A Behind the Scenes Look at Pediatric Hematology Oncology: What you don’t see on wards

Gail Tomlinson, M.D., PhD.
Division Chief, Pediatric Hematology-Oncology and others

Today’s Additional Speakers

Leanne Embry, PhD
Greg Aune, MD, PhD
Chatch Assanasen, MD

Commercial Disclosures

Tomlinson – none
Embry - none
Aune - none
Assanasen: Alexion Pharmaceuticals – paid speaker and Advisory Board

Learning Objectives

- Understand the psychosocial needs of cancer patients
- Understand the long-term risks of cancer chemotherapy on cancer outcomes
- Understand the importance of research on cancer outcomes and survivorship
- Understand limitations of cancer care in low to middle income countries

DISCLAIMER

This talk will not include all activities within the Division

Only a Few Highlights!

Perceived bragging rights intentional!
Clinical Trials Research

NCI Community Oncology Research Program (NCORP)
South Texas Consortium
UTHSCSA (lead), Methodist, Driscoll, Dell
Clinical Trial Infrastructure – COG Studies
Emphasis on minority children with cancer
$5M federal grant support

EXPANSION TO CANCER DELIVERY RESEARCH

POETIC - Consortium for Early Phase Drug Trials
Two open studies
First anti-PDL-1 study in children

Children’s Oncology Group COG

NCORP funded 200+ Member Consortium
>90% of children with cancer treated at COG institutions
35 Disease and Discipline committees
Major Leadership Roles by UTHSCSA Faculty
Langevin – Chair of NCORP Comm
Embry – Chair of Behavioral Science
Tomlinson – Steering and Vice-Chair, Rare Tumors
Weinman – Scientific Counsel
Sugalski – Steering Committee, Cancer Care Delivery Research
Grimes – Steering Committee, Cancer Control and Supportive Care

Focus on cancer in Hispanic children of South Texas

Background:
Hispanic children have higher rates of leukemia and germ cell tumors.
Hispanic children have worse outcomes in leukemia and possibly bone tumors.
Hispanic children may have unique toxicities.

Established Epidemiology Biorepository:
>450 enrolled
Blood samples – patient and parents
Extensive demographics and clinical data
Recent focus on establishment of model systems of cancer in Hispanic children

Greehey Children’s Cancer Research Institute

Peter Houghton, Ph.D., Director
12 major investigators
4 primary pediatric faculty
Multi-disciplinary, all focus on pediatric cancer

Cancer Survivorship Research

Background:
There will be 500,000 survivors of pediatric cancer in the U.S. by 2020.
Cardiac disease is a leading cause of premature death.
Goal: develop a model to study the long-term cardiovascular effects of early exposure to chemotherapy

- Model established
- Chemotherapy directly induces cardiac fibroblasts to increase collagen production
- Mice deficient in COBRA1 have enhanced sensitivity to doxorubicin

Down’s Syndrome and Pediatric Cancer Risk

Well-documented association of Trisomy 21 and leukemia
Less well-documented association of Protective association of Trisomy 21 and solid tumors, i.e., neuroblastoma
Genetics and Biology of Liver Tumorigenesis in Children

RP101195 - Gail E. Tomlinson, MD, PhD (Lead PI)

Aim: Identify new therapeutic targets

INTEGRATED ANALYSIS OF HEPATOBLASTOMA

Clinical & pathological annotation
RNA and miRNA expression profiling
Mouse modeling
Genome sequencing
CGH/SNP array

And now onto our next speaker . . .