# SITC 2018

NOVEMBER 7-11
WASHINGTON, D.C.
Walter E. Washington
Convention Center

sitc

Society for Immunotherapy of Cancer

SITC 2018 NOVEMBER 7–11 • WASHINGTON, D.C.

# Abstract P26: High-dimensional flow cytometry of circulating immune cells predicts clinical responses to combination Immune Checkpoint Blockade (ICB) and Radiotherapy (RT) in Gastroesophageal Cancer (GEC)

Joseph Chao, Wanqiu Hou, Min Li, Yi-Jen Chen, Paul Frankel, Helen Chen, Michael Tajon, Marwan Fakih, and Peter P. Lee

City of Hope Comprehensive Cancer Center, Duarte, CA

sitc
Society for Immunotherapy of Cancer
#SITC2018

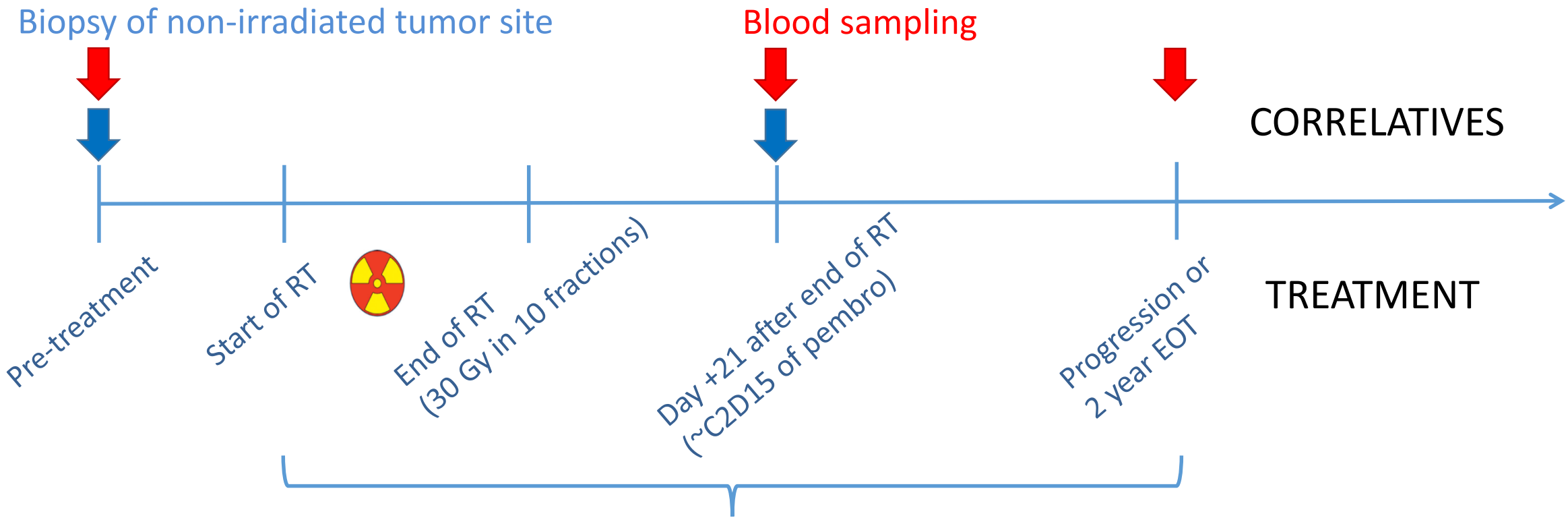
# Presenter Disclosure Information

*Joseph Chao*

The following relationships exist related to this presentation:

*Merck, Novonco Therapeutics (Institutional Research Funding)*
*Lilly, Boston Biomedical, Merck, AstraZeneca (Advisory Boards/Consulting)*
*Merck (Speakers Bureau)*

