

# Stanford

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## Raya Saab

Professor of Pediatrics (Hematology/Oncology)

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### CLINICAL OFFICES

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### Bio

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### CLINICAL FOCUS

- Pediatric Hematology-Oncology
- Rhabdomyosarcoma
- Sarcoma
- Pediatric solid tumors
- Global Health

### ACADEMIC APPOINTMENTS

- Professor - University Medical Line, Pediatrics - Hematology & Oncology
- Member, Bio-X
- Member, Maternal & Child Health Research Institute (MCHRI)

### ADMINISTRATIVE APPOINTMENTS

- Section Chief, Oncology, Lucile Packard Children's Hospital, Stanford University, CA, USA, (2022- present)
- Acting Director, Children's Cancer Institute, American University of Beirut Medical Center, (2017-2021)
- Associate Director for Administrative and Academic Affairs, Children's Cancer Institute, American University of Beirut Medical Center, (2014-2016)
- Director, Pediatric Cancer Research Program and Data Management Unit, Children's Cancer Institute, American University of Beirut Medical Center, (2012-2021)

## PROFESSIONAL EDUCATION

- Board Certification: Pediatric Hematology-Oncology, American Board of Pediatrics (2017)
- Fellowship: St Jude Children's Research Hospital (2007) TN
- Fellowship: University of Tennessee Pediatric Hematology and Oncology Fellowship (2006) TN
- Board Certification: Pediatrics, American Board of Pediatrics (2003)
- Residency: Duke University Health GME (2003) NC
- Internship: American University of Beirut Office of the Registrar (2000) Lebanon
- Medical Education: American University of Beirut Office of the Registrar (1999) Lebanon

## Publications

### PUBLICATIONS

- **A temporal in vivo catalogue of chromatin accessibility and expression profiles in pineoblastoma reveals a prevalent role for repressor elements.** *Genome research*  
Idriss, S., Hallal, M., El-Kurdi, A., Zalzal, H., El-Rassi, I., Ehli, E. A., Davis, C. M., Chung, P. E., Gendoo, D. M., Zacksenhaus, E., Saab, R., Khoueiry, P.  
2023
- **Heritable cancer predisposition testing in pediatric cancer patients excluding retinoblastoma in a middle-income country** *PEDIATRIC BLOOD & CANCER*  
El Khatib, O., Yahya, Y., Mahfouz, R., Hamadeh, L., Basbous, M., Abboud, M. R., Muwakkit, S., Rodriguez-Galindo, C., Jeha, S., Saab, R.  
2022; e29982
- **Non-coding RNA in rhabdomyosarcoma progression and metastasis.** *Frontiers in oncology*  
Ramadan, F., Saab, R., Hussein, N., Clézardin, P., Cohen, P. A., Ghayad, S. E.  
2022; 12: 971174
- **The Global Retinoblastoma Outcome Study: a prospective, cluster-based analysis of 4064 patients from 149 countries** *LANCET GLOBAL HEALTH*  
Alia, D. B., Tandili, A., Paiva, L., Wime, A., Chantada, G. L., Fandino, A. C., Sgroi, M., Pappan, R., Tamamyan, G., Camuglia, J. E., Gole, G. A., Clark, A., Lam, et al  
2022; 10 (8): E1128-E1140
- **CD147 Promotes Tumorigenesis via Exosome-Mediated Signaling in Rhabdomyosarcoma.** *Cells*  
Fahs, A., Hussein, N., Zalzal, H., Ramadan, F., Ghamloush, F., Tamim, H., El Homsy, M., Badran, B., Boulos, F., Tawil, A., Ghayad, S. E., Saab, R.  
2022; 11 (15)
- **Pediatric oncology infrastructure and workforce training needs: a report from the Pediatric Oncology East and Mediterranean (POEM) Group.** *Pediatric blood & cancer*  
Khan, M. S., Al-Jadiry, M. F., Tarek, N., Zamzam, M., Saab, R., Trehan, A., Rihani, R., AlRawas, A., Jeha, S., Belgaumi, A. F.  
2022; e29858
- **PATTERNS OF CEREBROSPINAL FLUID DIVERSION AND SURVIVAL IN CHILDREN WITH DIFFUSE INTRINSIC PONTINE GLIOMA: A REPORT FROM THE INTERNATIONAL DIFFUSE INTRINSIC PONTINE GLIOMA REGISTRY**  
Cooney, T., DeWire-Schottmiller, M., Lane, A., Saab, R., Bandopadhyay, P., Dorris, K., Packer, R., Kilburn, L., Minturn, J., Dodgshun, A., Parkin, S., Goldman, S., Sandler, et al  
OXFORD UNIV PRESS INC.2022: 23-24
- **Estimated incidence, prevalence, mortality, and registration of childhood cancer (ages 0-14 years) in the WHO Eastern Mediterranean region: an analysis of GLOBOCAN 2020 data.** *The Lancet. Child & adolescent health*  
Fadhil, I., Soliman, R., Jaffar, S., Al Madhi, S., Saab, R., Belgaumi, A., Elhaddad, A.  
2022; 6 (7): 466-473
- **Long-term follow-up of children treated with the Repiphysis expandable prosthesis for lower extremity bone sarcoma.** *Journal of pediatric orthopedics. Part B*  
Masrouha, K., Abboud, M., Saab, R., Muwakkit, S. A., Khoury, N., Haidar, R., Saghih, S.  
2022; 31 (2): e258-e263

