

**AWARD NUMBER: W81XWH-22-1-0811**

**TITLE: Physical, Psychological, Financial Late Effects and Health Care Use in Survivors of Adolescent and Young Adult Cancer: A Population-Based Study**

**PRINCIPAL INVESTIGATOR: Dr. Paul Nathan, MD**

**CONTRACTING ORGANIZATION: The Hospital for Sick Children  
Toronto, ON Canada**

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**TYPE OF REPORT: Annual**

**PREPARED FOR: U.S. Army Medical Research and Development Command  
Fort Detrick, Maryland 21702-5012**

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# REPORT DOCUMENTATION PAGE

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**1. REPORT DATE (DD-MM-YYYY)**

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Physical, Psychological, Financial Late Effects and Health Care Use in Survivors of Adolescent and Young Adult Cancer: A Population-Based Study

**5a. CONTRACT NUMBER**

W81XWH-22-1-0811

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**5c. PROGRAM ELEMENT NUMBER****6. AUTHOR(S)**

Drs. Paul Nathan, Sumit Gupta, Rinku Sutradhar, Nancy Baxter, Yan Yuan, Jason Pole, Amirrtha Srikanthan

**5d. PROJECT NUMBER****5e. TASK NUMBER****5f. WORK UNIT NUMBER****7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)**

The Hospital for Sick Children, 555 University Ave, Toronto, On M5G 1X8, Canada

**8. PERFORMING ORGANIZATION REPORT NUMBER****9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)**

U.S. Army Medical Research and Development Command  
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**13. SUPPLEMENTARY NOTES**

**14. ABSTRACT**

Although cancer is the leading cause of disease-related death in adolescents and young adults (AYA), over 85% become long-term survivors. Preliminary evidence suggests these survivors are at risk of long-term physical and psychological complications of their cancer and its therapy (known as "late effects"), but precise data quantifying this risk and identifying those at greatest risk is lacking. Consequently, how best to care for survivors, including who, when, and how to screen for late effects, is unknown. We will leverage population-based healthcare data in Ontario to create cohorts of >100,000 survivors and >500,000 controls to determine the risk of a broad range of physical, psychological, and functional late effects, to build risk prediction models that can inform clinical care, and to examine patterns of follow-up care and healthcare utilization.

**15. SUBJECT TERMS**

Adolescent and young adult (AYA), cancer survivorship, late effects, data linkage, health services research, risk prediction

**16. SECURITY CLASSIFICATION OF:****a. REPORT**

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**b. ABSTRACT**

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**c. THIS PAGE**

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- 1. INTRODUCTION:** *Narrative that briefly (one paragraph) describes the subject, purpose and scope of the research.*

Although cancer is the leading cause of disease-related death in adolescents and young adults (AYA), over 85% become long-term survivors. Preliminary evidence suggests these survivors are at risk of long-term physical and psychological complications of their cancer and its therapy (known as “late effects”), but precise data quantifying this risk and identifying those at greatest risk is lacking. Consequently, how best to care for survivors, including who, when, and how to screen for late effects, is unknown. We will leverage population-based healthcare data in Ontario to create cohorts of >100,000 survivors and >500,000 controls to determine the risk of a broad range of physical, psychological, and functional late effects, to build risk prediction models that can inform clinical care, and to examine patterns of follow-up care and healthcare utilization.

- 2. KEYWORDS:** *Provide a brief list of keywords (limit to 20 words).*

Adolescent and young adult (AYA), cancer survivorship, late effects, data linkage, health services research, risk prediction

- 3. ACCOMPLISHMENTS:** *The PI is reminded that the recipient organization is required to obtain prior written approval from the awarding agency grants official whenever there are significant changes in the project or its direction.*

**What were the major goals of the project?**

List the major goals of the project as stated in the approved SOW. If the application listed milestones/target dates for important activities or phases of the project, identify these dates and show actual completion dates or the percentage of completion.

