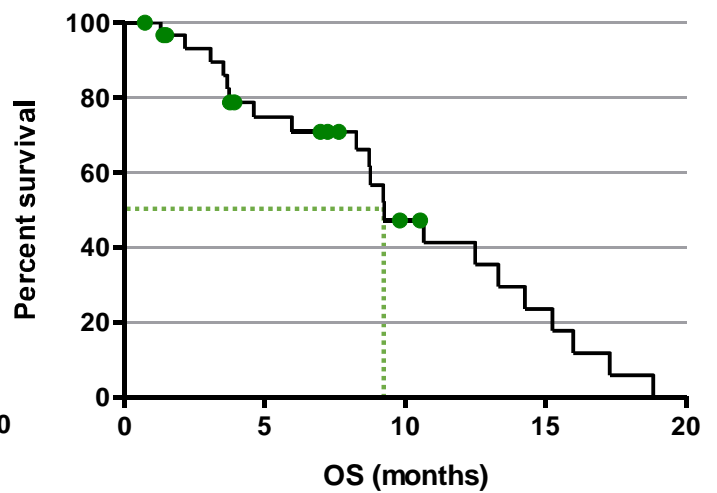


# Survival

Relapsed GBM, n=31

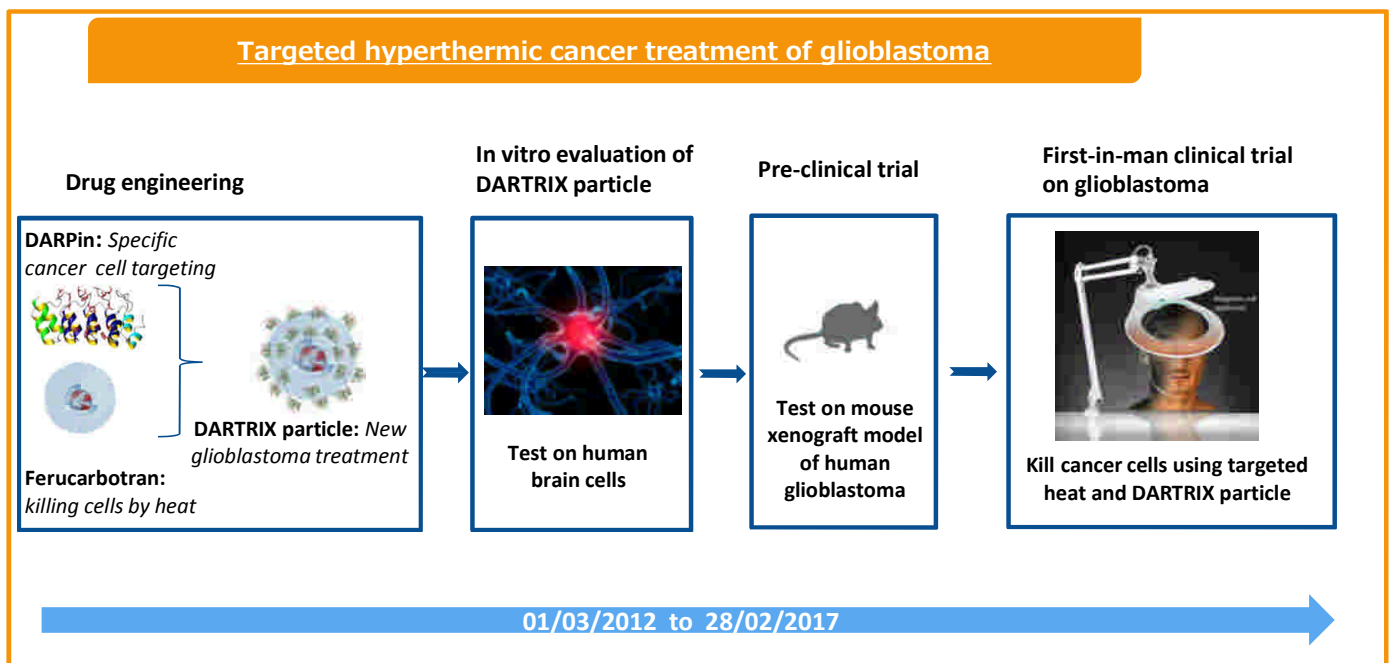


**mPFS 3.7 months**  
13% alive & progression free



**mOS 9.2 months**  
29% alive  
**12 month OS = 41%** 95% CI: 20-62

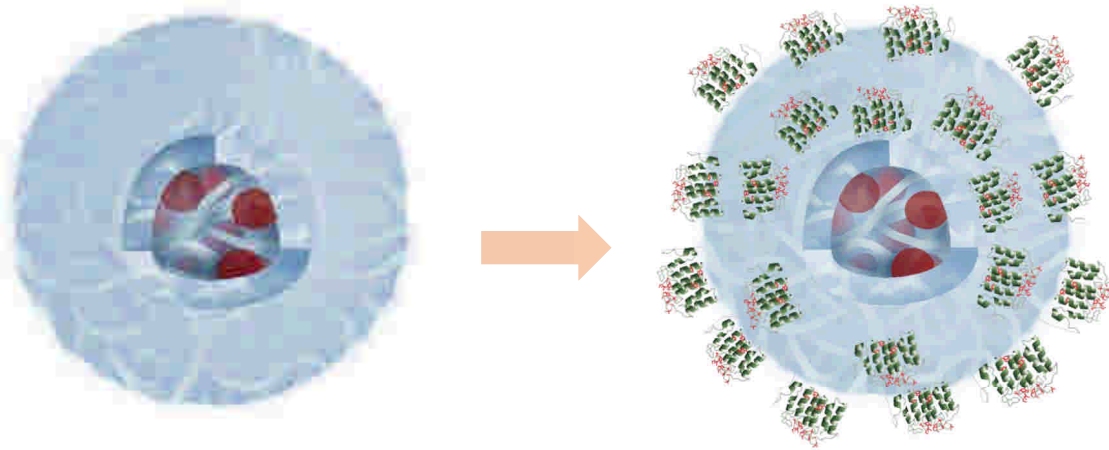
## Overview of the DARTRIX Project



# DARPin Targeted Magnetic Hyperthermic Therapy DARTRIX PROJECT

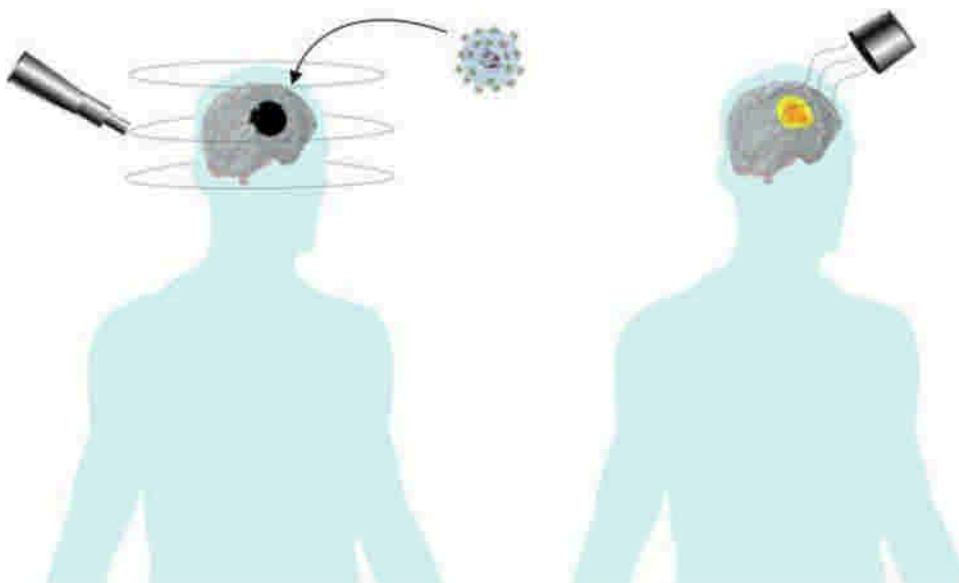


<http://www.dartrix.eu/>



DARTRIX particle  
Cancer targeted

## Therapeutic Application



This will be combined with the systemic immunotherapy

---

## Conclusions

- Unmet need in glioblastoma
- The concept of systemic immunotherapy and targeted intratumoral therapy is potentially powerful but underexplored

---

## Acknowledgements

EU Seventh Framework Programme



The National Brain Appeal

*Dartrix*

National Hospital for Neurology and Neurosurgery

UCL Cancer Institute



UCH/UCL Biomedical Research Centre

Patients, carers and their families

The National  
Brain Appeal  
Funding advances  
in neurology and  
neurosurgery

---