Importance of Clinical Trials

Filip Janku, MD, PhD
Assistant Professor
Investigational Cancer Therapeutics (Phase I Clinical Trials Program)
MD Anderson Cancer Center
Houston, TX
Department of Investigational Cancer Therapeutics at MD Anderson

• The largest cancer drug development program in the nation and the world with more than 150 clinical trials on the priority list.

• The mission is to bring new drugs to cancer patients

• Clinical trial is an attractive option for patients with limited therapeutic options, who failed proven therapies
Why Do We Need Clinical Trials

• Clinical trials answer two important questions

  – Does the new treatment work?

  – Is the new treatment safe?
How Do We Do Clinical Trials

• Clinical trials are usually carried out in “phases”

  – **Phase I**: What is the safe dose?

  – **Phase II**: Does the treatment work?

  – **Phase III**: Is the treatment better than existing options?

• Timeline: 10-15 years
Clinical Trials: Pros

• **For mankind**
  – Increase in knowledge about particular disease and its therapy
  – Development of new therapies
  – Prove of efficacy or lack of thereof
  – Identification of potential significant side effects

• **For individual patient**
  – Access to new therapies, which are not commercially available
  – Expansion of therapeutic options
  – Standardized protocol-driven therapy
  – Some studies in cancer patients suggested that patients on clinical trials tend to have better outcomes compared to patients treated outside of trials
Clinical Trials: Cons

• For mankind
  – None

• For individual patient
  – Need to meet all qualifying criteria, which are usually not flexible
  – Less flexible and often more intense schedule
  – Travel, financial consequences and time commitment
  – Possible risk of unknown/unexpected side effects
Why Should I Consider Clinical Trials

• Results of clinical trials are important not only for developing new therapies

• Clinical trials can provide necessary evidence to convince payers to reimburse new and effective therapies

• Clinical testing is necessary tool to make the progress happen
Strategies for Clinical Trials in ECD

- Prognosis and outcomes have dramatically improved; however, overall there is still room for improvement

- We have relatively limited therapeutic armamentarium

- We have limited resources (patients, finances) and large number of questions, which need to be answered
Strategies for Clinical Trials in ECD

• **Phase I**: Access for ECD patients to these studies, which are often limited to conventional cancers

• **Phase II**:
  – “Basket studies”: clinical trials for patients with any cancer or histiocytosis with certain unifying feature (e.g. vemurafenib in patients with *BRAF* mutation)
  – ECD specific phase II studies: because of limited number of patients this approach should be reserved for promising therapies with high likelihood of FDA/EMA approval (*BRAF*+: vemurafenib, dabrafenib/trametinib; *BRAF*- cobimetinib or trametinib?)

• **Phase III**: not feasible in ECD
Where Can I Learn About Clinical Trials?

• ECD Global Alliance Website
• Clinicaltrials.gov
• Care Centers
Examples of Clinical Trials for ECD Patients at MD Anderson

- **BRAF** mutation positive
  - Multicenter: my pathway (vemurafenib)
  - Multicenter: dabrafenib/trametinib
  - Multicenter: BVD-523
  - Multicenter: PLX8394

- **BRAF** mutation negative
  - Multicenter: BVD-523 (if MAP2K1 mutation present)
  - Multicenter: PLX8394
  - Single Center: everolimus/anakinra
Take Home Message

Clinical Trials are Part of Standard of Care in ECD

Important clinical efforts
- **BRAF+**: vemurafenib or dabrafenib/trametinib
- **BRAF-**: cobimetinib? or trametinib?