

CORRELATION WITH DISEASE BURDEN AND EARLY DETECTION OF RECURRENCE USING A NOVEL NUCLEOSOME-BASED PLASMA BASED ASSAY IN LONGITUDINALLY MONITORED NEUROBLASTOMA PATIENTS

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Disclosures

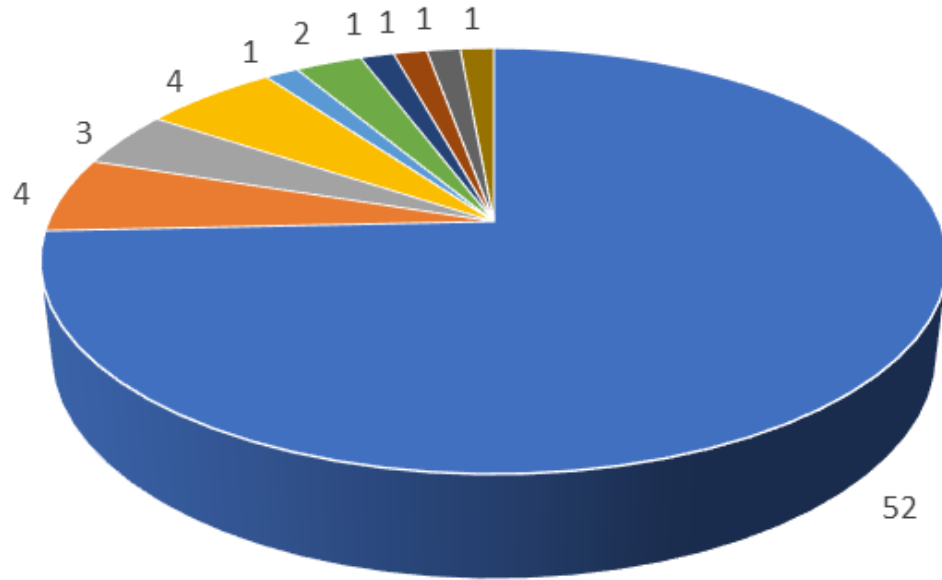
Founder shares Autolus Ltd

Consulting Roche

Collaborations ALX-Oncology, Volition

- Longitudinal monitoring during and after treatment
- Pilot data in small number of centres
- Early detection of relapse /progression
- Platform for comparing technologies

