

Pediatric Proton Therapy in the United States: Patterns of Care 2010



pediatric proton foundation



The **National Association** for **Proton Therapy**

LOMA LINDA UNIVERSITY
MEDICAL CENTER

cdh
CENTRAL DUPAGE
HOSPITAL
ProCure
Proton Therapy Center
INTEGRIS
Cancer Institute
OF OKLAHOMA

Ψ
HEALTH
Proton Therapy Center

MGH
1811
MASSACHUSETTS
GENERAL HOSPITAL
1811 - 2011

Penn Medicine

HAMPTON UNIVERSITY
PROTON THERAPY INSTITUTE
FIGHTING CANCER, SAVING LIVES

THE UNIVERSITY OF TEXAS
MD Anderson
Cancer Center

UF
UNIVERSITY OF FLORIDA
PROTON
THERAPY
INSTITUTE

★ = In Operation ☆ = Under Construction ★ = In Development

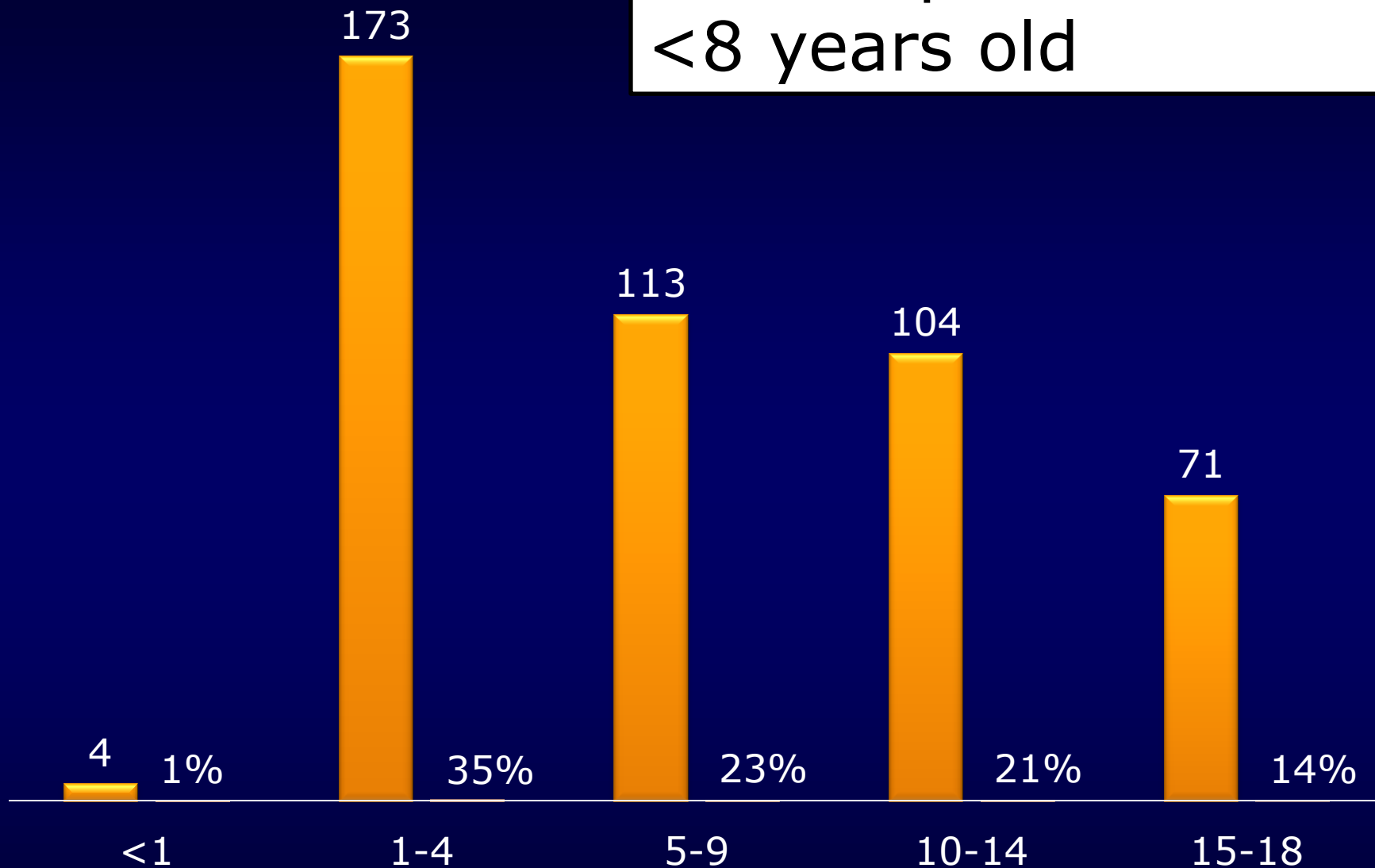
Survey Methodology

- All 9 proton centers were surveyed by staff of PPF and NAPT
 - Anonymous patient age range, tumor site, and histology collected for patients treated from 1/1/2010-12/31/2010
- Data processed and collated by PPF/NAPT
- 100% response rate

Results

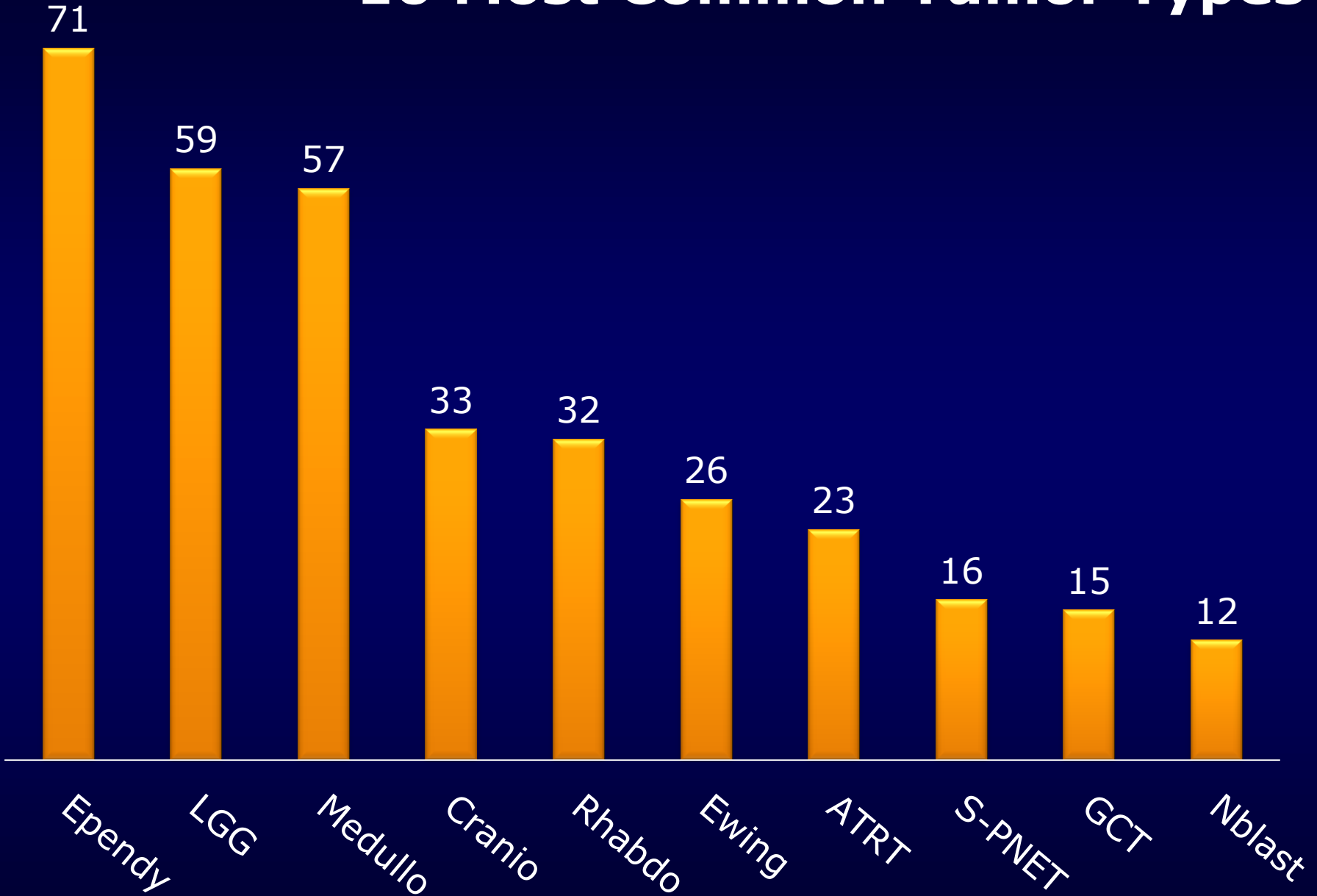
- 465 children and adolescents treated with proton therapy in 2010
- All facilities treated ≥ 1 pediatric patient
 - Hampton University and Procure-Central DuPage opened mid-year
- Approximately 45 different diagnoses
- 66% of patients treated at 3 centers (MGH, MDACC, UF)

