CAN-003 INTERIM ANALYSIS

PRIMA BIOMED TELECONFERENCE

November 2012

PRIMA BIOMED LTD

Australian Cancer Treatment Company

Forward-Looking Statements

The statements in this presentation regarding the future and commercial prospects of Prima, including statements regarding the efficacy of Cvac™, the timetable and success of clinical trials, and the potential market for Cvac™ are forward looking and actual results could be materially different from those expressed or implied by such forward-looking statements as a result of various risk factors. This presentation contains certain forward-looking statements. Forward-looking words such as "expect," "anticipate," "believe," "likely," "intend," "should," "could," "may," "plan," "will," "forecast," "estimate," "target," "aim," and other similar expressions are intended to identify forward-looking statements. Indications of and guidance on future earnings and financial position and performance are also forward-looking statements. Forward-looking statements, opinions, and estimates provided in this presentation are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions.

Forward-looking statements, including projections, guidance on future earnings, and estimates are provided as a general guide only and should not be relied upon as an indication or guarantee of future performance. The expectations reflected in these statements may be affected by a range of variables which could cause actual results or trends to differ materially including the risk factors summarized in appendix I. The forward-looking statements involve known and unknown risks, uncertainties, and other factors, many of which are outside the control of Prima, and its directors, officers, employees, advisers, agents, and affiliates.

Forward-looking statements only speak as to the date of this presentation and Prima assumes no obligation to update or revise such information or to reflect any change in management's expectations, from the date of this presentation, with regard to any change in events, conditions, or circumstances on which any forward-looking statement is based. The forward-looking statements included in this presentation involve subjective judgment and analysis and are subject to significant business, economic, and competitive uncertainties, risks and contingencies, many of which are outside the control of and are unknown to Prima. Given these uncertainties, you are cautioned to not place undue reliance on such forward-looking statements. There can be no assurance that actual outcomes will not differ materially from such forward-looking statements.

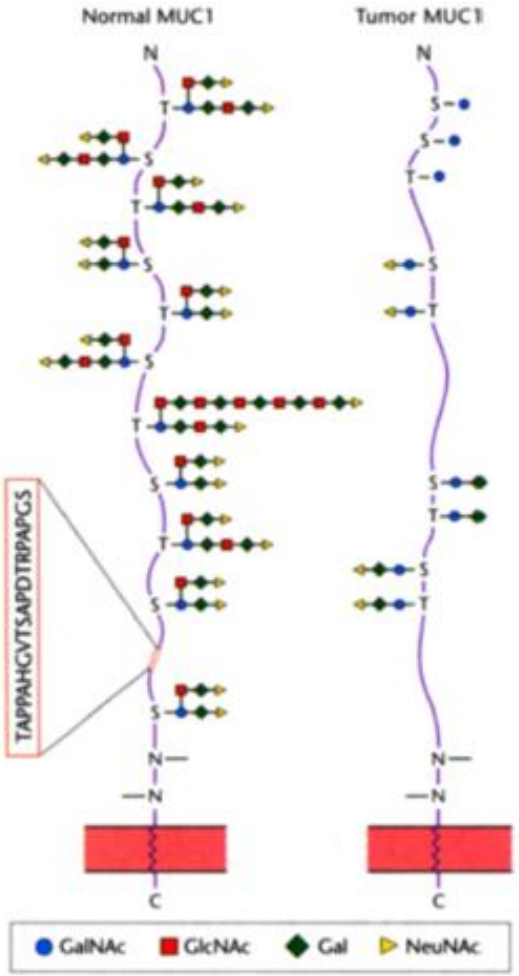
Ovarian Cancer

- Typically late stage when diagnosed
- No diagnostic tests to detect early
- Symptoms are often non-specific.
- Overall 20–30% 5-year survival
  - Stage I (15% of total) – 91% at 5 years
  - Stage II (17%) – 72%
  - Stage III (61%) – 27%
  - Stage IV (7%) – 22%
- Responds well at first to chemotherapy and debulking surgery
- ***Major unmet need for new treatments***

Antigen Target: Mucin 1

Normal Mucin 1

- More complex O-linked sugar chains
- Glycosylated
- Tandem repeat sequence (VNTR [variable number of tandem repeats])

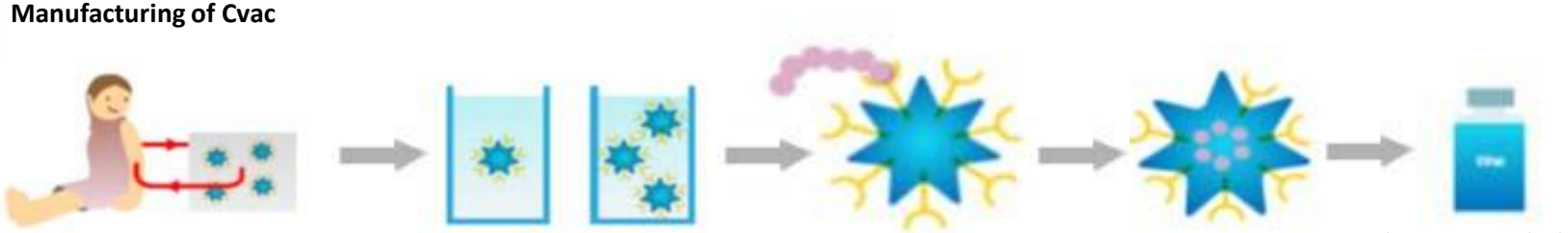


Tumor Mucin 1

- Simpler and fewer sugar chains
- Underglycosylated
- “Naked“ structure; carbohydrate and peptide epitopes are exposed