Tumour types of patients enrolled



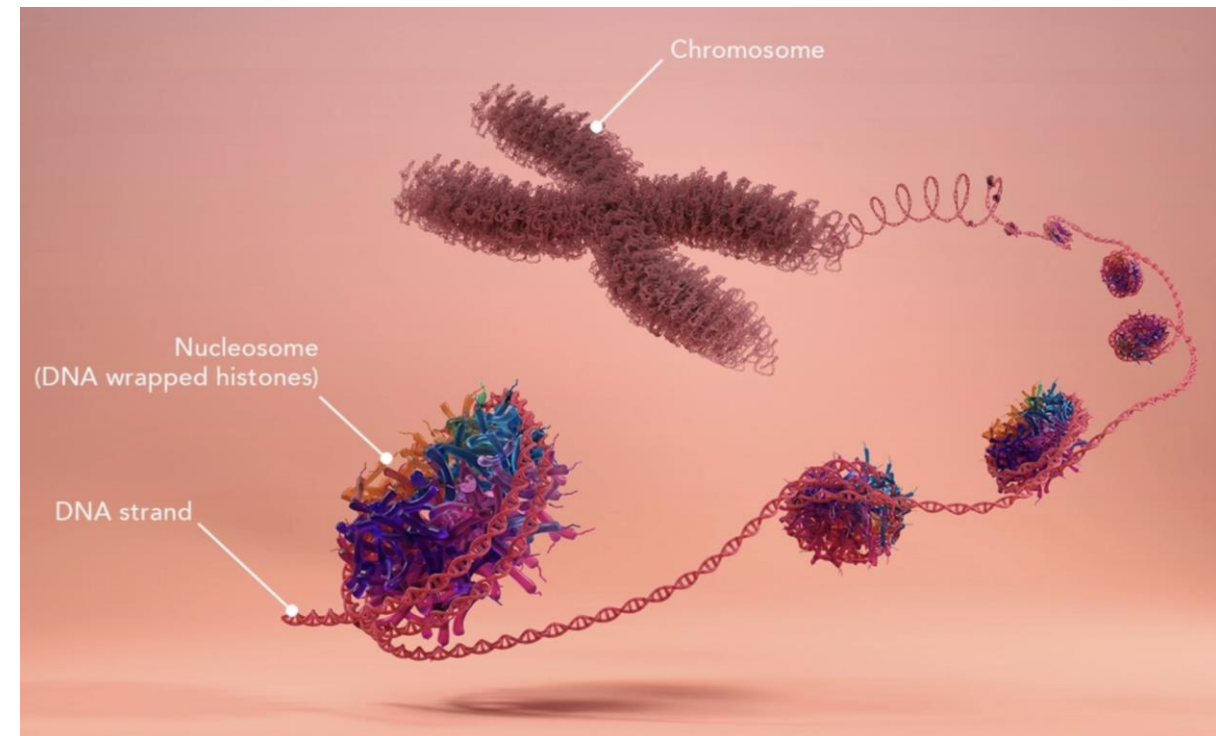
- Neuroblastoma
- Wilms Tumour
- Rhabdomyosarcoma
- Adrenal cortical tumour
- ATRT
- Teratoma
- Clear Cell Sercoma Kidney
- Hepatoblastoma
- Ewings Sarcoma
- Beckwith-Wiedemann Syndrome

GOSH samples

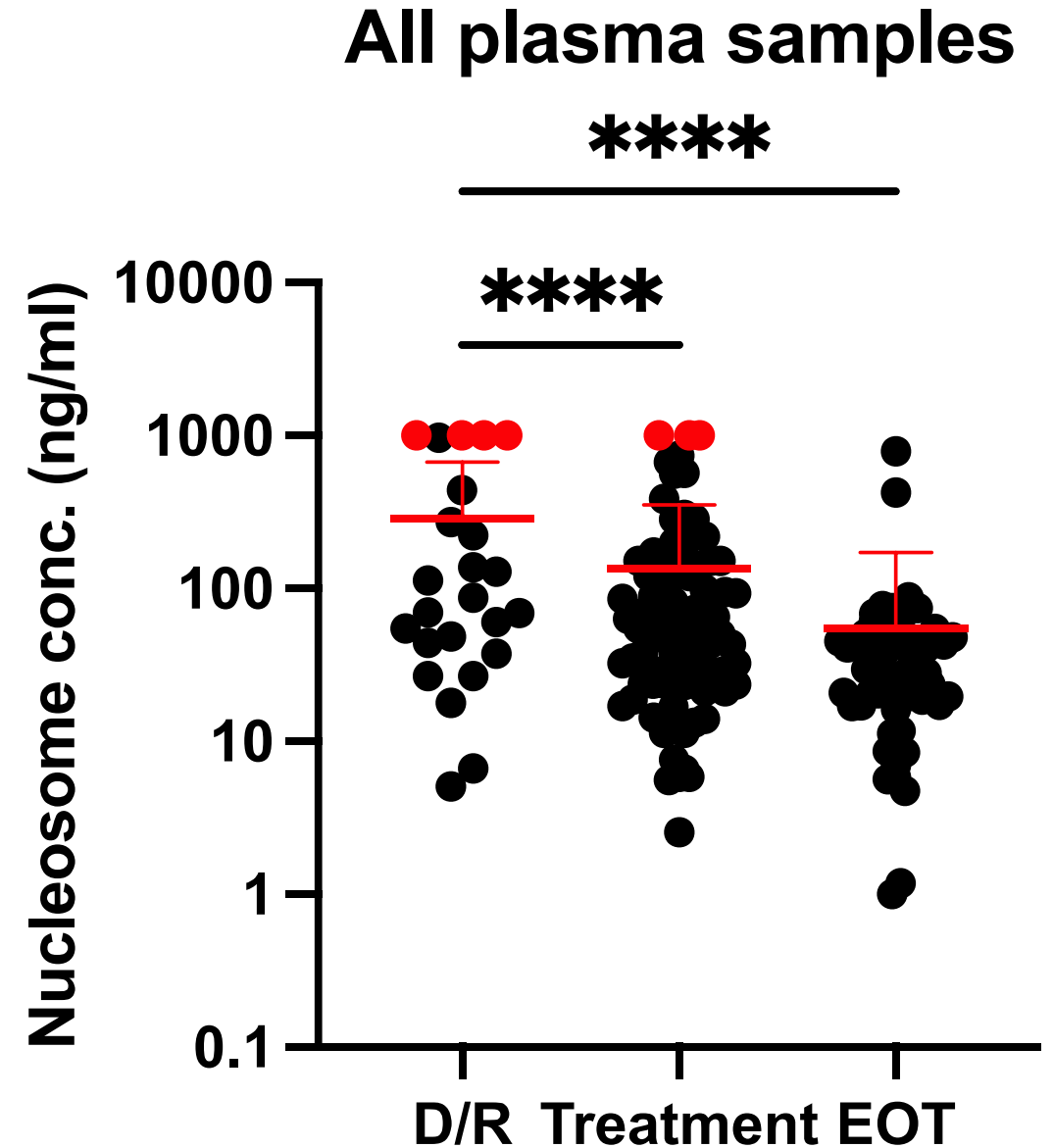
- Open at 2 centres since Sept 2020
- Total patients 179
- Average 3.5 samples per patient



