

Supplemental Table 1

Primary Tumors

- Tumor tissue obtained directly from the operating room
- Faithfully represent the genetic, epigenetic, and transcriptional profile of human tumors
- Contain admixed non-neoplastic cells
- Contain intratumoral genetic heterogeneity
- Often contain substantial necrosis
- Limited in quantity (*i.e.* individual tumors are non-renewable)
- Susceptible to ischemia and degradation due to delays between surgical resection and freezing/fixation

Primary Xenografts

- Primary tumors that have been implanted into immunodeficient mice and have re-grown into tumors
- Largely free of admixed non-neoplastic human cells
- Unlimited in quantity (*i.e.* xenografts can be repeatedly passaged)
- Some tumor types do not efficiently form xenografts
- Xenograft growth can require several months

Primary Cultures

- Early passage cultures of dissociated primary tumors
- Often contain admixed non-neoplastic cells
- Limited in quantity

Established Cell Lines

- Late passage cultures of dissociated primary tumors
- Do not contain admixed non-neoplastic human cells
- Unlimited in quantity (*i.e.* cell lines can be repeatedly passaged)
- Some tumor types do not efficiently form cell lines
- Establishment can require several months
- Matched normal tissue is often not available