Cvac Overview

Manufacturing of Cvac



MNCs (white blood cells) are taken from the patient by apheresis and sent to the lab

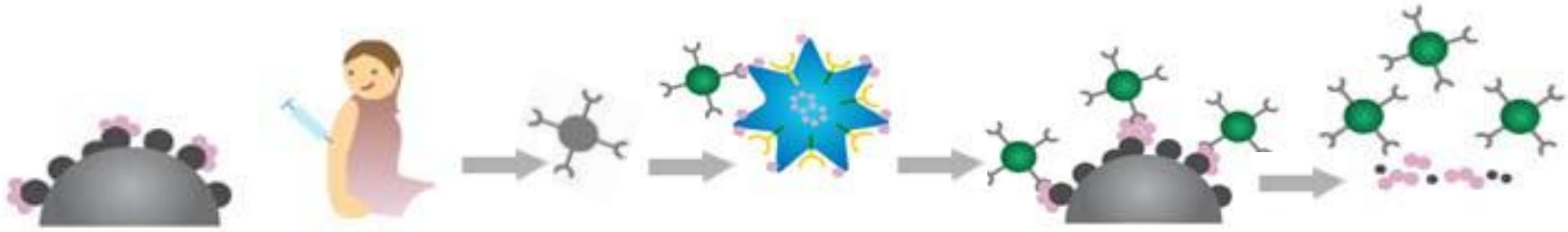
MNCs are separated and matured to dendritic cells (DCs) with growth factors

DCs are pulsed with the antigen, mannan-mucin 1 fusion protein (M-FP)

Mucin 1-antigen is internalized by the DCs

The DCs are washed, formulated, and frozen in 1 mL vials

Mechanism after injection



Mucin 1 is overexpressed on ovarian cancer cells

Cvac is administered as 4 intradermal injections for each dose

Cvac activates CD8+ T-cells specific to mucin 1

T cells target mucin 1 overexpressed on cancer cells

T cells kill cancer cells

CAN-003 Background

- The intent of the CAN-003 trial is to determine the safety and efficacy of Cvac compared with observational standard of care (SOC) in epithelial ovarian cancer patients who are in remission after first or second-line therapy.

Primary Objectives:

- To determine the ***safety*** of administering Cvac in this population
- To determine the effects of Cvac on ***progression-free survival*** (PFS)

Secondary Objectives:

- To determine overall survival (OS) for ovarian cancer patients who receive Cvac after achieving remission in the first or second-line setting
- To evaluate the host ***immunologic response*** to Cvac administration

CAN-003 Interim Safety Data

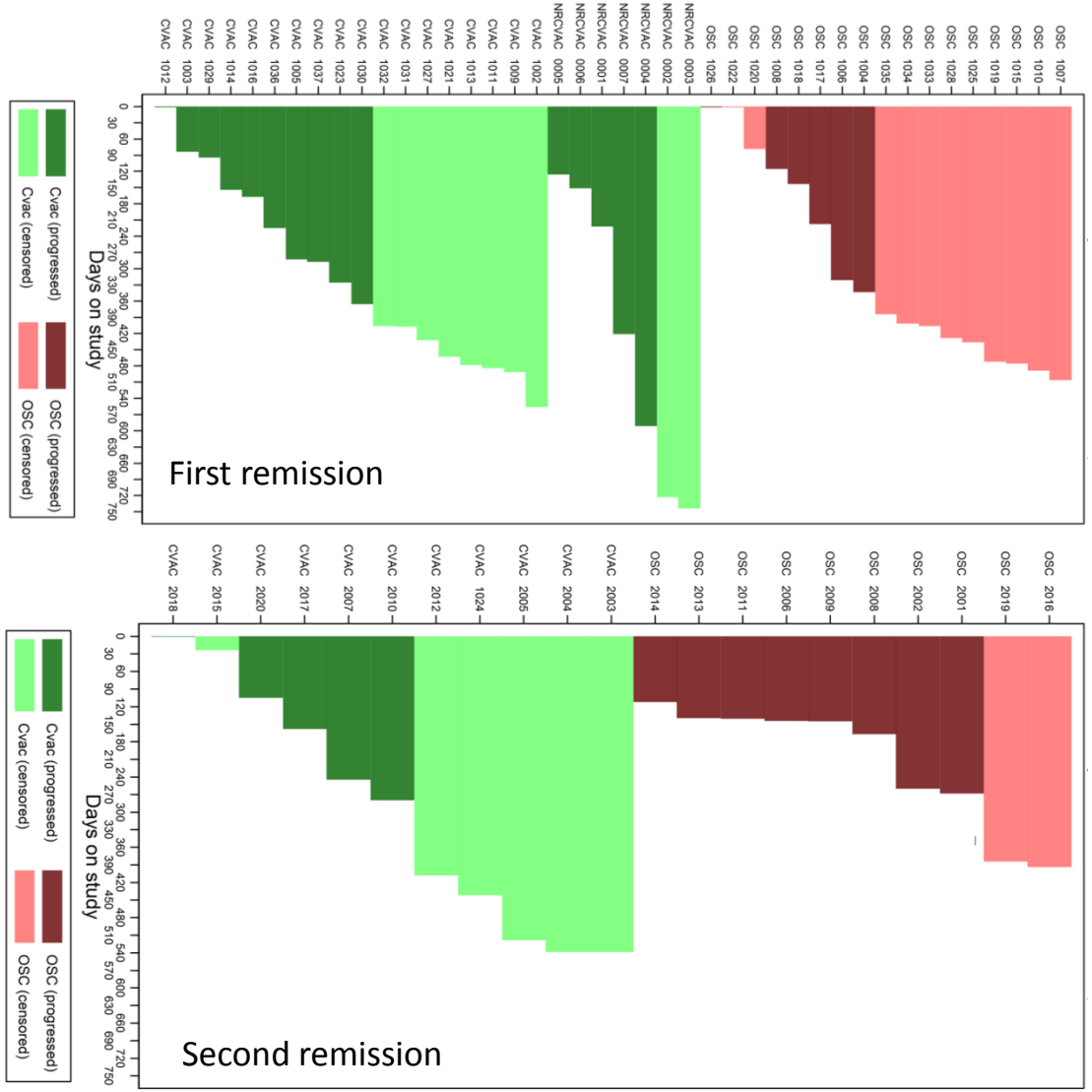
Cvac is very well tolerated.