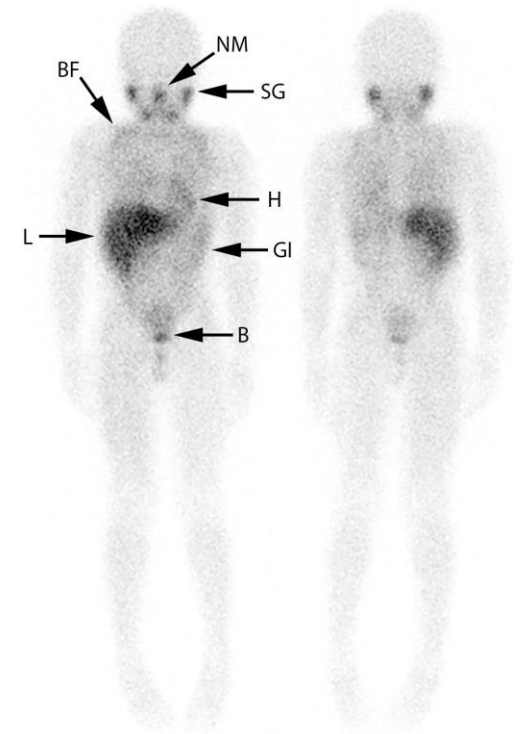
- ELISA detects histone H3.1 in fragmented DNA released from cells
- Classical double-antibody immunoassay requiring as little as 20ul plasma/well
- Range of assays in development with potential different cancer specificities