Major Task 1: Receive permission to access Ontario health administrative databases, development of a dataset creation plan (DCP) at ICES which will allow linkage of data necessary to meet the objectives stated in specific aims 1, 2 and 3 (timeline: months 1-3)

- IRB (Research Ethics Board) approval completed April 8, 2022

- ICES privacy and permission form (PIA, PAW, DCP) approval completed July 28, 2023

Major Task 2: Achieve Specific Aim 1: To determine the physical, psychological, and financial late effects experienced by survivors of adolescent and young adult (AYA) cancers and to compare these to AYA from the general population (timeline: months 4-9)

- Not started, see details below

Major Task 3: Achieve Specific Aim 2: Identification of predictors/risk factors of late effects of cancer therapy in survivors of AYA cancers and development of predictions models for specific late effects in the AYA population (timeline: months 10-24)

- Not started, see details below

Major Task 4: Achieve Specific Aim 3: Identification of predictors of health care utilization by AYA survivors of cancers in Ontario and evaluation of different long-term follow-up (LTFU) care models (timeline: months 25-34)

- Not started, see details below

Major Task 5: Dissemination and Knowledge Translation (KT) strategy for specific aim 1, 2 and 3 (timeline: months 20-36)

- Not started, see details below

### **What was accomplished under these goals?**

*For this reporting period describe: 1) major activities; 2) specific objectives; 3) significant results or key outcomes, including major findings, developments, or conclusions (both positive and negative); and/or 4) other achievements. Include a discussion of stated goals not met. Description shall include pertinent data and graphs in sufficient detail to explain any significant results achieved. A succinct description of the methodology used shall be provided. As the project progresses to completion, the*

*emphasis in reporting in this section should shift from reporting activities to reporting accomplishments.*

Our protocol has received ethical approval from the SickKids Research Ethics Board. At ICES, we have also completed and received approval for their Project Activation Worksheet (PAW), Privacy Impact Assessment (PIA), and Data Creation Plan (DCP).

Unfortunately, launch of the project (i.e., cohort creation and linkage) has been delayed by requirements surrounding the need for a Federalwide Assurance (FWA) at ICES where the data linkage and analysis will be completed. Since ICES does not have its own FWA, we are working on covering the individual researchers at ICES under SickKids' FWA. This has required involvement of legal teams at both sites and although we are close to signing the final agreements, this has not yet been completed. We are also working with the legal department at the University of Alberta to execute a collaboration agreement with them and our co-investigator, Dr. Yan Yuan. As soon as these legal obstacles are overcome, we will commence the actual work of the project.

**What opportunities for training and professional development has the project provided?**

*If the project was not intended to provide training and professional development opportunities or there is nothing significant to report during this reporting period, state "Nothing to Report."*

*Describe opportunities for training and professional development provided to anyone who worked on the project or anyone who was involved in the activities supported by the project. "Training" activities are those in which individuals with advanced professional skills and experience assist others in attaining greater proficiency. Training activities may include, for example, courses or one-on-one work with a mentor. "Professional development" activities result in increased knowledge or skill in one's area of expertise and may include workshops, conferences, seminars, study groups, and individual study. Include participation in conferences, workshops, and seminars not listed under major activities.*

Nothing to report.

**How were the results disseminated to communities of interest?**

*If there is nothing significant to report during this reporting period, state "Nothing to Report."*

*Describe how the results were disseminated to communities of interest. Include any outreach activities that were undertaken to reach members of communities who are not usually aware of these*

*project activities, for the purpose of enhancing public understanding and increasing interest in learning and careers in science, technology, and the humanities.*

Nothing to report.

**What do you plan to do during the next reporting period to accomplish the goals?**

*If this is the final report, state “Nothing to Report.”*

*Describe briefly what you plan to do during the next reporting period to accomplish the goals and objectives.*

During the next reporting period, we will fully execute the collaboration agreement and Individual Investigator Agreements with ICES and our study team members. Once those are in place, we will create and define the study cohorts and late effect outcomes (physical, psychological, and financial late effects). In collaboration with an ICES analyst, we will create the survivor and control groups, identify and clean and code all outcome variables (late effects), and create and define variables/covariates (probable predictors/risk factors) related to cancer demographics, diagnosis, and treatment modalities. We will then compare the late effects outcomes between survivor and control cohorts. Next, in collaboration with an ICES analyst, cancer demographic, diagnosis and treatment related variables (probable predictors/risk factors) will be identified from Ontario-based health administrative databases and defined for the study cohort. We will continue on to statistically evaluate risk factors associated with late effects and to develop prediction models. Despite the delay in commencing the project, we anticipate that we will be able to progress rapidly once legal agreements are finalized.