- Only 1 *serious* adverse event (SAE) was considered possibly related to Cvac treatment
- Total of 5 SAEs in the Cvac arm (2 of disease progression, 1 each of abdominal pain, small bowel obstruction, and febrile neutropenia) compared with 2 SAEs in the SOC arm (abdominal pain and hematoma/respiratory failure leading to death)
- 7 *severe* adverse events noted (bunion, headache, cough, itch , flu-like symptoms and urinary tract infection)

CAN-003 Interim Efficacy Data

Promising trend in PFS data

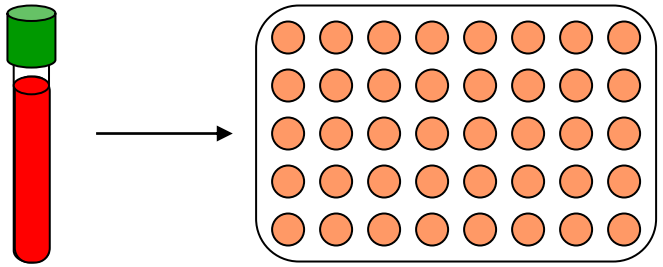
Median PFS
(as of Aug 2012)
NR Cvac: 421 D
Cvac: 365 D
Control: 321 D



Cell Therapy - A new paradigm for the treatment of cancer

PRIMA BIOMED LTD
Australian Cancer Treatment Company

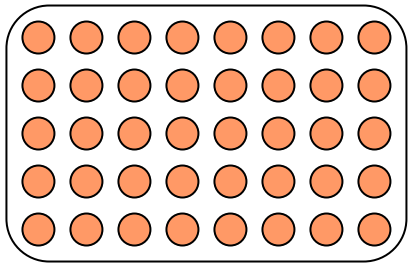
Immune Monitoring: What Is It?