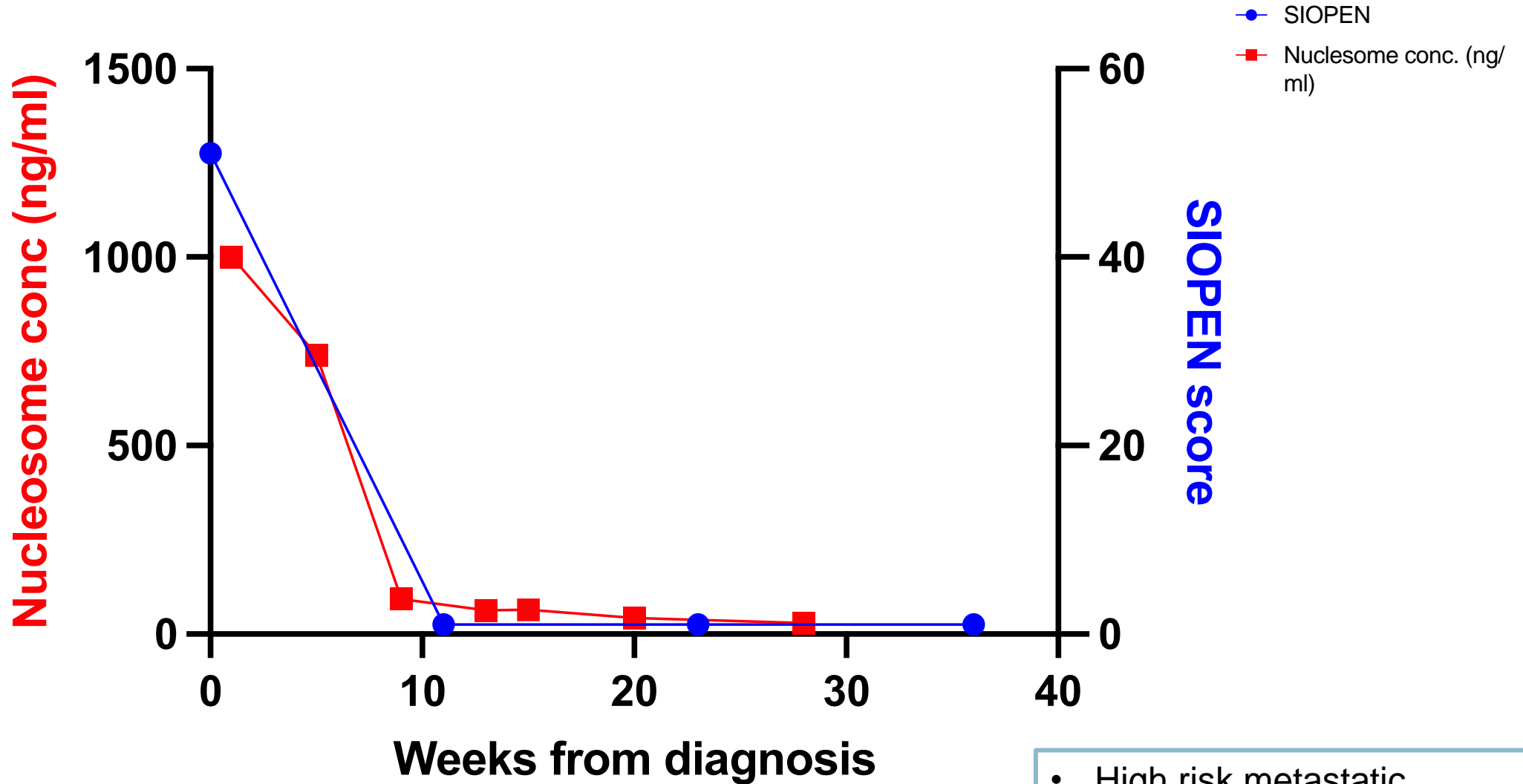


- Initial focus on neuroblastoma
- Results from 201 GOSH samples
- The red points are off scale, arbitrarily assigned 1000 ng/ml



