The Challenges of Oral Chemotherapy Delivery

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Disclosures

- I have no conflicts of interest to disclose.
Current Challenges

- Oral Parity
- Financial Toxicity
- Access
- Transitions of Care
- Safety
- Staff Resources
- Bioavailability
- Interactions
- Adherence/Persistence
Oral Chemotherapy Access Legislative Landscape – July 2015

- **Active Campaign**
- **Signed into law**

40 states have enacted oral chemotherapy access laws:

- **2008** Oregon
- **2009** Indiana, Iowa, Hawaii, District of Columbia
- **2010** Vermont, Connecticut, Kansas, Colorado, Minnesota
- **2011** Illinois, New Mexico, Texas, New York, Washington
- **2012** New Jersey, Virginia, Maryland, Nebraska, Delaware, Louisiana
- **2013** Massachusetts, Oklahoma, Utah, Nevada, Florida, Rhode Island, California
- **2014** Maine, Missouri, Wisconsin, Kentucky, Georgia, Arizona, Ohio
- **2015** Wyoming, South Dakota, West Virginia, Mississippi, North Dakota, New Hampshire
Current Challenges

- Oral Parity
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- Bioavailability
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EXPECT DELAYS
Bioavailability: Take with Food

- Altretamine
- Bexarotene
- Bosutinib
- Capecitabine
- Cyclophosphamide
- Exemestane
- Imatinib
- Palbociclib
- Regorafenib*
- Vorinostat
Bioavailability: Take w/o Food

- Abiraterone*
- Afatinib*
- Cabozantinib*
- Ceritinib
- Chlorambucil
- Dabrafenib
- Erlotinib
- Estramustine
- Ibrutinib
- Lapatinib
- Lomustine
- Melphalan
Take w/o Food (cont)

- Mercaptopurine
- Nilotinib
- Pazopanib
- Pomalidomide
- Sonidegib
- Temozolomide
- Trametinib
- Ceritinib
Bioavailability: Acid Suppression

- Bosutinib
- Crizotinib
- Dabrafenib
- Dasatinib
- Erlotinib
- Palbociclib
- Gefitinib
- Nilotinib
- Pazopanib
- Ponatinib
- Vismodegib
- Methotrexate
Interactions: Avoid Grapefruit*

- Afatinib
- Axitinib
- Bexarotene
- Cabozantinib
- Crizotinib
- Dabrafenib
- Dasatinib
- Erlotinib
- Etoposide^* 
- Everolimus
- Gefitinib
- Imatinib
Avoid Grapefruit* (cont)

- Ibrutinib
- Lapatinib
- Nilotinib
- Olaparib
- Palbociclib
- Panobinostat^ 
- Pazopanib
- Ponatinib
- Regorafenib
- Ruxolitinib
- Sunitinib
- Ceritinib
Interactions: Increased INR

- Tamoxifen (contraindicated)
- Capecitabine
- Erlotinib
- Imatinib
- Lapatinib
- Sorafenib
- Ceritinib
- Vemurafenib
- Dasatinib
- Gefitinib
- Bicalutamide
- Flutamide
- Vorinostat
Interactions: Decreased INR

- Enzalutamide
- Dabrafenib
- Mitotane
Adherence/Persistence

- “Drugs don’t work in patients who don’t take them”
  
  C. Everett Koop
  US Surgeon General
  1982-1989
Adherence/Persistence

- **Adherence**: the extent to which a person’s behavior – taking medication, following a diet, and/or executing lifestyle changes, corresponds with agreed recommendation from a health care provider.

- **Persistence**: duration of time from the initiation to the discontinuation of therapy.
Patient Adherence

- Potential indicators of poor adherence
  - Complexity of regimen (e.g. capecitabine+lapatinib)
  - Duration of therapy
  - Adverse effects (real or imagined)
  - Psychological/behavioral deficits
  - Physical impairments
  - Language barriers
  - Socioeconomic factors
  - Cultural factors
  - System issues
Adherence in the Literature

- Tamoxifen
- Aromatase inhibitors
- TKIs
Results of Nonadherence

- Increased utilization of healthcare resources
- Drug resistance
- Suboptimal response
- Disease progression
- Death
Improving Adherence

- Identify high-risk patients
- Education (and re-education)
- Use of pill boxes and pill reminders
- Simplification of regimen
- Reinforcement of adherent behaviors
- Access to healthcare team
- Listen to what the patient is NOT saying
Future Considerations

- Post marketing research
- Formulation/packaging
- New indications for existing agents
- Combination regimens
- Combination agents
- Care continuity
- Resource optimization
Conclusions

- The delivery of oral chemotherapy is a complex and evolving healthcare issue

- Multidisciplinary approach required for optimal outcomes

- Goals
  - Adherence
  - Adverse effect management
  - Patient safety
References


- Schneider SM, Hess K, Gosselin T. Interventions to Promote Adherence with Oral Agents. Semin Oncol Nurs. 2011 May; 27(2): 133–141
References (cont)


Questions??

“"It completely cures 15 major diseases. Now if only we could get someone to swallow it.""