WHAT IS A BRAIN TUMOR

• Growth inside the skull
• Cells lose signal to stop dividing. Like CD
• Many different types 120
• Benign, low grade, cancer or malignant
• Some genetic, some spontaneous, some environmental, some combination of these
• Environmental causes
BENIGN BRAIN TUMORS

- MENINGIOMAS
- ACOUSTIC NEUROMAS
- PITUITARY TUMORS

- WE CAN CURE MOST WITH SURGERY

LOW GRADE TUMORS

- PRE-CANCEROUS
- LOW GRADE GLIOMAS

- CAN BECOME CANCEROUS
MALIGNANT BRAIN TUMORS

• GLIOBLASTOMA
• ANAPLASTIC ASTROCYTOMA
• EPENDYOMAS
• METASTATIC BRAIN TUMORS
  – LUNG
  – BREAST
  – MELANOMA
  – COLON
• NEED COMBINATION THERAPY

TREATMENTS

• SURGERY
• RADIATION THERAPY
• CHEMOTHERAPY
• IMMUNE THERAPY
• COMPLEMENTARY MEDICINE
SURGERY

• BIOPSY – FRAMELESS OR FRAME
• CRANIO TOMY
  – AWAKE
  – MOTOR STRIP MAPPING
  – FRAMELESS MRI GUIDED
  – INTRAOP MRI
• NEED TO GET ALL TUMOR OUT

RADIATION THERAPY

• STANDARD
• RADIOSURGERY
  – SRT
  – SRS
    • GAMMA KNIFE
    • XKNIFE
    • CYBERKNIFE
    • PROTON BEAM
    • ALL THE SAME
CHEMOTHERAPY

• TEMODAR
• AVASTIN
• PROBLEM OF THE BLOOD BRAIN BARRIER
• SELECTIVE BBB OPENING
• TARGETED NANODRUGS
• PERSONALIZED THERAPY

IMMUNOTHERAPY

• BRAIN CANCER VACCINES
CANCER STEM CELL

• 2% TO 3% OF CELLS IN TUMOR
• SUPPLY OF NEW CANCER CELLS

IMAGING

• CT SCANS
• MRI SCANS
  – MRI SPECT
  – FUNCTIONAL MRI
• PET SCANS
YOUR TEAM

• NEUROSURGEON
• NEUROLOGIST
• NEURO-ONCOLOGIST
• MEDICAL ONCOLOGIST
• RADIATION ONCOLOGIST
• NEURO-RADIOLOGIST
• NEURO-PATHOLOGIST

CLINICAL TRIALS

• ONLY 5% OF MALIGNANT TUMORS
• PHASE I
• PHASE II
• PHASE III
• FDA APPROVED
• RESEARCH NURSE
• PLEASE SPEAK TO YOUR DOCTOR ABOUT CLINICAL TRIALS
COMPREHENSIVE CENTERS

- ONLY A SMALL PERCENT OF NEUROSURGEONS SPECALIZE IN BRAIN TUMORS
- OUTCOME BETTER IN COMPREHENSIVE CENTERS

### Brain Tumor Quality Data

<table>
<thead>
<tr>
<th>In-Patient Hospital Averages</th>
<th>Cedars-Sinai Brain Tumor 2006 (N = 164)</th>
<th>National Average 2006</th>
<th>Cedars-Sinai Brain Tumor 2007 (N = 164)</th>
<th>National Average 2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>For patients undergoing <strong>brain tumor resection</strong>, the median <strong>mortality rate</strong> was:</td>
<td>0.00%</td>
<td>1.52%</td>
<td>0.06%</td>
<td>1.57%</td>
</tr>
<tr>
<td>For patients undergoing <strong>brain tumor resection</strong>, the median <strong>length of stay</strong> following surgery was:</td>
<td>5.7</td>
<td>5.4</td>
<td>4.8</td>
<td>5.1</td>
</tr>
</tbody>
</table>
Brain Tumor Quality Data

<table>
<thead>
<tr>
<th></th>
<th>Cedars-Sinai Brain Tumor 2002-2006</th>
<th>State of California Average</th>
<th>National Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Year Survival</td>
<td>75.9%</td>
<td>49.8%</td>
<td>46.6%</td>
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<tr>
<td>Two Year Survival</td>
<td>61.1%</td>
<td>31.7%</td>
<td>29.3%</td>
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<tr>
<td>Three Year Survival</td>
<td>55.9%</td>
<td>26.4%</td>
<td>24.4%</td>
</tr>
<tr>
<td>Four Year Survival</td>
<td>51.4%</td>
<td>23.5%</td>
<td>21.8%</td>
</tr>
<tr>
<td>Five Year Survival</td>
<td>50.1%</td>
<td>21.7%</td>
<td>19.8%</td>
</tr>
</tbody>
</table>

THANK YOU

• PLEASE ENJOY THE CONFERENCE