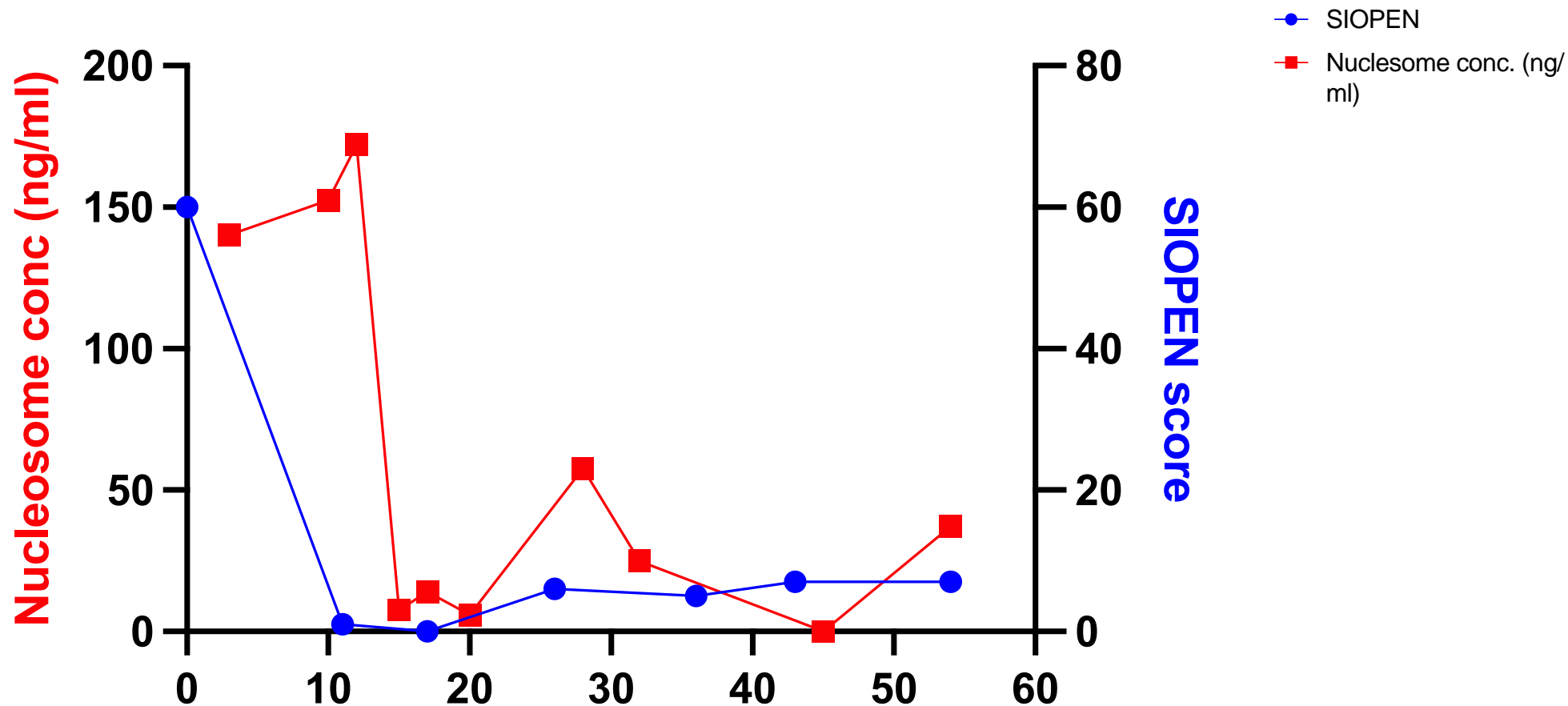
- International Society of Pediatric Oncology European Neuroblastoma Group (SIOPEN) scoring for metastatic deposits identified by metaiodobenzylguanidine (^{123}I -mIBG) scans
- Internationally accepted scoring system of metastatic sites that approximates to total disease burden
- Curie score assesses soft tissue as well as skeletal disease`





Time 0, nucleosome conc.
=>1000ng/ml

- High risk metastatic Neuroblastoma.
- Achieved and sustained remission.