- 4. IMPACT:** *Describe distinctive contributions, major accomplishments, innovations, successes, or any change in practice or behavior that has come about as a result of the project relative to:*

**What was the impact on the development of the principal discipline(s) of the project?**

*If there is nothing significant to report during this reporting period, state “Nothing to Report.”*

*Describe how findings, results, techniques that were developed or extended, or other products from the project made an impact or are likely to make an impact on the base of knowledge, theory, and research in the principal disciplinary field(s) of the project. Summarize using language that an intelligent lay audience can understand (Scientific American style).*

Nothing to report.

**What was the impact on other disciplines?**

*If there is nothing significant to report during this reporting period, state “Nothing to Report.”*

*Describe how the findings, results, or techniques that were developed or improved, or other products from the project made an impact or are likely to make an impact on other disciplines.*

Nothing to report.

**What was the impact on technology transfer?**

*If there is nothing significant to report during this reporting period, state “Nothing to Report.”*

*Describe ways in which the project made an impact, or is likely to make an impact, on commercial technology or public use, including:*

- *transfer of results to entities in government or industry;*
- *instances where the research has led to the initiation of a start-up company; or*
- *adoption of new practices.*

Nothing to report.

**What was the impact on society beyond science and technology?**

*If there is nothing significant to report during this reporting period, state “Nothing to Report.”*

*Describe how results from the project made an impact, or are likely to make an impact, beyond the bounds of science, engineering, and the academic world on areas such as:*

- *improving public knowledge, attitudes, skills, and abilities;*

- *changing behavior, practices, decision making, policies (including regulatory policies), or social actions; or*
- *improving social, economic, civic, or environmental conditions.*

Nothing to report.

- 5. CHANGES/PROBLEMS:** *The PD/PI is reminded that the recipient organization is required to obtain prior written approval from the awarding agency grants official whenever there are significant changes in the project or its direction. If not previously reported in writing, provide the following additional information or state, "Nothing to Report," if applicable:*

**Changes in approach and reasons for change**

*Describe any changes in approach during the reporting period and reasons for these changes. Remember that significant changes in objectives and scope require prior approval of the agency.*

Nothing to report.

**Actual or anticipated problems or delays and actions or plans to resolve them**

*Describe problems or delays encountered during the reporting period and actions or plans to resolve them.*

We have encountered significant delays while navigating the US Department of Defense's ethics requirements. Our colleagues at ICES who will have access to study data are required to be covered by a FWA, but ICES does not have one and cannot apply for one. They do not have an ethics board of record, as the analyses that they conduct receive ethical approval from the collaborating hospital/research institution. After much discussion with the Office of Human Research Oversight at the Department of Defense, we began the process of drafting Individual Investigator Agreements to extend SickKids' FWA to our 3 ICES colleagues. We discovered that we first had to go through SickKids' legal department to create a collaboration agreement between our institution and ICES, before the Individual Investigator Agreements can move forward. Unfortunately, this has been a lengthy process.

These delays were unforeseen because this was the first time that ICES had been asked to apply for an FWA and that SickKids had been asked to extend their FWA to external individuals. For these reasons, the last year has been spent navigating this complex legal situation and working with the Department of Defense, SickKids, and ICES to find and execute the solutions needed to fully initiate this project. Presently, SickKids' and ICES' legal departments are negotiating the collaboration agreement.

#### **Changes that had a significant impact on expenditures**

*Describe changes during the reporting period that may have had a significant impact on expenditures, for example, delays in hiring staff or favorable developments that enable meeting objectives at less cost than anticipated.*

Due to the significant delays mentioned above, we are unable to meet our initially proposed timeline. We have not been able to create our cohort or begin the linkage. Once we are able to move past the legal issues we have encountered so far, we are in a position to make swift and efficient progress towards our study goals. With this being a three-year grant, it is important for us to complete our study aims in full before the study ends. For that reason, we are hopeful that the Department of Defense is willing to consider a no-cost extension to this project once the legal agreements are approved. This would enable us to complete the project as planned.