PBMCs or whole blood

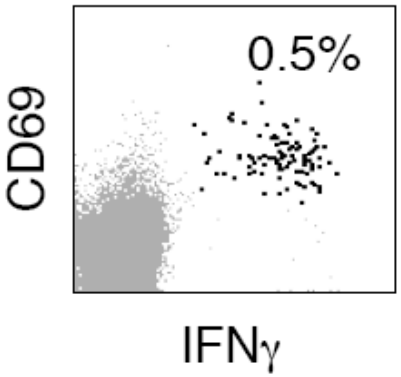
Antigenic stimulus + brefeldin A

Incubate 4–6 h



- Fix cells
- Permeabilize
- Stain

Gate on cells of interest

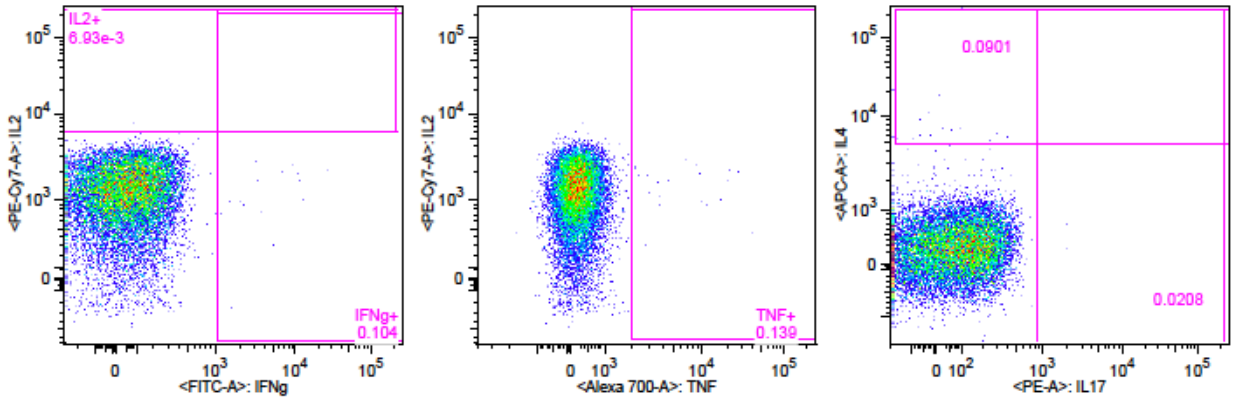


Stanford , HIMC labs

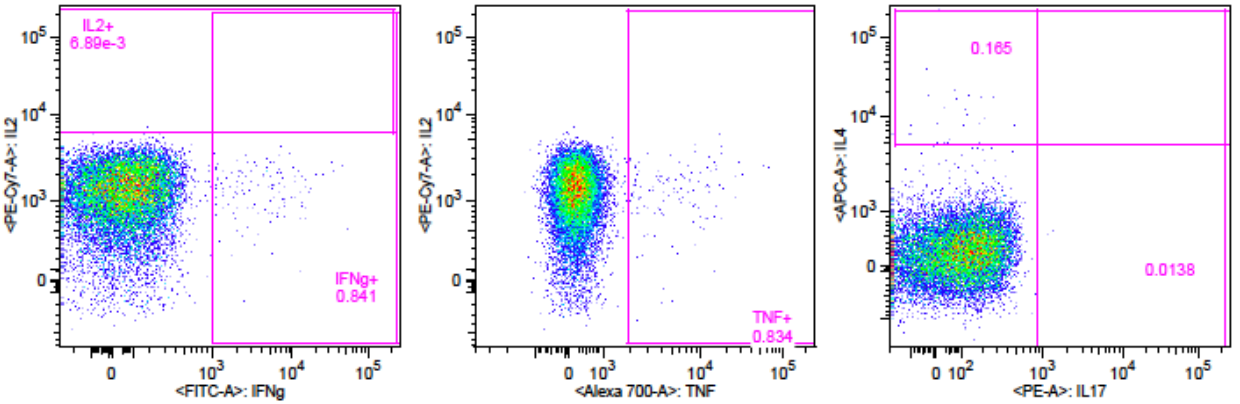
PRIMA BIOMED LTD
Australian Cancer Treatment Company

Immune Monitoring Representative Results: Mucin 1 Stimulation

Unstimulated



Mucin 1 stimulated



Immune Monitoring

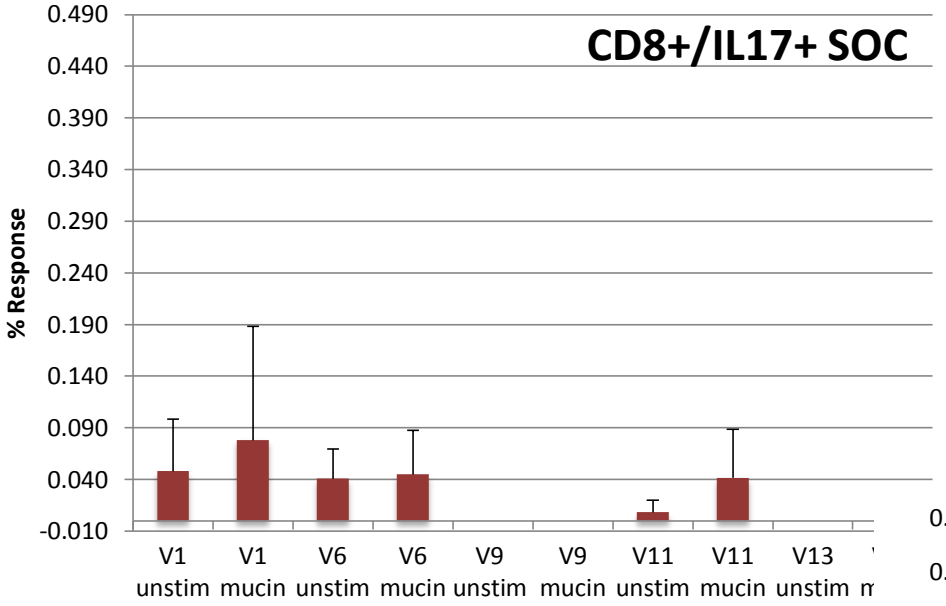
- Time points tested are prior to Cvac treatment and during the course of Cvac treatment
  - Visit 1 = screening
  - Visit 6 = 3 Cvac doses
  - Visit 9 = 7 Cvac doses
  - Visit 11 = gap in dosing
  - Visit 13 = completed Cvac dosing

- Average presented of 5 Cvac patients
- Average presented of 2 SOC patients

Immune Monitoring

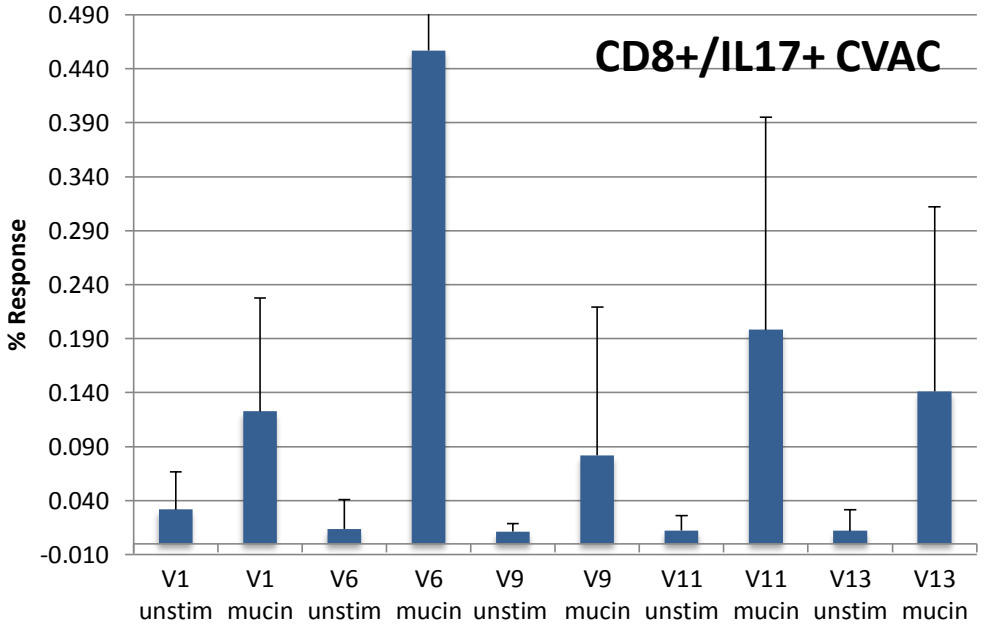
- Results show stimulation of CD8+ or CD4+ cell types:
  - CD8+: cytotoxic T cell (killer)
  - CD4+: helper T cells
- Different cytokines were tested:
  - Tumor necrosis factor alpha (TNFa)
  - Interferon gamma (IFNg)
  - Interleukin 17 (IL-17)
- Each patient sample was tested unstimulated and after stimulation with the cancer-specific target mucin 1.