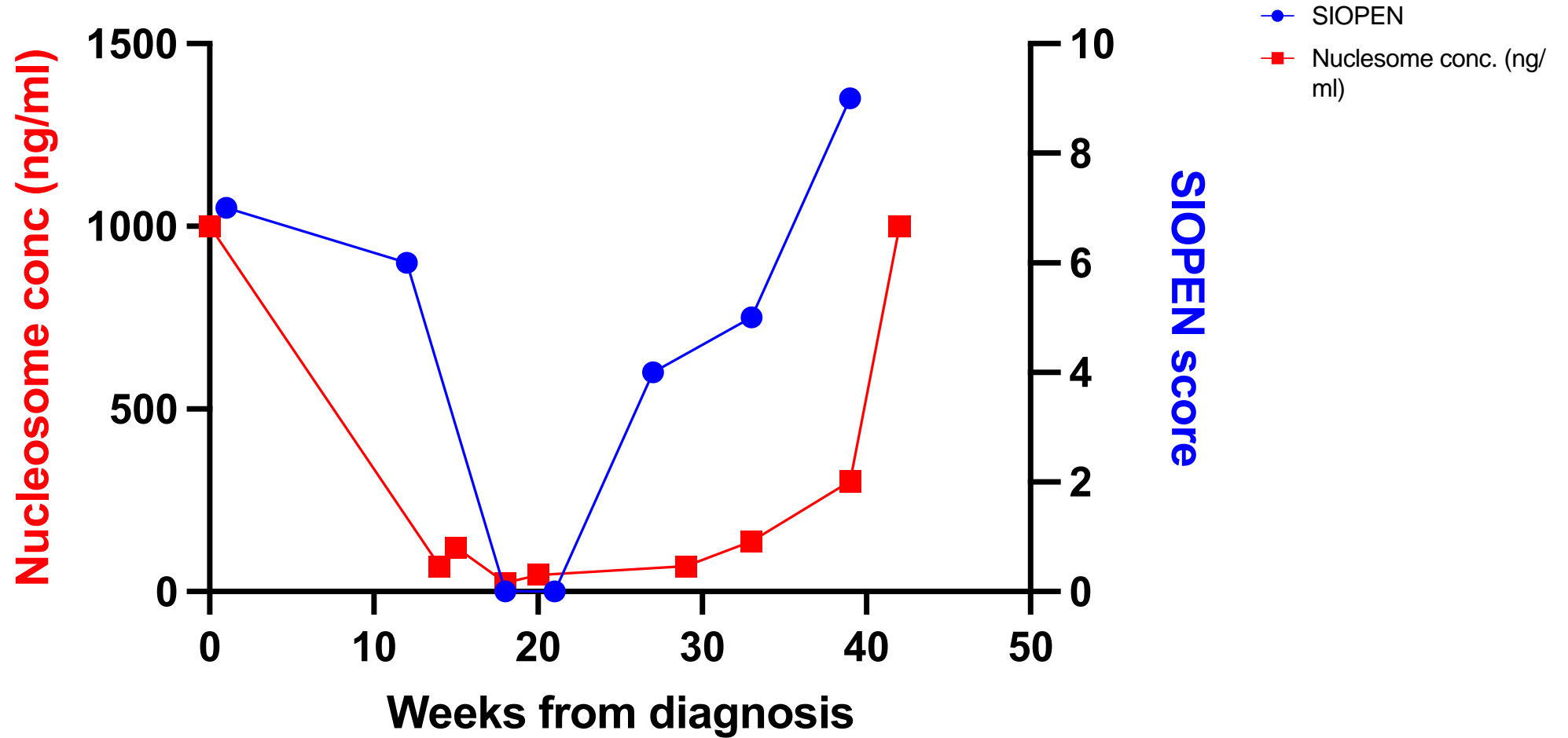


Weeks from diagnosis

↑
R1

↑
R2

- Metastatic high risk disease.
- Good initial response.
- Two subsequent relapses associated with minor changes in SIOPEN scoring system.

