Supplemental Data

Supplemental Table 1

Adverse events which investigators attributed to AV-GBM-1 (DC-ATA/GM-CSF)

| Adverse Event | Grade 1 n (%) | Grade 2 n (%) | Grade 3 n (%) | Grade 4 n (%) | Grade 5 n (%) | Total n (%) |
| --- | --- | --- | --- | --- | --- | --- |
| Injection-site reaction | 8 (14.0) | 1 (1.8) | 0 | 0 | 0 | 9 (15.8) |
| Flu-like symptoms | 6 (10.5) | 0 | 0 | 0 | 0 | 6 (10.5) |
| Bone pain | 4 (7.0) | 0 | 0 | 0 | 0 | 4 (7.0) |
| Left arm cellulitis | 0 | 1 (1.8) | 0 | 0 | 0 | 1 (1.8) |
| Arthralgia (joint pain) | 1 (1.8) | 0 | 0 | 0 | 0 | 1 (1.8) |
| Myalgia (muscle pain) | 1 (1.8) | 0 | 0 | 0 | 0 | 1 (1.8) |
| Pruritis | 1 (1.8) | 0 | 0 | 0 | 0 | 1 (1.8) |
| Bruising | 1 (1.8) | 0 | 0 | 0 | 0 | 1 (1.8) |
| Memory loss | 1 (1.8) | 0 | 0 | 0 | 0 | 1 (1.8) |
| Lower quadrant pain | 1 (1.8) | 0 | 0 | 0 | 0 | 1 (1.8) |

DC-ATA=vaccine of autologous dendritic cells pulsed with autologous tumor antigens from lysate of irradiated self-renewing tumor cells

