Impact of socioeconomic deprivation on time to diagnosis of childhood cancer

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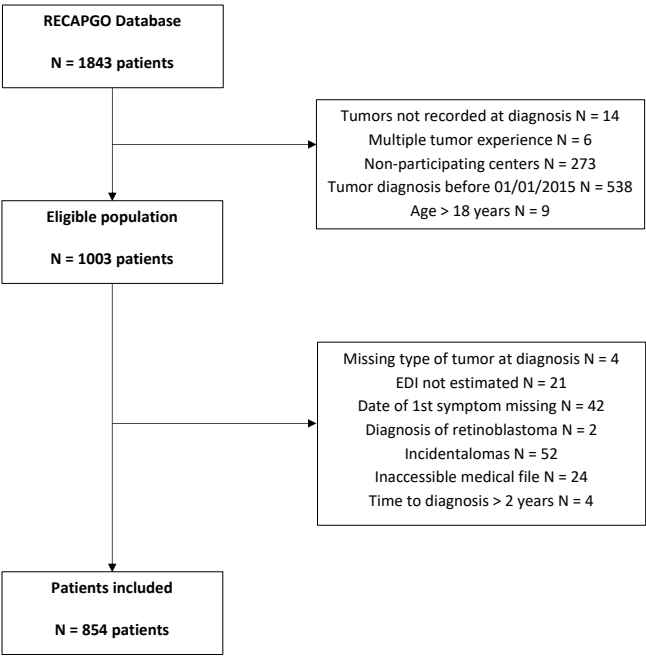[5]Centre Hospitalier Universitaire de Rennes
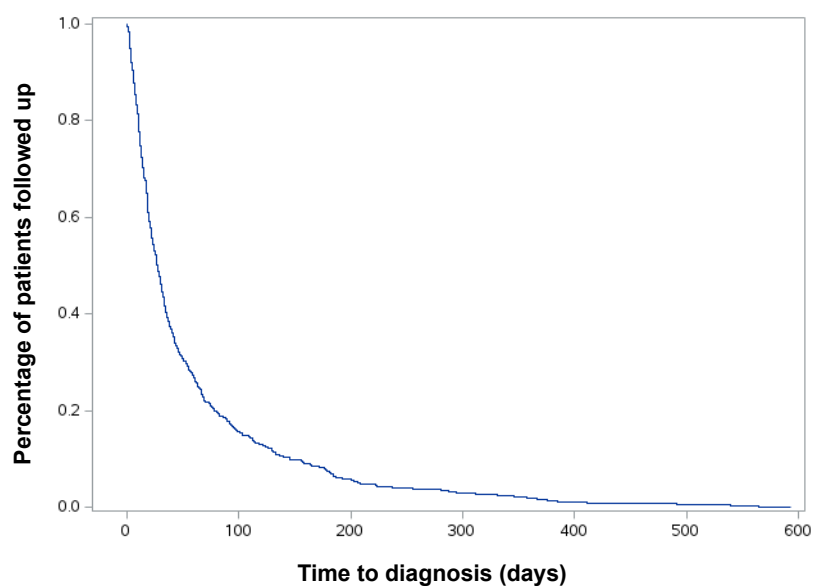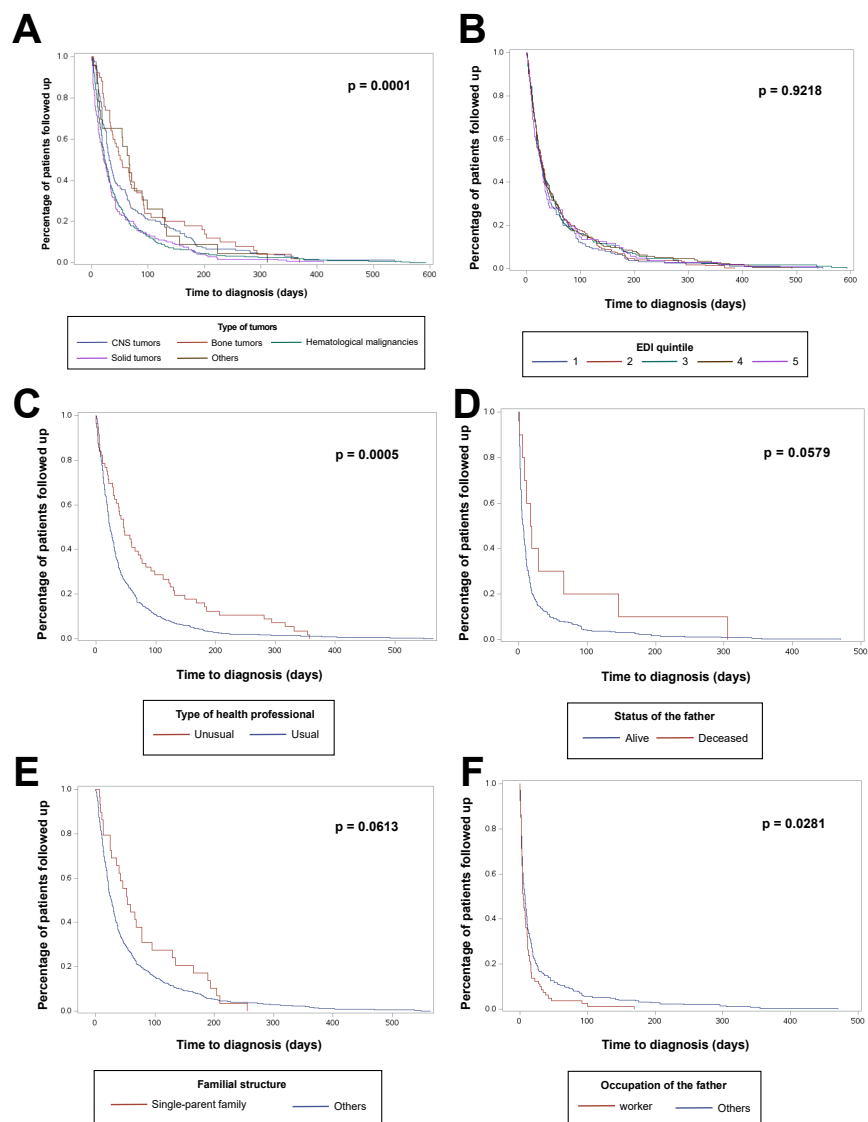
October 21, 2023