#### **Significant changes in use or care of human subjects, vertebrate animals, biohazards, and/or select agents**

*Describe significant deviations, unexpected outcomes, or changes in approved protocols for the use or care of human subjects, vertebrate animals, biohazards, and/or select agents during the reporting period. If required, were these changes approved by the applicable institution committee (or equivalent) and reported to the agency? Also specify the applicable Institutional Review Board/Institutional Animal Care and Use Committee approval dates.*

**Significant changes in use or care of human subjects**

Nothing to report.

**Significant changes in use or care of vertebrate animals**

Nothing to report.

**Significant changes in use of biohazards and/or select agents**

Nothing to report.

**6. PRODUCTS:** *List any products resulting from the project during the reporting period. If there is nothing to report under a particular item, state “Nothing to Report.”*

- **Publications, conference papers, and presentations**

*Report only the major publication(s) resulting from the work under this award.*

**Journal publications.** *List peer-reviewed articles or papers appearing in scientific, technical, or professional journals. Identify for each publication: Author(s); title; journal; volume; year; page numbers; status of publication (published; accepted, awaiting publication; submitted, under review; other); acknowledgement of federal support (yes/no).*

Nothing to report.

**Books or other non-periodical, one-time publications.** *Report any book, monograph, dissertation, abstract, or the like published as or in a separate publication, rather than a periodical or series. Include any significant publication in the proceedings of a one-time conference or in the report of a one-time study, commission, or the like. Identify for each one-time publication: author(s); title; editor; title of collection, if applicable; bibliographic information; year; type of publication (e.g., book, thesis or dissertation); status of publication (published; accepted, awaiting publication; submitted, under review; other); acknowledgement of federal support (yes/no).*

Nothing to report.

**Other publications, conference papers and presentations.** *Identify any other publications, conference papers and/or presentations not reported above. Specify the status of the publication as noted above. List presentations made during the last year (international, national, local societies, military meetings, etc.). Use an asterisk (\*) if presentation produced a manuscript.*

Nothing to report.

- **Website(s) or other Internet site(s)**

*List the URL for any Internet site(s) that disseminates the results of the research activities. A short description of each site should be provided. It is not necessary to include the publications already specified above in this section.*

Nothing to report.

- **Technologies or techniques**

*Identify technologies or techniques that resulted from the research activities. Describe the technologies or techniques were shared.*

Nothing to report.

- **Inventions, patent applications, and/or licenses**

*Identify inventions, patent applications with date, and/or licenses that have resulted from the research. Submission of this information as part of an interim research performance progress report is not a substitute for any other invention reporting required under the terms and conditions of an award.*

Nothing to report.

- **Other Products**

*Identify any other reportable outcomes that were developed under this project. Reportable outcomes are defined as a research result that is or relates to a product, scientific advance, or research tool that makes a meaningful contribution toward the understanding, prevention, diagnosis, prognosis, treatment and /or rehabilitation of a disease, injury or condition, or to improve the quality of life. Examples include:*

- *data or databases;*
- *physical collections;*
- *audio or video products;*
- *software;*
- *models;*
- *educational aids or curricula;*
- *instruments or equipment;*
- *research material (e.g., Germplasm; cell lines, DNA probes, animal models);*
- *clinical interventions;*
- *new business creation; and*
- *other.*

Nothing to report.

## 7. PARTICIPANTS & OTHER COLLABORATING ORGANIZATIONS

### **What individuals have worked on the project?**

*Provide the following information for: (1) PDs/PIs; and (2) each person who has worked at least one person month per year on the project during the reporting period, regardless of the source of compensation (a person month equals approximately 160 hours of effort). If information is unchanged from a previous submission, provide the name only and indicate “no change”.*

#### Example:

*Name: Mary Smith*  
*Project Role: Graduate Student*  
*Researcher Identifier (e.g. ORCID ID): 1234567*  
*Nearest person month worked: 5*

*Contribution to Project: Ms. Smith has performed work in the area of combined error-control and constrained coding.*

*Funding Support: The Ford Foundation (Complete only if the funding support is provided from other than this award.)*

Name: Paul Nathan  
Project Role: Principal investigator  
ORCID: 0000-0003-0334-0871  
Nearest person month worked: 0.5 person months

Contribution to Project: No change.  
Funding Support: N/A

Name: Sumit Gupta  
Project Role: Co-investigator  
ORCID: 0000-0003-1334-3670  
Nearest person month worked: 0.5 person months