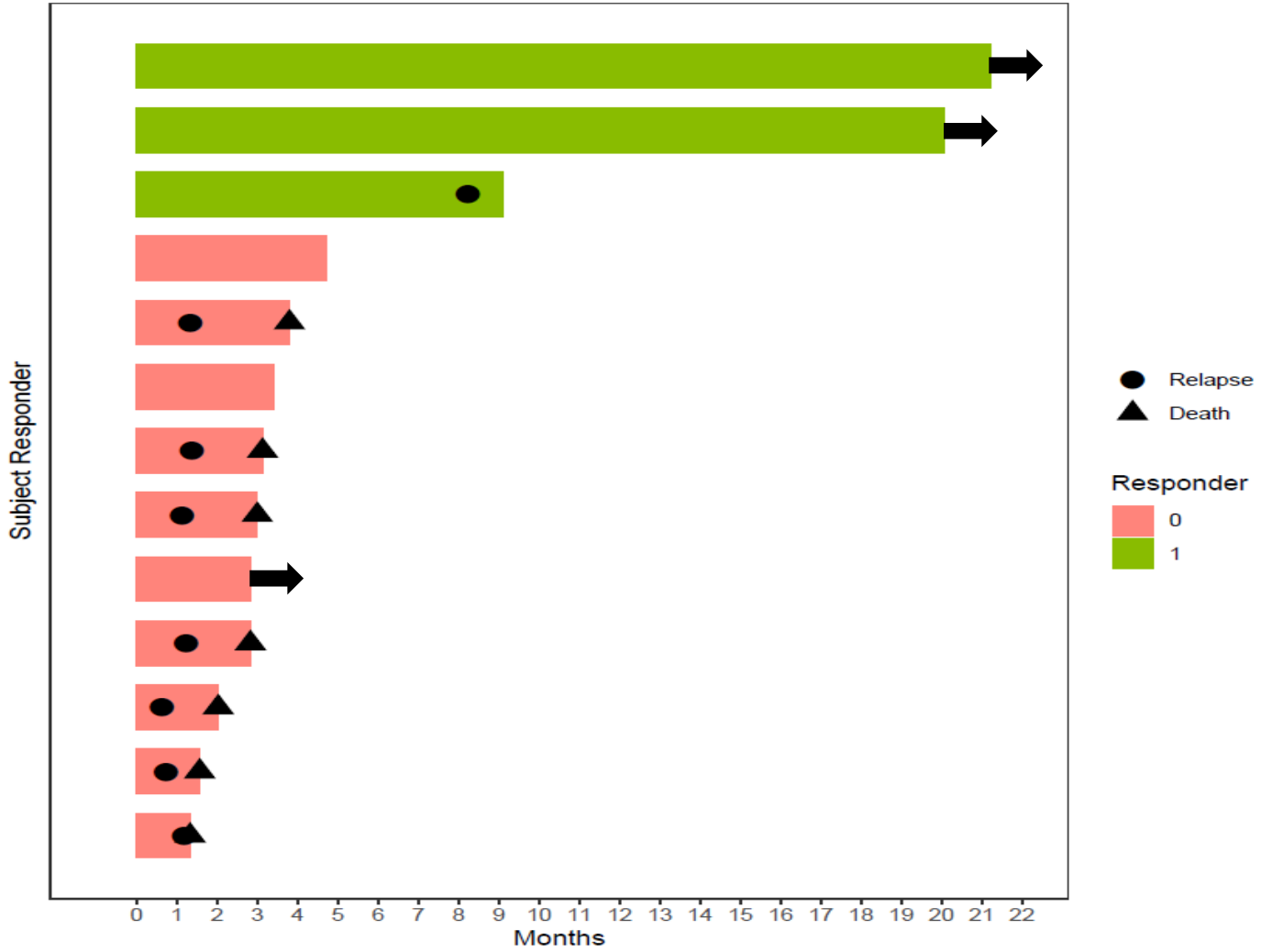
# Trial Schema




Pembrolizumab 200 mg every 3 weeks
CT every 6 weeks for 18 weeks then every 9 weeks for RECIST1.1 assessment
Target Accrual: 14 patients

# Clinical Response Data (data cut-off as of 9/28/18)

- 1 patient pending response evaluation
- All patients with MSS disease
- EBV status to be determined among adenocarcinomas (3 were SCC histology)