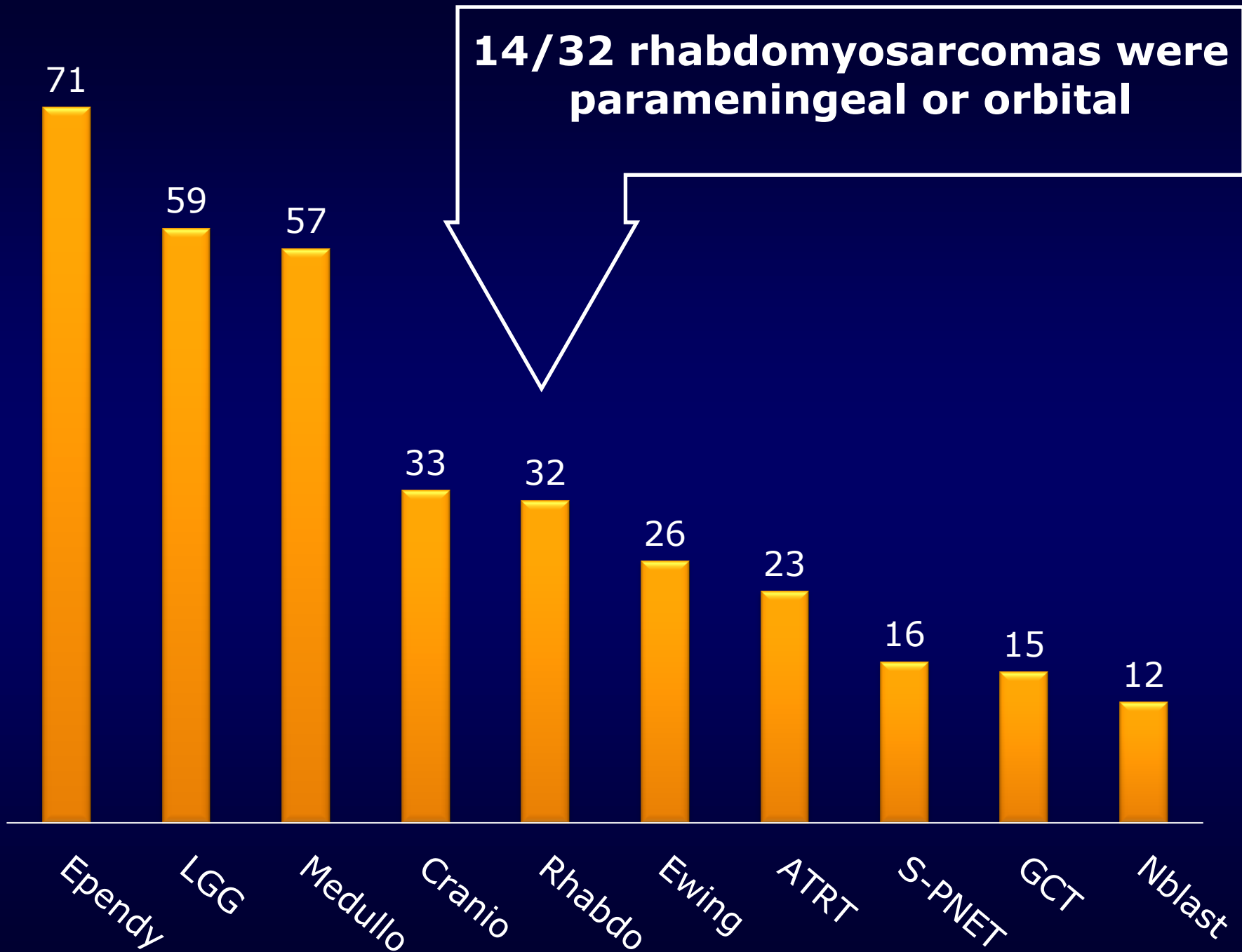
53% of patients were <8 years old

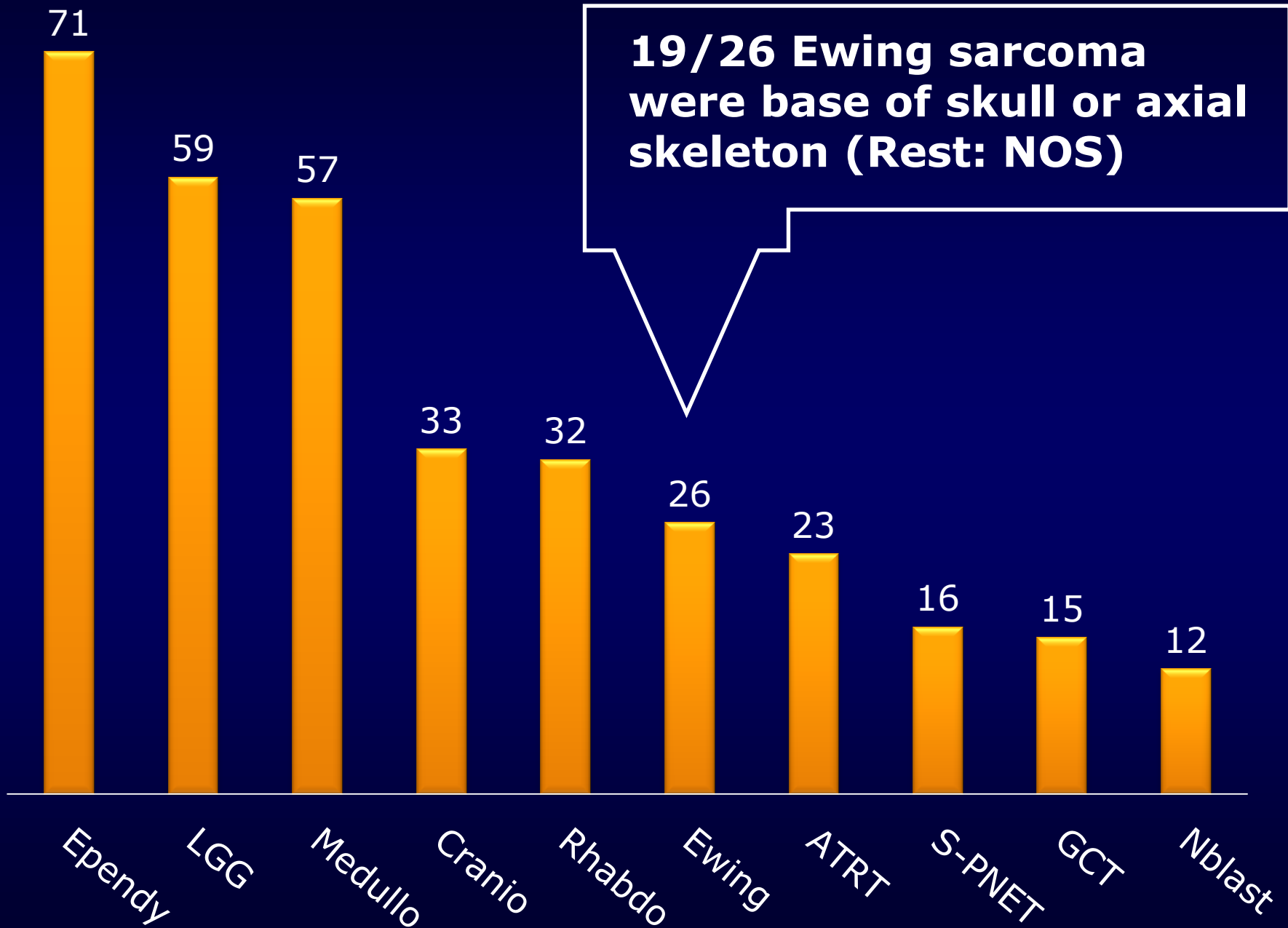


Patient Age

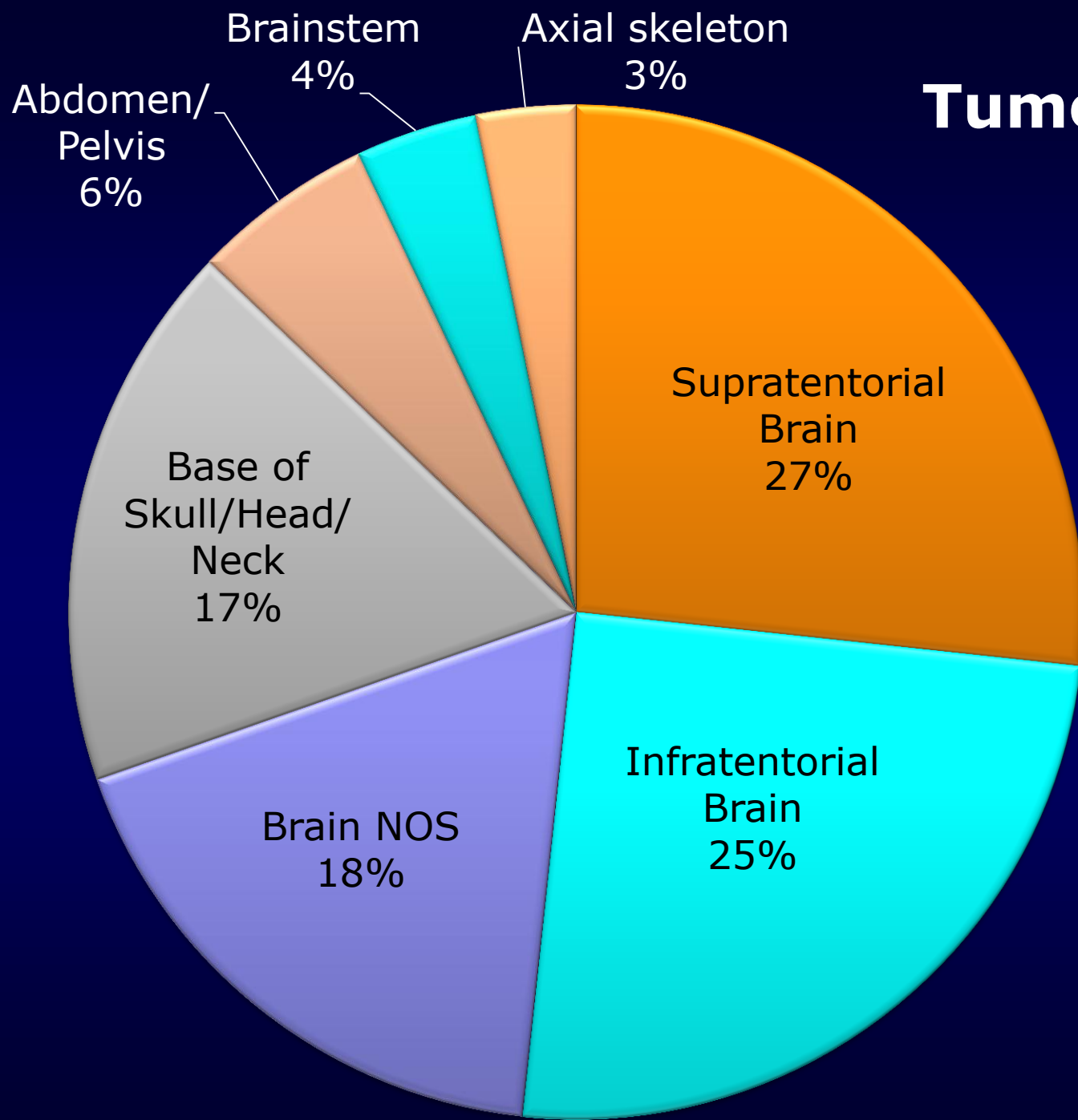
10 Most Common Tumor Types







Tumor Site



Limitations

- Self-reported survey
 - No external validation
- Tumor stage and subsite not reported
 - Did not consistently have full detail on histology, site (“NOS”)
 - ICD-9 code not always specific or reliable
- Do not confuse “patterns of care” with “best indications”

Conclusion

- In 2010, all operating proton centers were treating children
- Wide variety of diagnoses treated, but young patients with CNS tumors and trunk/axial sarcomas most common
- Multidisciplinary team is important
 - 3/6 top tumors require concurrent chemotherapy
 - 50% of patients require anesthesia support