Contribution to Project: No change.  
Funding Support: Canadian Institutes of Health Research

**Has there been a change in the active other support of the PD/PI(s) or senior/key personnel since the last reporting period?**

*If there is nothing significant to report during this reporting period, state “Nothing to Report.”*

*If the active support has changed for the PD/PI(s) or senior/key personnel, then describe what the change has been. Changes may occur, for example, if a previously active grant has closed and/or if a previously pending grant is now active. Annotate this information so it is clear what has changed from the previous submission. Submission of other support information is not necessary for pending changes or for changes in the level of effort for active support reported previously. The awarding agency may require prior written approval if a change in active other support significantly impacts the effort on the project that is the subject of the project report.*

***New active support – Paul Nathan***

Title: Financial Hardship in Canadian Childhood Cancer Survivors.

Major Goals: The main goals of this project are to evaluate and quantify the long-term, attributable impact of childhood cancer on employment income and labour market participation in Canadian adult survivors of childhood cancer, compared to the general population. As well, will examine the independent effect of sociodemographic and disease-related risk factors on employment income and labour market participation in Canadian adult survivors of childhood cancer.

Status of Support: Active

Project Number:

Name of PD/PI: Nathan PC, Pechlivanoglou P

Source of Support: POGO Project Funding Grant

Primary Place of Performance: Hospital for Sick Children, Toronto, Canada

Project/Proposal Start and End Date: (MM/YYYY) (if available): 03/2023-03/2024

Total Award Amount (including Indirect Costs):

Person Months (Calendar/Academic/Summer) per budget period: 0.24 calendar month

Title: Long-term outcomes of Pediatric Low-Grade Glioma Survivors: A Molecularly-Informed, Population-Based Approach

Major Goals: The main goals of this project are to identify all Ontario pediatric low-grade glioma survivors diagnosed over the last 30 years and determine how often survivors develop adverse events.

Status of Support: Active

Project Number:

Name of PD/PI: Coltin H

Source of Support: Brain Tumour Foundation of Canada - Project Grant

Primary Place of Performance: Hospital for Sick Children, Toronto, Canada

Project/Proposal Start and End Date: (MM/YYYY) (if available): 07/2023-07/2024

Total Award Amount (including Indirect Costs):

Person Months (Calendar/Academic/Summer) per budget period: 0.12 calendar month

Title: Emotion and Symptom-focused Engagement (EASE): a randomized controlled trial of a traumatic stress intervention for parents of children with cancer.

Major Goals: The main goal of this project is to apply the novel psychotherapeutic Emotion And Symptom-focused Engagement (EASE) intervention to alleviate traumatic stress symptoms and to improve wellbeing in individuals living with life-threatening cancer or in family caregivers.

Status of Support: Active

Project Number: 202303

Name of PD/PI: Jibb LA, Rodin G

Source of Support: Canadian Institutes of Health Research (CIHR) – Project Grant

Primary Place of Performance: Hospital for Sick Children, Toronto, Canada

Project/Proposal Start and End Date: (MM/YYYY) (if available): 07/2023-06/2028

Total Award Amount (including Indirect Costs):

Person Months (Calendar/Academic/Summer) per budget period: 0.12 calendar month

### ***Previously active grants that closed – Paul Nathan***

Title: Neuropathic pain in adolescent survivors of childhood cancer

Major goal: The goal of this project is to measure neuropathic pain in a cohort of survivors of childhood cancer

Status of support: Closed

Project Number:

Name of PD/PI: Stinson J

Source of Support: Garron Family Cancer Centre

Primary Place of Performance: Hospital for Sick Children, Toronto, Canada

Project/Proposal Start and End Date: (MM/YYYY) (if available): 01/2022-01-2023

Total Award Amount (including Indirect Costs):

Person Months (Calendar/Academic/Summer) per budget period: 0.12 calendar month

Title: Impact of the COVID-19 pandemic on the psychosocial health of children with cancer, survivors, and family caregivers

Major Goals: The goal of this project is to assess how COVID has impacted children and families of children who have or have survived cancer

Status of Support: Active

Project Number: DC0190GP

Name of PD/PI: Alberts N

Source of Support: Canadian Institutes of Health Research (CIHR): COVID Operating Grant

Primary Place of Performance: Concordia University, Montreal, Canada

Project/Proposal Start and End Date: (MM/YYYY) (if available): 10/2021-10/2022

Total Award Amount (including Indirect Costs):

Person Months (Calendar/Academic/Summer) per budget period: 0.012 calendar months

### ***New active support – Sumit Gupta***

Title: An adapted early warning signs and symptoms (EWSS) intervention to improve early recognition and referral of childhood cancers in Kenya and Cameroon: An Effectiveness Implementation Study.