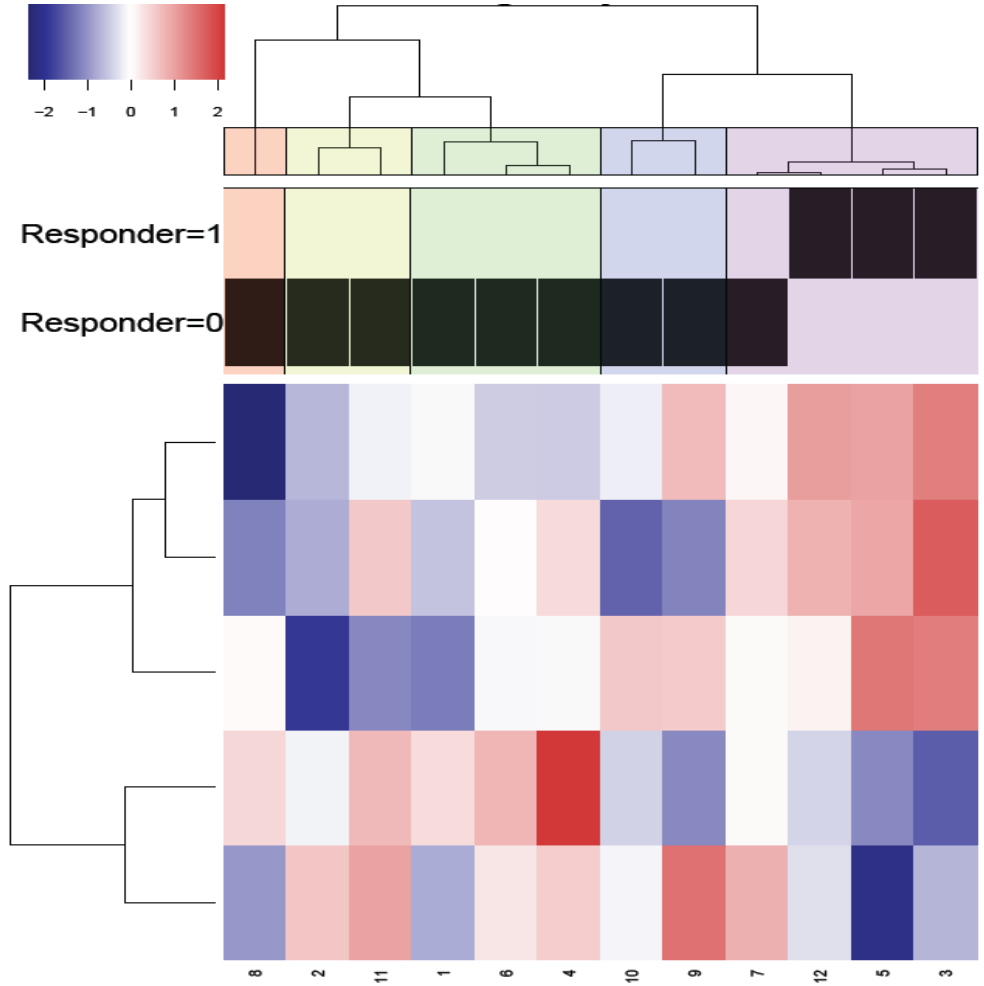


# Methods – Flow cytometry antibody panel (15-color) to analyze 105 circulating immune cell subsets

| Laser | Innate network | Adaptive network | Checkpoint network | LP | Filter | Fluor assignment |
|---|---|---|---|---|---|---|
| **640 (Red)** | CD33 | CCR10 | KLRG1 | 685 | 670/30 | APC/Alexa647 |
| | CD56 | CCR6 | 4-1BB | 685 | 730/45 | APC-R700/Alexa700 |
| | CD11c | CD73 | CXCR5 | 750 | 780/60 | APC-Cy7 |
| **405 (Violet)** | CD141 | PD-1 | BTLA | | 450/50 | BV421 |
| | Death | Dump | Dump | 505 | 525/50 | BV510 |
| | CD1c | CXCR5 | LAG-3 | 630 | 660/20 | BV650 |
| | CD123 | CXCR3 | OX40 | 750 | 780/60 | BV786 |
| **UV (355)** | CD14 | CD45RA | CD45RA | | 379/28 | BUV395 |
| | CD3 | CD8 | CD8 | 450 | 515/30 | BUV496 |
| | CD20 | CD4 | CD4 | 770 | 820/60 | BUV805 |
| **488 (Blue)** | CD83 | CD25 | CD160 | 505 | 525/50 | FITC/BB515 |
| | HLA-DR | CCR4 | TIGIT | 685 | 710/50 | PerCP-Cy5.5 |
| **Yel/Green (561)** | TCR$\gamma\delta$ | ICOS | PD-1 | | 585/15 | PE |
| | PD-L1 | CCR7 | CCR7 | 600 | 610/20 | PE-CF594 |
| | CD16 | CD127 | TIM-3 | 750 | 780/60 | PE-Cy7 |

# Initial Results – Circulating immune cell subsets with significant correlation to clinical responses

- Updated analysis of 13 patients with response data
- Clustering analyses between responders and non-responders revealed 5 subsets with logFC >1 at C2D15 sampling compared to baseline that are significant ($p < 0.05$)
- γδ T cells demonstrating increase of interest for further investigation



# Future Research Plans

- Confirm circulating immune cell subsets correlating with durable clinical benefit remain significant with longer term follow-up
- Tissue analyses of patients with satisfactory pre- and post-treatment biopsies
- Stool and oral microbiome profiling of patients with available specimens after trial amendment
- Circulating immune cell biomarkers correlating with durable clinical responses need to be validated in larger datasets