Pediatric Oncology

John F. Kuttesch, Jr., Ph.D., M.D.
Chief, Division of Pediatric Hematology/Oncology
> 12,400 children and adolescents are diagnosed with cancer per year

One of every 500 young adults is a childhood cancer survivor
  • Nearly 2/3 of the survivors later experience significant and chronic medical problems or develop secondary cancers

The causes of most pediatric cancers remain a mystery and cannot be prevented

Leading cause of death by disease in children and adolescents

100% socioeconomic and psychosocial impact on the family
Impact
- Sub Specialization
- Multidisciplinary Care
- Collaboration: Children’s Oncology Group
  ✓ Clinical Trials
  ✓ Clinical Translational Research
  ✓ Basic Research

Challenges
- Acute
  ✓ Child
  ✓ Family
- Late
  ✓ Organ System
  ✓ Neurological/ Learning Disabilities
  ✓ Psychosocial
  ✓ Second Cancers (10-fold risk)

### Childhood Cancer (USA): 0-14 years
**Incidence:** 17/100,000

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>1975-1977</th>
<th>2002-2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Lymphocytic Leukemia</td>
<td>58</td>
<td>91</td>
</tr>
<tr>
<td>Acute Myeloid Leukemia</td>
<td>19</td>
<td>64</td>
</tr>
<tr>
<td>Bone and Joint</td>
<td>50</td>
<td>79</td>
</tr>
<tr>
<td>Brain/Central Nervous System</td>
<td>57</td>
<td>75</td>
</tr>
<tr>
<td>Hodgkin’s Lymphoma</td>
<td>81</td>
<td>97</td>
</tr>
<tr>
<td>Non-Hodgkin’s Lymphoma</td>
<td>43</td>
<td>85</td>
</tr>
<tr>
<td>Neuroblastoma</td>
<td>53</td>
<td>74</td>
</tr>
<tr>
<td>Soft Tissue</td>
<td>61</td>
<td>82</td>
</tr>
<tr>
<td>Wilms</td>
<td>73</td>
<td>90</td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td><strong>58</strong></td>
<td><strong>83</strong></td>
</tr>
</tbody>
</table>

*From: CA CANCER J CLIN 2013;63:11–30*
What We Do....
Mission: Pediatric Oncology at UNM Health Science Center

To Decrease the Burden of Childhood Cancer in Children and Families of New Mexico through Clinical Service, Research and Education.
Clinical Services – Pediatric Hematology/Oncology

- The Only Tertiary Care Provider of Oncology Services for Infants, Children and Adolescents in New Mexico

- Multidisciplinary Team Approach in the Comprehensive Care of Patients (7 physicians, 2 practitioners, 9 nurses, 3 social workers, 2 pharmacists)

- Comprehensive Children’s Hospital Environment

- UNM Cancer Center Services: Radiation Therapy, Orthopedic Oncology, Gynecologic Oncology

- Collaboration with UNM Cancer Center: Care of Young Adults
Clinical Services – Pediatric Hematology/Oncology

- **Comprehensive Treatment Planning and Care**
  - Weekly Patient Care Meetings
  - Biweekly Tumor Board Reviews
  - Weekly Radiology Conferences
  - Psychosocial Rounds

- **Comprehensive Clinics/Programs**
  - Post Bone Marrow Transplant Follow-up Clinic
  - Young Enduring Survivors (YES) Clinic
  - Mariposa
Pediatric Hematology/Oncology

- Referrals received from all parts of the state
- 175 referrals from 2010–2013
Research – Pediatric Hematology/Oncology

- Nationally-Recognized Investigators
  - Dr. Boayue (PI COG-UNM); Dr. Heideman (Brain Tumors); Dr. Kuttesch (Brain Tumors, Chair, DSMC-Experimental Therapies; Dr. Winter (Leukemia Research)

- Children’s Oncology Group - UNM
  - Over 90% of eligible patients enrolled on National Cancer Institute-approved therapeutic trials
  - Sixty-Five Open Research Studies (Therapy, Epidemiology, Biology, Registry)
  - Cancer Control Research Studies: Medication Adherence, Osteonecrosis, Kidney Function
  - Data Compliance: 100%

- Sponsored Research - UNM
  - Clinical Projects: 7
  - Laboratory-Based Projects: 3
Clinical Trials – Pediatric Oncology