CD8+ Killer T Cells in SOC / Cvac – IL17

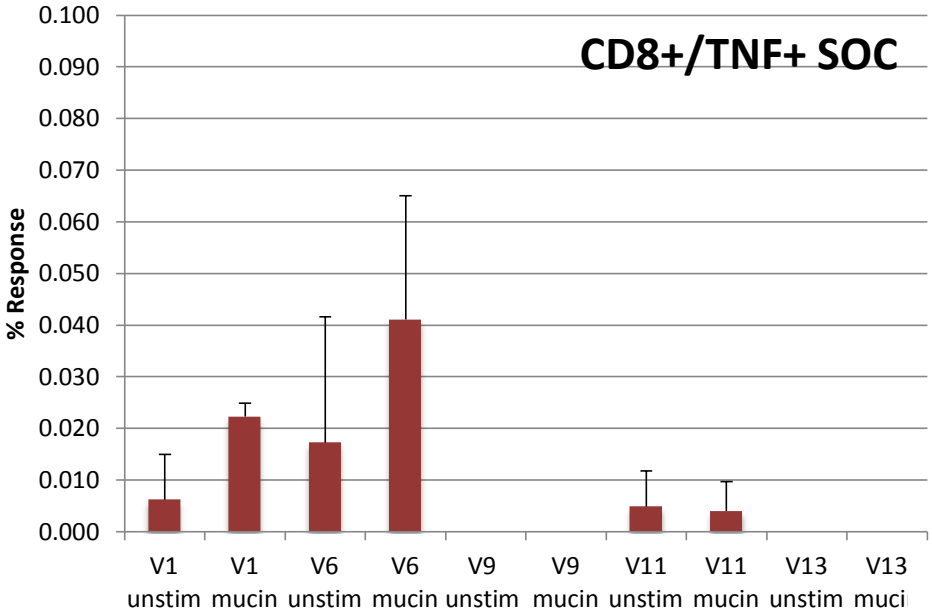


Little to no expression was measured in the SOC patients through the trial

In Cvac treated patient, a mucin 1 specific cytotoxic T cells response is observed as seen with the increased expression of IL-17