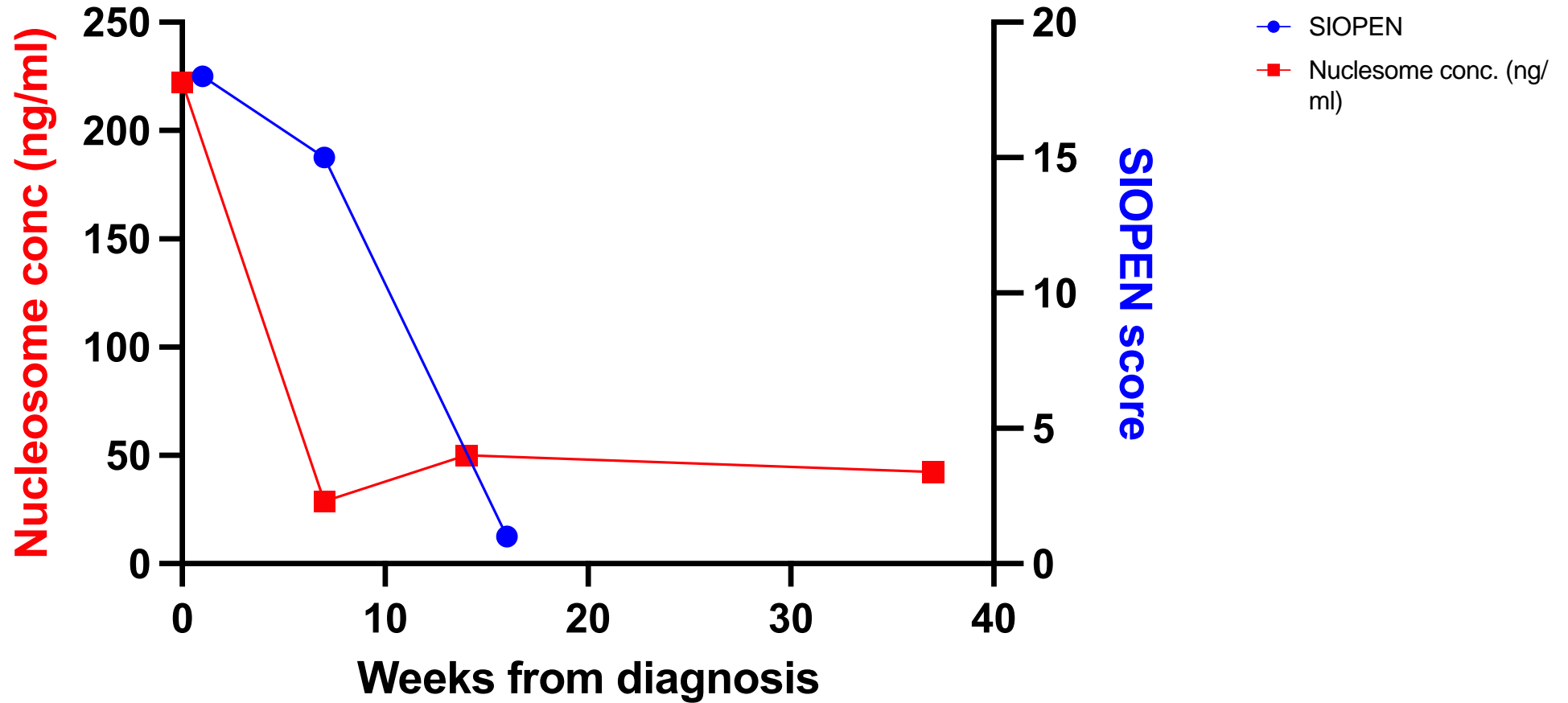


↑
R1

↑
Progression

↑
Progression

• Patient underwent several lines of treatment but had ongoing progression.



↑
End of Treatment

- Stage MS Neuroblastoma
- 4 cycles of chemotherapy and end of treatment

- Feasible and cheap
- Potentially suitable for long term monitoring
- Evaluation of cancer specific nucleosome markers is warranted
- Comparison with other techniques data is pending

Acknowledgments

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All clinicians and nurses



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Volition