Major Goals: The main goal is to adapt an established healthcare worker training intervention, which has been implemented in Ghana with promising outcomes, to two additional countries: Cameroon and Kenya. We will evaluate the feasibility, cost and the health impacts of the intervention in both countries. By doing so, we hope to create a toolkit that healthcare providers and policymakers across sub-Saharan Africa can use to implement similar programs in their countries.

Status of Support: Active

Project Number:

Name of PD/PI: Denburg A, Barwick M, Githanga J, Gupta S

Source of Support: Canadian Institutes of Health Research

Primary Place of Performance: Hospital for Sick Children, Toronto, Canada

Project/Proposal Start and End Date: (MM/YYYY) (if available): 03/2022-03/2027

Total Award Amount (including Indirect Costs):

Person Months (Calendar/Academic/Summer) per budget period: 1 calendar month

Title: Patterns of children's healthcare utilization and cost in the last year of life across the development of a regional specialist pediatric palliative care program.

Major Goals: The main goal is to research the relationship between specialized pediatric palliative care resources and the healthcare usage and cost of children near the end of their lives.

Status of Support: Active

Project Number:

Name of PD/PI: Lysecki D, Gupta S

Source of Support: McMaster University Department of Pediatrics CoRE Builder Team Grant

Primary Place of Performance: McMaster University, Hamilton, Canada

Project/Proposal Start and End Date: (MM/YYYY) (if available): 07/2023-07/2025

Total Award Amount (including Indirect Costs):

Person Months (Calendar/Academic/Summer) per budget period: 0.25 calendar months

Title: Emotion and Symptom-focused Engagement (EASE): a randomized controlled trial of a traumatic stress intervention for parents of children with cancer.

Major Goals: The main goal of this project is to apply the novel psychotherapeutic Emotion And Symptom-focused Engagement (EASE) intervention to alleviate traumatic stress symptoms and to improve wellbeing in individuals living with life-threatening cancer or in family caregivers.

Status of Support: Active

Project Number: 202303

Name of PD/PI: Jibb LA, Rodin G

Source of Support: Canadian Institutes of Health Research (CIHR) – Project Grant

Primary Place of Performance: Hospital for Sick Children, Toronto, Canada

Project/Proposal Start and End Date: (MM/YYYY) (if available): 07/2023-06/2028

Total Award Amount (including Indirect Costs):

Person Months (Calendar/Academic/Summer) per budget period: 0.1 calendar month

Title: Use of High-throughput sequencing of the immunoglobulin loci for refined risk stratification in pediatric B-ALL

Major Goals: The main goal is to define novel applications of high-throughput sequencing (HTS) of the rearranged immunoglobulin loci (Ig) for improved risk stratification in pediatric B-lymphoblastic leukemia (BALL).

Status of Support: Active  
Project Number: CA220656  
Name of PD/PI: Rau R, Wood B  
Source of Support: United States Department of Defense  
Primary Place of Performance: Seattle Children's Hospital, Seattle, USA  
Project/Proposal Start and End Date: (MM/YYYY) (if available): 01/2023-01/2027  
Total Award Amount (including Indirect Costs):  
Person Months (Calendar/Academic/Summer) per budget period: 0.1 calendar months

Title: Developing a Guideline to Support Timely Palliative Care Involvement in Pediatric Oncology  
Major Goals: The main goal is to develop provincial guidelines to support standardization of Specialized Pediatric Palliative Care referral practices in pediatric oncology.

Status of Support: Active  
Project Number:  
Name of PD/PI: Widger K, Kassam A  
Source of Support: Pediatric Oncology Group of Ontario  
Primary Place of Performance: Hospital for Sick Children, Toronto, Canada  
Project/Proposal Start and End Date: (MM/YYYY) (if available): 03/2023-03/2024  
Total Award Amount (including Indirect Costs):  
Person Months (Calendar/Academic/Summer) per budget period: 0.1 calendar months

Title: Financial Hardship in Canadian Childhood Cancer Survivors.