Abstract

Background: In adults, there is a link between socioeconomic status (SES) and cancer prognosis, notably due to increased time to diagnosis (TTD) in deprived population leading to the spread of the disease. In children, such an association has not been clearly reported. The objective of our study was to assess the impact of SES on TTD of childhood cancer and its potential consequences on cancer prognosis. Methods: We carried out a multicenter retrospective study based on the LOGAFTER multicentric database. We studied the SES at the individual and ecological levels. Results: Overall, 854 children were included. The median time to diagnosis was 28 days [12;64]. A usual care pathway did not seem to impact TTD, but the use of alternative medicine and an initial management by professionals not usually involved in the specific childhood cancer context increased TTD. None of the SES ecological variables were strictly associated with a significant impact on TTD. However, we noted strong trends for single-parent families and children whose fathers had died who presented with an increased TTD. Conclusions: In the current study, the impact of SES on TTD in children on both the individual and ecological levels was not clear. However, we noted some keys at the individual scale that require further investigation to explain a potential association between deprivation and TTD.

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│   RECAPGO Database      │
│                         │
│   N = 1843 patients     │
└─────────────────────────┘
            │
            │──────────────────────────►┌────────────────────────────────────────────┐
            │                           │ Tumors not recorded at diagnosis N = 14      │
            │                           │ Multiple tumor experience N = 6              │
            │                           │ Non-participating centers N = 273            │
            ▼                           │ Tumor diagnosis before 01/01/2015 N = 538    │
┌─────────────────────────┐            │ Age > 18 years N = 9                         │
│  Eligible population     │            └────────────────────────────────────────────┘
│                         │
│   N = 1003 patients     │
└─────────────────────────┘
            │
            │──────────────────────────►┌────────────────────────────────────────────┐
            │                           │ Missing type of tumor at diagnosis N = 4     │
            │                           │ EDI not estimated N = 21                     │
            │                           │ Date of 1st symptom missing N = 42           │
            │                           │ Diagnosis of retinoblastoma N = 2            │
            │                           │ Incidentalomas N = 52                        │
            ▼                           │ Inaccessible medical file N = 24             │
┌─────────────────────────┐            │ Time to diagnosis > 2 years N = 4            │
│  Patients included       │            └────────────────────────────────────────────┘
│                         │
│   N = 854 patients      │
└─────────────────────────┘
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A (p = 0.0001) Type of tumors: CNS tumors, Bone tumors, Hematological malignancies, Solid tumors, Others

B (p = 0.9218) EDI quintile: 1, 2, 3, 4, 5

C (p = 0.0005) Type of health professional: Unusual, Usual

D (p = 0.0579) Status of the father: Alive, Deceased

E (p = 0.0613) Familial structure: Single-parent family, Others

F (p = 0.0281) Occupation of the father: worker, Others

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Table 3_PBC.docx available at https://authorea.com/users/408121/articles/673656-impact-of-socioeconomic-deprivation-on-time-to-diagnosis-of-childhood-cancer

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