Eligibility Criteria for Immuno-Oncology Trials

FDA Cardio-Oncology Symposium
December 1, 2017

Douglas Johnson MD, MSCI
Vanderbilt-Ingram Cancer Center
Nashville, TN
Background

**APC – T-cell Interaction**

- Dendritic cell
- MHC
- TCR
- CD8

**Activation**
- Cytokine secretion
- Lysis
- Proliferation
- Migration to tumor

**Tumor Microenvironment**

- Tumor cell
- MHC
- PD-L1
- PD-L2

**CTLA-4 Blockade (Ipilimumab)**

**PD-1 Blockade (Nivolumab)**

All about the T cells

Adapted from Wolchok J, ASCO 2015
Inclusion/Exclusion Criteria

Anything that predisposes to immune toxicity
- Autoimmune disease
- Prior transplant

Anything that compromises immune efficacy
- Steroids
- Viral infections
- Prior anti-PD-1

Difficulty in interpreting efficacy/toxicity
- Brain mets
- Organ dysfunction
- Poor performance status

What is missing?
Inclusion/Exclusion Criteria

• Too restrictive?
  – Increasing inclusion/exclusion criteria in NSCLC trials
  – Between brain mets, autoimmunity, impaired organ function, prior cancers…. 

Missing a huge number of real-world patients!!!
Inclusion/Exclusion Criteria

• Too Restrictive?
  – No difference in survival in NSCLC with prior cancer
  – Good tolerance of ipilimumab and anti-PD-1 in patients with autoimmune disease, hepatitis B/C
  – Good tolerance in organ dysfunction
  – Good activity of ipi/nivo in untreated brain mets

Inclusion/Exclusion Criteria

Moving in the right direction?

- No prior cancers
- No autoimmunity
- No brain mets

- No cancer requiring definitive treatment, or cancers that have not been treated in X years
- Long list of exceptions or nothing requiring systemic therapy
- Definitively treated brain mets or brain met specific trials
Cardiac specific criteria

• Largely absent
  – “other medical condition that could interfere”
  – Impaired performance status
  – Combination partner criteria (e.g. VEGF or BRAF/MEK immune combinations)