Major Goals: The main goals of this project are to evaluate and quantify the long-term, attributable impact of childhood cancer on employment income and labour market participation in Canadian adult survivors of childhood cancer, compared to the general population. As well, will examine the independent effect of sociodemographic and disease-related risk factors on employment income and labour market participation in Canadian adult survivors of childhood cancer.

Status of Support: Active  
Project Number:  
Name of PD/PI: Nathan PC, Pechlivanoglou P  
Source of Support: POGO Project Funding Grant  
Primary Place of Performance: Hospital for Sick Children, Toronto, Canada  
Project/Proposal Start and End Date: (MM/YYYY) (if available): 03/2023-03/2024  
Total Award Amount (including Indirect Costs):  
Person Months (Calendar/Academic/Summer) per budget period: 0.25 calendar month

Title: Barriers to and facilitators of the early integration of pediatric palliative care for children with cancer in Canada.

Major Goals: The main goal is to try to understand why palliative care services are not accessed very often or are accessed too late in Canada and to create a set of policy recommendations aimed at improving access to pediatric palliative care for all Canadian children who need it.

Status of Support: Active  
Project Number:  
Name of PD/PI: Granek L  
Source of Support: Canadian Institutes of Health Research  
Primary Place of Performance: York University, Toronto, Canada

Project/Proposal Start and End Date: (MM/YYYY) (if available): 02/2023-02/2024  
Total Award Amount (including Indirect Costs):  
Person Months (Calendar/Academic/Summer) per budget period: 0.1 calendar month

***Previously active grants that closed – Sumit Gupta***

Title: International benchmarking of population-based childhood cancer survival by stage at diagnosis  
Major Goals: The goal of this project is to compare stage-specific survival of specific childhood solid tumours between different countries.

Status of Support: Closed

Project Number:

Name of PD/PI: Gatta G, Pritchard-Jones K

Source of Support: Children with Cancer UK

Primary Place of Performance: Istituto Nazionale dei Tumori, Milan, Italy

Project/Proposal Start and End Date: (MM/YYYY) (if available): 01/2021-01/2023

Total Award Amount (including Indirect Costs):

Person Months (Calendar/Academic/Summer) per budget period: 0.12 calendar months

**What other organizations were involved as partners?**

*If there is nothing significant to report during this reporting period, state “Nothing to Report.”*

*Describe partner organizations – academic institutions, other nonprofits, industrial or commercial firms, state or local governments, schools or school systems, or other organizations (foreign or domestic) – that were involved with the project. Partner organizations may have provided financial or in-kind support, supplied facilities or equipment, collaborated in the research, exchanged personnel, or otherwise contributed.*

*Provide the following information for each partnership:*

*Organization Name:*

*Location of Organization: (if foreign location list country)*

*Partner’s contribution to the project (identify one or more)*

- *Financial support;*
- *In-kind support (e.g., partner makes software, computers, equipment, etc., available to project staff);*
- *Facilities (e.g., project staff use the partner’s facilities for project activities);*
- *Collaboration (e.g., partner’s staff work with project staff on the project);*
- *Personnel exchanges (e.g., project staff and/or partner’s staff use each other’s facilities, work at each other’s site); and*
- *Other.*

Nothing to report.

## 8. SPECIAL REPORTING REQUIREMENTS

**COLLABORATIVE AWARDS:** *For collaborative awards, independent reports are required from BOTH the Initiating Principal Investigator (PI) and the Collaborating/Partnering PI. A duplicative report is acceptable; however, tasks shall be clearly marked with the responsible PI and research site. A report shall be submitted to <https://ers.amedd.army.mil> for each unique award.*

**QUAD CHARTS:** *If applicable, the Quad Chart (available on <https://www.usamraa.army.mil>) should be updated and submitted with attachments.*

9. **APPENDICES:** *Attach all appendices that contain information that supplements, clarifies or supports the text. Examples include original copies of journal articles, reprints of manuscripts and abstracts, a curriculum vitae, patent applications, study questionnaires, and surveys, etc.*