
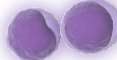
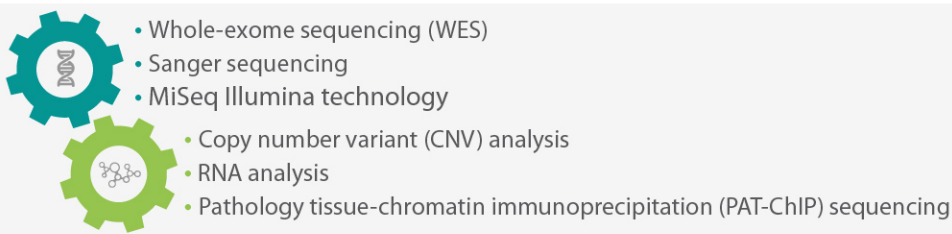


# Data integration to identify a successful combinatorial therapy based on epigenetic drugs in a BPDCN xenograft model

## Sequencing analyses

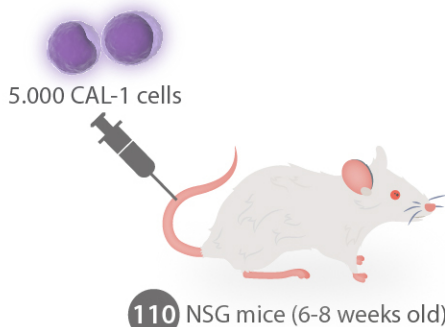
-  **14** Blastic Plasmacytoid Dendritic Cell Neoplasm (BPDCN) patients (range 9-89 years, male:female ratio=10:4)
-  Patient-derived CAL-1 cell line

## Data integration



- ➔ The epigenetic regulatory program was the most significantly undermined ( $P < .0001$ )
- 25 epigenetic-modifiers were mutated (e.g., ASXL1, TET2, SUZ12, ARID1A, PHF2, CHD8)
- ASXL1 was the most frequently affected (28.6% of cases)

## BPDCN xenograft mouse model



| Treatments                                 | Median survival versus control |
|--|--------------------------------|
| Saline (control)                           | 32 days                        |
| Bortezomib                                 | no beneficial                  |
| 5' - Azacytidine                           | 43.6 days ( $P < .01$ )        |
| Romidepsin                                 | no beneficial                  |
| Decitabine                                 | 44.7 days ( $P < .05$ )        |
| Decitabine + Bortezomib                    |                                |
| Decitabine + Romidepsin                    | 42.8 days ( $P < .01$ )        |
| Decitabine + 5' - Azacytidine              | 52.8 days ( $P < .01$ )        |
| Romidepsin + 5' - Azacytidine              |                                |
| Romidepsin + Bortezomib                    |                                |
| Romidepsin + Bortezomib + Decitabine       |                                |
| Romidepsin + 5' - Azacytidine + Decitabine | 41.8 days ( $P < .05$ )        |

◀ Best result in terms of survival