A comprehensive clinical trials team meets weekly to discuss enrollments and study issues. The current open study portfolio includes:

- 14 Biology Studies
- 35 Therapeutic Trials
- 15 Cancer Control, Epidemiology, Late Effects and Pharmacologic PK/PD Studies
Community Outreach and Survivor Programs, Methods to Enhance Clinical Trial Recruitments

- Adolescents and Young Adults
  - YES Clinic
- Camps for Children/Survivors
  - Camp Enchantment
  - Sibling Retreat
- Hospice Programs
  - Mariposa
- Off-site Teaching / Physician Outreach Programs
  - Community Education
  - Hospital Outreach
  - School Outreach
Education & Outreach – Pediatric Hematology/Oncology

- Medical Student/Resident Education
  - Clinical Rotations: 16 residents
  - Medical Student Lectures: 130
  - Tumor Boards, Radiology Rounds, Patient Care Conferences
  - Medical Student Teaching
  - Consistently Outstanding Teaching Scores

- Professional Presentations

- Community Outreach
Young Enduring Survivors Clinic (YES)

- Provides Multi-Disciplinary Follow-up for > 500 Survivors of Pediatric Malignancies

- Programs
  - Multi-disciplinary clinic for patients at least 2 years off therapy and cancer-free. Health assessment and screening. Risk assessment.
  - School Re-entry Program
  - Tobacco Use Screening and Cessation Program: Funded through a community grant
  - Young Adult Transition Program as patients become adults
  - Outreach: Education
UNM Mariposa Program
Pediatric Hospice

"The dying child deserves always to be treated first as a child, and secondarily as a dying person."
- Kathleen W. Faulkner, Hospice Care for Children

- Mariposa is a team of highly-trained professionals offering the only Pediatric Palliative care and Hospice resource in New Mexico.

- Mariposa offers comprehensive, compassionate care for infants, children and adolescents with life limiting conditions….not just cancer!

- Mariposa emphasizes quality of life rather than length of life.

- Serves not only the child, but supports the entire family, including parents and siblings.
Pediatric Oncology Summary

- **Clinical Service**
  - Pediatric Specialists/ Pediatric-focused
  - Medium + -sized program
  - Care of infants, children, adolescents (Young Adults)
  - Continuum of care: Diagnosis to Survivorship
  - Multidisciplinary care combining resources of a Comprehensive Children’s Hospital and a comprehensive Cancer Center
  - Mariposa

- **Research**
  - Clinical Research: outstanding recruitment and conduct of clinical trials
  - National leadership in clinical research /nationally recognized investigators
  - Laboratory research: T-cell malignancies
  - Mentoring of residents and medical students

- **Education**
  - Mentoring and Teaching: Residency and Medical Student
  - Consultation and co-ordination of care

- **Program Development**
  - Adolescent and Young Adult Program: (leukemia, lymphoma, sarcoma & gynecologic Ca)
### Pediatric Hematology/Oncology

**Budget 2013-2014**

<table>
<thead>
<tr>
<th></th>
<th>Amount ($)</th>
<th>Total (%)</th>
</tr>
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<tbody>
<tr>
<td><strong>Revenues:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tobacco Settlement Fund Allocation</td>
<td>261,400</td>
<td>9.0</td>
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<tr>
<td>General Fund Appropriation</td>
<td>1,303,400</td>
<td>45.1</td>
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<tr>
<td>Overall Total Revenues</td>
<td>2,889,924</td>
<td></td>
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<td><strong>Expenses:</strong></td>
<td></td>
<td></td>
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<tr>
<td>Total Compensation</td>
<td>2,504,669</td>
<td>87.2</td>
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<tr>
<td>Non-Salary Costs</td>
<td>370,335</td>
<td>12.8</td>
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<tr>
<td>Total Expenses</td>
<td>2,875,004</td>
<td></td>
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<tr>
<td><strong>Net Revenue</strong></td>
<td>14,920</td>
<td>0.5</td>
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</table>

(As of June 30, 2014)

- **Supports our mission to deliver outstanding care to the Children of New Mexico**
- **Supports access to the best therapies available in the world to improve outcomes**
- **Supports survivorship, education and outreach**
- **To give the best care to the Children of New Mexico**
Questions?