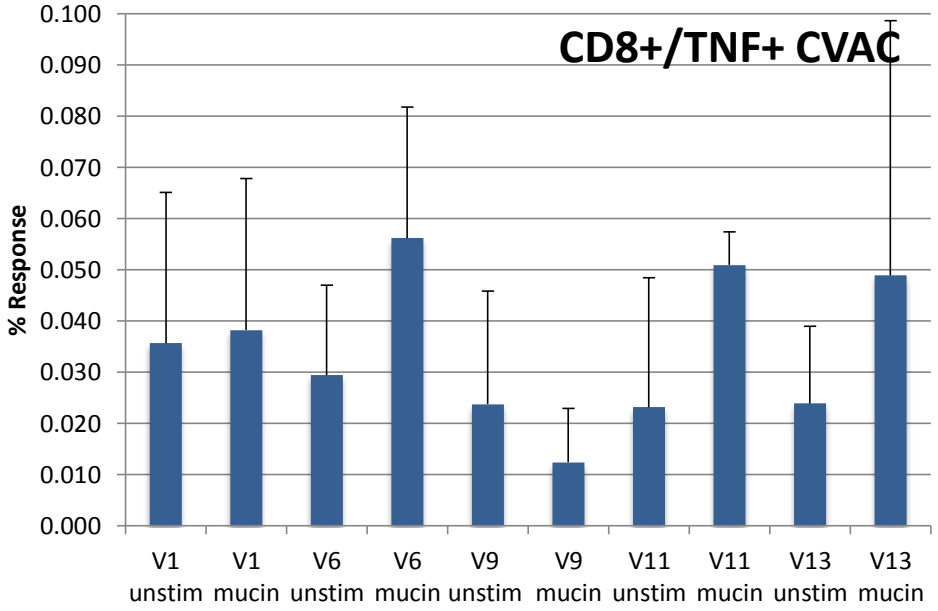


CD8+ Cytotoxic (Killer) T Cells in SOC vs Cvac Patients – TNFa

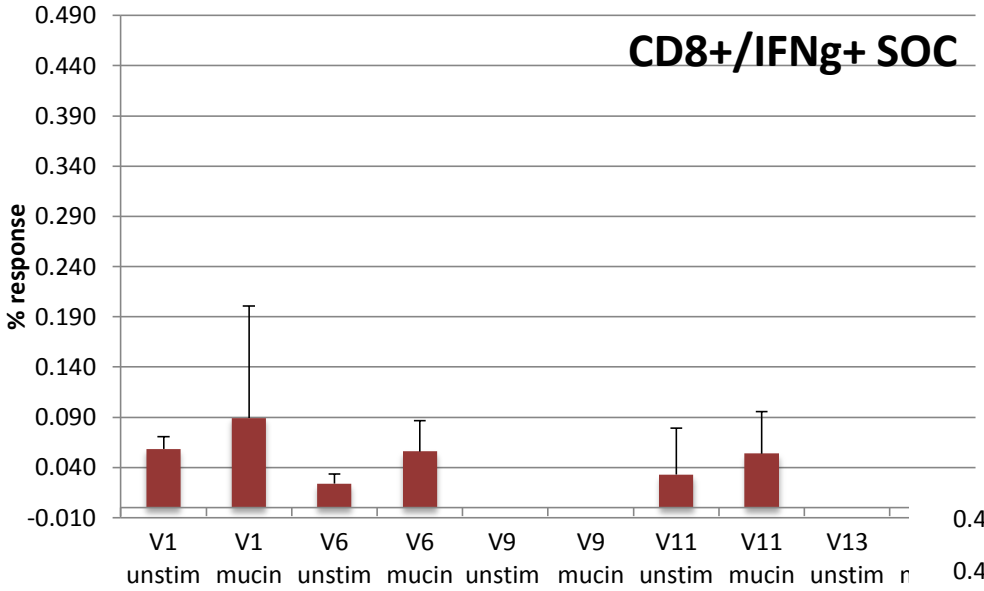


In SOC patients who are not treated with Cvac showed a low level of T cell activity in some time.
This was a limited response to mucin 1.

Cytotoxic T cells show increased responses when stimulated or challenged with mucin 1.
However , there is notable variability.

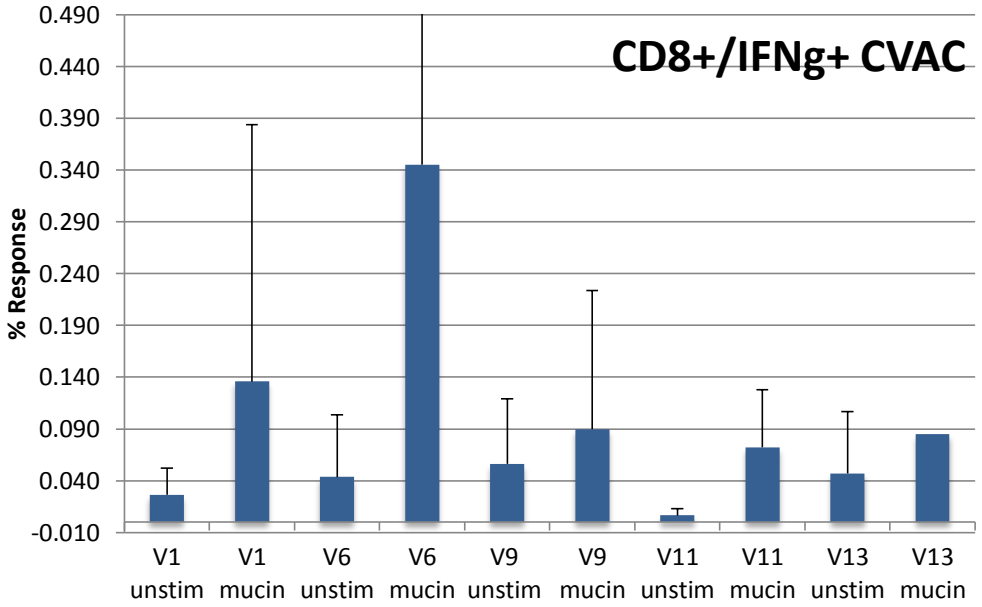


CD8+ Cytotoxic (Killer) T Cells in SOC vs Cvac Patients – IFN g

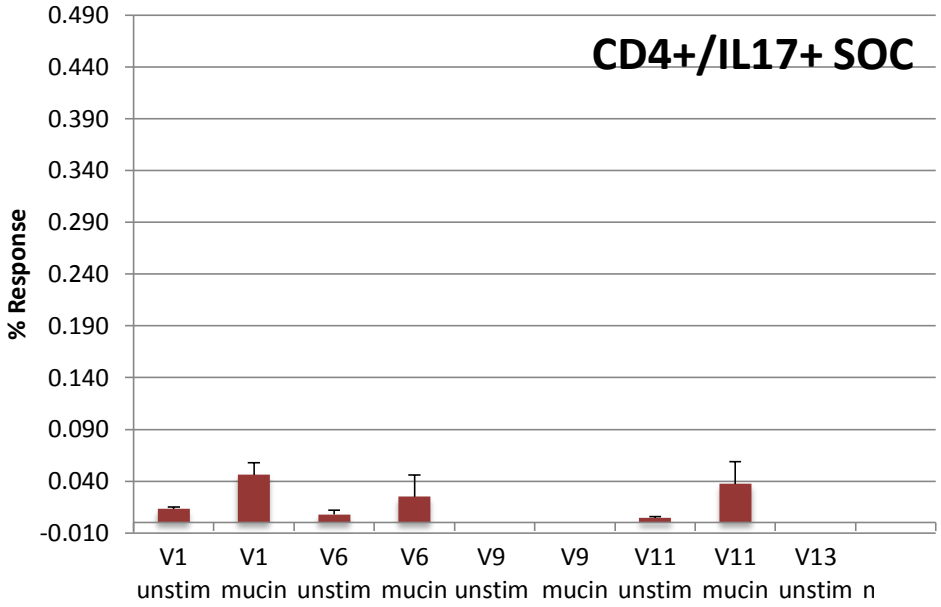


In SOC patients there was limited response throughout the course of treatment

In Cvac treated patients there was a mucin 1 specific increase in IFNg activated killer T cells.



