

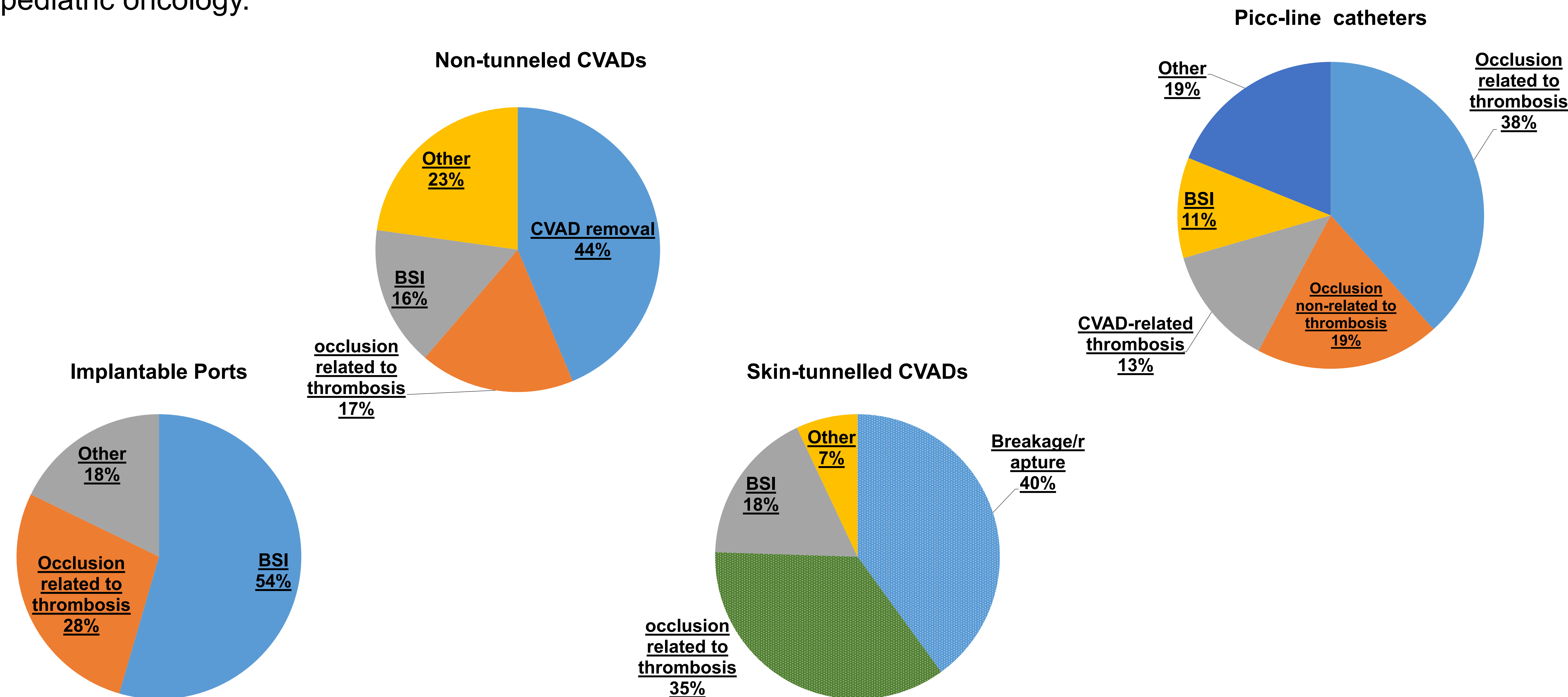


# Central Venous Access Devices (CVADs) in 935 Pediatric Oncology Patients: complications and amicable settlement

**Introdution:** CVAD have a prominent role in the management of pediatric oncology patients. However,data from large pediatric cohorts receiving CVADs are scarce. Therefore, we aimed to systematically analyze existing evidence of the incidence of CVAD failure and complications across CVAD types within a large cohort and implement treatment protocols for preventing the occurrence and promptly treating the most common complications.

**Methods:** In this context, we analyzed 935 patients received 1326 CVADs in Dmitry Rogachev National Research Center over a period of 1 year (2018-2019),focused on CVAD-related complications, divided into groups according to the CVAD-types,as well as the long-term catheter survival rates. The incident rate(IR)per1,000 catheter days(CD) was estimated either.

**Discussio&Conclusion:** Our study revealed no statistically significant differences in the frequency of the rate of complications described in the literature and our data from the large cohort. Introducing of treatment protocols for preventing the occurrence and promptly treating the most common complications related to CVADs, allowed to reduce the financial toxicity and reduce the risks of BSI,which is especially important in pediatric oncology.



| Catheter-related blood stream infections per 100 CVADs |            |             |        |
|--------------------------------------------------------|------------|-------------|--------|
| CVAD type                                              | No. of BSI | No. of CVAD | Result |
| Non-tunneled CVADs                                     | 28         | 495         | 5,657  |
| Picc-line catheters                                    | 5          | 161         | 3,106  |
| tunneled catheters                                     | 35         | 393         | 8,906  |
| Implanted ports                                        | 6          | 63          | 9,524  |
| Total                                                  | 74         | 935         | 7,914  |

| Incidence Rate on 1000 per 1000 catheter days |                  |             |        |
|-----------------------------------------------|------------------|-------------|--------|
| CVAD type                                     | No. of incidents | No. of CVAD | Result |
| Non-tunneled CVADs                            | 176              | 26151       | 6,730  |
| Picc-line catheters                           | 47               | 24863       | 1,890  |
| tunneled catheters                            | 200              | 82506       | 2,424  |
| Implanted ports                               | 11               | 15434       | 0,713  |
| Total                                         | 434              | 148327      | 2,926  |

