## Description of the cohort

Patients and tumor characteristics(Table 1)

Forty-nine patients were included in our cohort. Two girls of 26 and 11 months diagnosed with low risk neuroblastoma were included due to early progression. The MYCN status for both patients was negative at diagnosis but changed for the younger one at relapse. We excluded 4 patients for the construction of the mathematical model as the date of inclusion in the HRNBL1 protocol was delayed when compared with the initial diagnosis (pre-treatment with other off-protocol chemotherapy types and one 36 months-old girl with a metastatic, MYCN negative esthesio-neuroblastoma whose size could not be estimated).

Median age was 36 months (range 11-140). LDH levels at diagnosis were high with a median of 842 IU/L (range 302 – 22,022), compared with laboratory typical values < 300 IU/L. Metastases were present for most patients (91.8%) and SIOPEN scores were overall high (median 27 (0-60)). Three patients who had a negative mIBG (no fixing primary tumor on scintigraphy) but PET-visible metastases were excluded. All patients underwent bone marrow aspirates and/or biopsies.

Location of primary tumors was adrenal for 55.1% patients (n=27) and abdominal for 34.7% (n=17). Details are given in Figure S3A. Primary tumor median volume was 272 cm3 (range 0.5 – 2 266 cm3). Locations of metastasesare detailed in Figure S3B. The most frequent metastatic site was bone marrow (n=38, 77.6%).

### Patients outcome

Twenty-three patients had complete response (46.9%), 24 partial response (49%) and only 2 had stable disease (4.1%). However only 20 patients did not ultimately progress (40.8%). Among those who progressed (59.2%), 25 died (51% of whole initial cohort). Details of patients survival are showed in Figure 2. The median survival without progression was 29 months. At 3 and 5 years, progression-free survival rates were 44.1%, and 29.1%, respectively. Median overall survival (OS) was 43 months. At 3 and 5 years, OS rates were 55.8% and 38.9%, respectively.