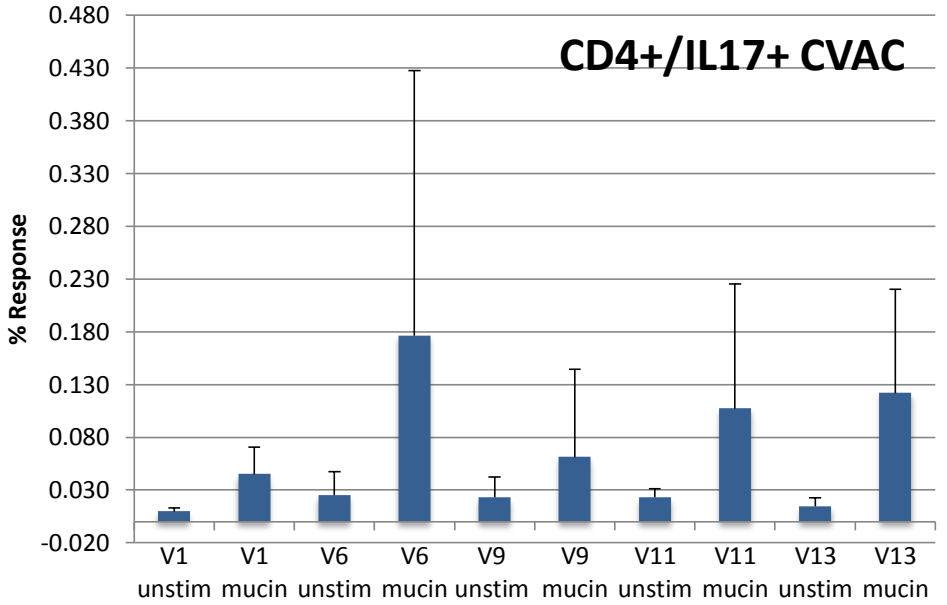
CD4+ Helper T Cells in SOC– IL17



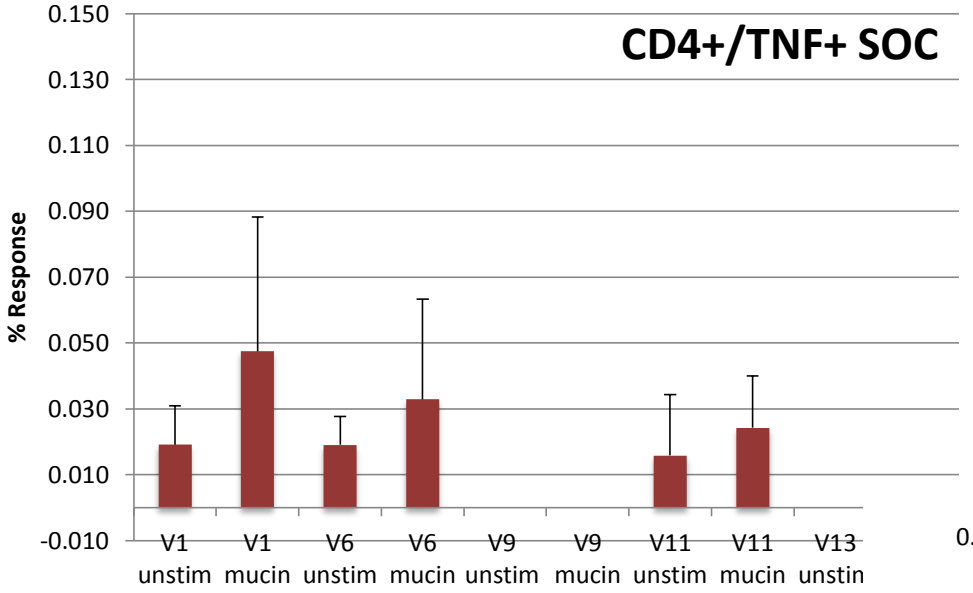
In SOC patients there was little to no response from CD4+ when assessing IL-17 responses

In Cvac treated patients, CD4+helper cells and IL-17 levels had little to no expression prior to treatment

Testing with mucin 1 showed high levels of IL-17 across all time points of the trial