GM-CSF=granulocyte macrophage colony stimulating factor

Supplemental Table 2

Adverse events which investigators felt were possibly related to AV-GBM-1

| Adverse Event | Grade 1 n (%) | Grade 2 n (%) | Grade 3 n (%) | Grade 4 n (%) | Grade 5 n (%) | Total n (%) |
| --- | --- | --- | --- | --- | --- | --- |
| Fatigue | 11 (19.3) | 4 (7.0) | 0 | 0 | 0 | 15 (26.3) |
| Seizure | 2 (3.5) | 5 (8.8) | 3 (5.2) | 0 | 0 | 10 (17.4) |
| Nausea | 5 (8.7) | 2 (3.5) | 0 | 0 | 0 | 7 (12.2) |
| Cerebral edema | 0 | 1 (1.8) | 3 (5.2) | 1 (1.8) | 0 | 5 (8.8) |
| Headache | 4 (7.0) | 0 | 1 (1.8) | 0 | 0 | 5 (8.8) |
| Vomiting | 5 (8.8) | 0 | 0 | 0 | 0 | 5 (8.8) |
| Myalgia (muscle pain) | 4 (7.0) | 0 | 0 | 0 | 0 | 4 (7.0) |
| Platelet count decreased | 1 (1.8) | 1 (1.8) | 0 | 1 (1.8) | 0 | 3 (5.2) |
| Weakness/Rt or Lt side  | 0 | 1 (1.8) | 2 (3.5) | 0 | 0 | 3 (5.2) |
| Rash | 0 | 1 (1.8) | 1 (1.8) | 0 | 0 | 2 (3.5) |
| Fall | 1 (1.8) |  | 1 (1.8) | 0 | 0 | 2 (3.5) |
| Arthralgia (joint pain) | 1 (1.8) | 1 (1.8) | 0 | 0 | 0 | 2 (3.5) |
| Confusion/forgetfulness | 0 | 2 (3.5) | 0 | 0 | 0 | 2 (3.5) |
| Non cardiac chest pain | 1 (1.8) | 1 (1.8) | 0 | 0 | 0 | 2 (3.5) |
| Bone pain | 2 (3.5) | 0 | 0 | 0 | 0 | 2 (3.5) |
| Pruritis | 2 (3.5) | 0 | 0 | 0 | 0 | 2 (3.5) |
| Abdominal pain/cramps | 2 (3.5) | 0 | 0 | 0 | 0 | 2 (3.5) |
| GERD | 2 (3.5) | 0 | 0 | 0 | 0 | 2 (3.5) |
| Hyponatremia | 2 (3.5) | 0 | 0 | 0 | 0 | 2 (3.5) |
| Parasthesia | 2 (3.5) | 0 | 0 | 0 | 0 | 2 (3.5) |
| Pancreatitis | 0 | 0 | 1 (1.8) | 0 | 0 | 1 (1.8) |
| Memory loss | 0 | 0 | 1 (1.8) | 0 | 0 | 1 (1.8) |
| PE/DVT | 0 | 0 | 1 (1.8) | 0 | 0 | 1 (1.8) |
| Nose bleeds | 0 | 0 | 1 (1.8) | 0 | 0 | 1 (1.8) |
| Flu-like symptoms | 0 | 1 (1.8) | 0 | 0 | 0 | 1 (1.8) |
| Double/Blurred vision | 0 | 1 (1.8) | 0 | 0 | 0 | 1 (1.8) |
| Pyramidal tract syndrome  | 0 | 1 (1.8) | 0 | 0 | 0 | 1 (1.8) |
| Constipation | 0 | 1 (1.8) | 0 | 0 | 0 | 1 (1.8) |
| Hypothyroidism | 0 | 1 (1.8) | 0 | 0 | 0 | 1 (1.8) |
| Hypophosphatemia | 0 | 1 (1.8) | 0 | 0 | 0 | 1 (1.8) |
| Adrenal insufficiency | 0 | 1 (1.8) | 0 | 0 | 0 | 1 (1.8) |
| Dysarthria | 0 | 1 (1.8) | 0 | 0 | 0 | 1 (1.8) |
| Flatulence | 0 | 1 (1.8) | 0 | 0 | 0 | 1 (1.8) |
| Dyspnea (short of breath) | 0 | 1 (1.8) | 0 | 0 | 0 | 1 (1.8) |
| Lymphocytes decreased | 1 (1.8) | 0 | 0 | 0 | 0 | 1 (1.8) |
| Elevated creatinine | 1 (1.8) | 0 | 0 | 0 | 0 | 1 (1.8) |
| Fever | 1 (1.8) | 0 | 0 | 0 | 0 | 1 (1.8) |
| Tachycardia | 1 (1.8) | 0 | 0 | 0 | 0 | 1 (1.8) |
| Left hand edema | 1 (1.8) | 0 | 0 | 0 | 0 | 1 (1.8) |
| Depression | 1 (1.8) | 0 | 0 | 0 | 0 | 1 (1.8) |
| Extrapyramidal disorder | 1 (1.8) | 0 | 0 | 0 | 0 | 1 (1.8) |
| Speech aphasia | 1 (1.8) | 0 | 0 | 0 | 0 | 1 (1.8) |
| Facial droop | 1 (1.8) | 0 | 0 | 0 | 0 | 1 (1.8) |
| Insomnia | 1 (1.8) | 0 | 0 | 0 | 0 | 1 (1.8) |
| Eye irritation | 1 (1.8) | 0 | 0 | 0 | 0 | 1 (1.8) |
| Earwax buildup | 1 (1.8) | 0 | 0 | 0 | 0 | 1 (1.8) |
| Oral thrust | 1 (1.8) | 0 | 0 | 0 | 0 | 1 (1.8) |
| Hot flashes | 1 (1.8) | 0 | 0 | 0 | 0 | 1 (1.8) |

Supplemental Table 3.

Summary of Severe Adverse Events

**55 SAE among 29 patients; no SAE attributed to study agent**

16 hospitalized for seizures (3 patients twice)

7 hospitalized after falls, usually with other neuro complaints or findings (1 patient twice)

6 hospitalized for increased focal weakness (1 three times)

3 hospitalized for pancreatitis—(all 3 for the same patient)

3 hospitalized for other symptoms attributed to cerebral edema/mass effect (headache, visual)

3 hospitalized for pulmonary embolus & deep venous thrombosis

3 hospitalized for RUQ & fever, cholecystitis, sepsis (all 3 for the same patient)

2 hospitalized for altered mental status due to increased cerebral edema related to Ommaya (same patient twice)

2 hospitalized for chest pain and SOB

2 hospitalized for general deterioration

1 hospitalized for chest pain and fever

1 hospitalized for suicidal ideation

1 hospitalized for hyponatremia

1 hospitalized for increasing weakness that was secondary to pancytopenia

1 hospitalized for fever and weakness

1 hospitalized for facial edema

1 hospitalized for appendicitis

1 found dead at home after a fall two days earlier; had refused to go to the hospital