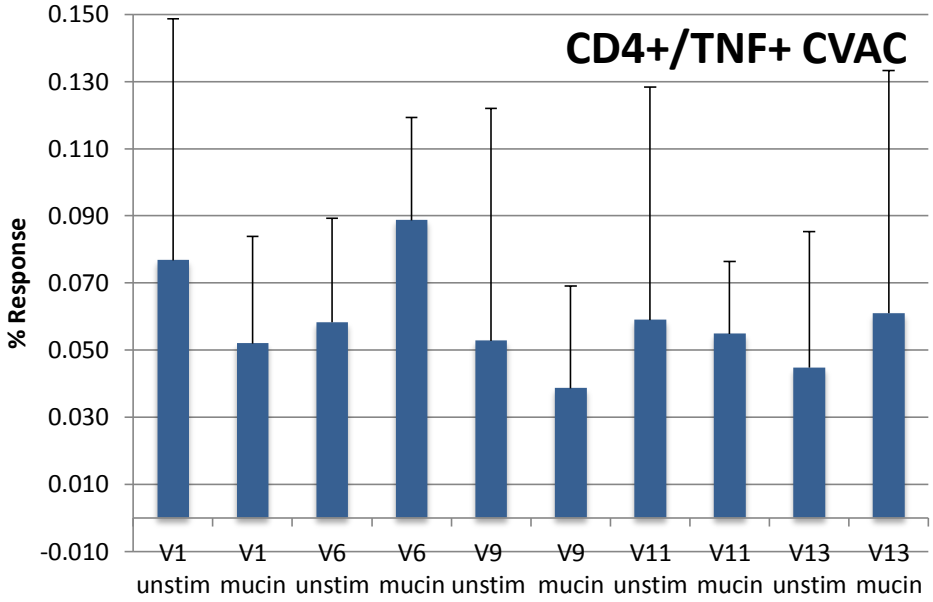


CD4+ Helper T cells in SOC vs Cvac – TNFa



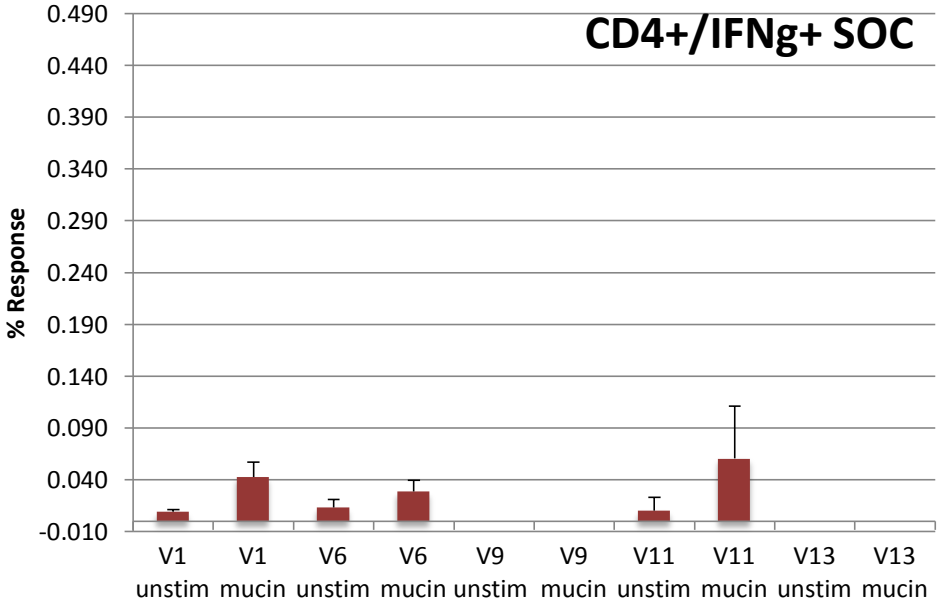
CD4+ helper cells showed some basal expression on TNFa in SOC patients

In Cvac treated patients, CD4+ helper cells showed some up regulation when challenged with mucin 1 However, there variability.



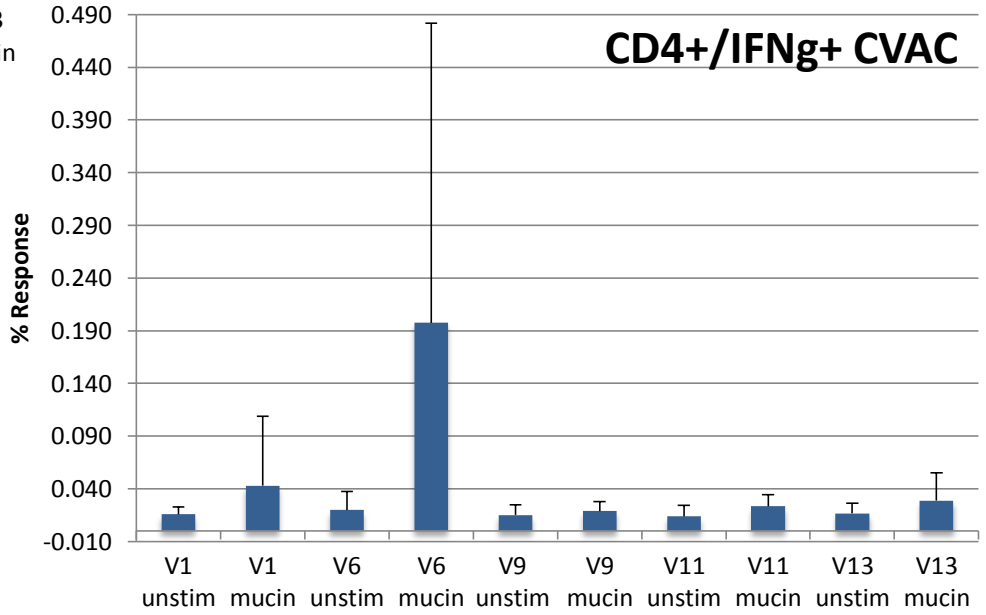
Cell Therapy - A new para

CD4+ Helper T Cells in SOC vs Cvac Patients – IFN g



In SOC patients, there was little to no expression

In Cvac treated patients, the CD4+ helper cells showed little stimulation with mucin 1 with substantial noise and variability.



Immune Monitoring Conclusions

- Standard of Care (SOC) patients had limited or no response when challenged with mucin 1
- Patients receiving Cvac showed responsive T cells – both CD4+ (helper T cells) and CD8+ (killer T cells).
- In this cohort of patients, CD8+ cytotoxic T cells showed more greater reactivity than CD4+ T helper cells in this cohort
- T cells from Cvac treated patients showed responses to mucin 1 when challenged

  => T cell response is mucin 1 specific
- Despite biological variation, data from the first 5 Cvac patients show a trend indicating maintenance of the immune response to Cvac over time.

Q & A Session

?