- **Vincristine-induced neurotoxicity in pediatric patients with rhabdomyosarcoma: A retrospective analysis of clinical features and outcome** *PEDIATRIC HEMATOLOGY AND ONCOLOGY*  
Dakik, L., Basbous, M., Tamim, H., Moubarak, Y., Tarek, N., Hamideh, D., Muwakkit, S., Abboud, M., Saab, R.  
2022; 1-6
- **Global Neuroblastoma Network: An international multidisciplinary neuroblastoma tumor board for resource-limited countries** *PEDIATRIC BLOOD & CANCER*  
Matthay, K. K., Hylton, J., Penumathy, N., Khattab, M., Soh, S., Nguyen, H., Alcasabas, A., Fawzy, M., Saab, R., Khan, M., Ghandour, K., Chantada, G., Parikh, et al  
2022; 69 (4): e29568
- **Burden of cancer in adolescents and young adults.** *The Lancet. Oncology*  
Saab, R.  
2021; 23 (1): 2-3
- **Cancer care for displaced children in Lebanon.** *The Lancet. Oncology*  
Saab, R., Ghanem, K., Jeha, S.  
2021; 22 (12): 1663-1664
- **A GRIN3A polymorphism may be associated with glucocorticoid-induced symptomatic osteonecrosis in children with acute lymphoblastic leukemia** *PERSONALIZED MEDICINE*  
Zgheib, N. K., El-Khoury, H., Maamari, D., Basbous, M., Saab, R., Muwakkit, S. A.  
2021; 18 (05): 431-439
- **Treatment-induced cerebral sinus venous thrombosis in childhood acute lymphoblastic malignancies: New risk factors to consider** *PEDIATRIC BLOOD & CANCER*  
El-Khoury, H., Saifi, O., Haddad, S., Chahrour, M., Ghanem, K. M., Mubarak, Y., Tamim, H., Makki, M., Zakka, C., Chan, A. K., Mahfouz, R., Tarek, N., El-Solh, et al  
2021; 68 (11): e29210
- **Cancer Registration in the Middle East, North Africa, and Turkey: Scope and Challenges** *JCO GLOBAL ONCOLOGY*  
Abdul-Sater, Z., Shamseddine, A., Taher, A., Fouad, F., Abu-Sitta, G., Fadhil, I., Saab, R., Sullivan, R., Adib, S. M., Saleh, S., Mukherji, D., ICRIM  
2021; 7: 1101-1109
- **Pediatric oncology infrastructure and workforce training needs: A report from the Pediatric Oncology East and Mediterranean (POEM) Group** *PEDIATRIC BLOOD & CANCER*  
Khan, M., Al-Jadiry, M., Tarek, N., Zamzam, M., Saab, R., Trehan, A., Rihani, R., AlRawas, A., Jeha, S., Belgaumi, A. F.  
2021; 68 (9): e29190
- **Extraskelatal Ewing sarcoma: Diagnosis, management and prognosis** *ONCOLOGY LETTERS*  
Abboud, A., Masrouha, K., Saliba, M., Haidar, R., Saab, R., Khoury, N., Tawil, A., Saghie, S.  
2021; 21 (5): 354
- **Childhood cancer care in the Middle East, North Africa, and West/Central Asia: A snapshot across five countries from the POEM network** *CANCER EPIDEMIOLOGY*  
Basbous, M., Al-Jadiry, M., Belgaumi, A., Sultan, I., Al-Haddad, A., Jeha, S., Saab, R.  
2021; 71: 101727
- **RE-IRRADIATION OF DIPG: DATA FROM THE INTERNATIONAL DIPG REGISTRY**  
Lafay-Cousin, L., Lane, A., Schafer, A., Saab, R., Cheng, S., Bandopadhyay, P., Zaghoul, M., El-Ayadi, M., Dorris, K., Packer, R., Kilburn, L., Minturn, J., Dodgshun, et al  
OXFORD UNIV PRESS INC.2020: 301-2
- **PATTERNS OF CEREBROSPINAL FLUID DIVERSION AND SURVIVAL IN CHILDREN WITH DIFFUSE INTRINSIC PONTINE GLIOMA: A REPORT FROM THE INTERNATIONAL DIPG REGISTRY**  
Cooney, T., DeWire-Schottmiller, M., Lane, A., Saab, R., Bandopadhyay, P., Dorris, K., Packer, R., Kilburn, L., Minturn, J., Dodgshun, A., Parkin, S., Goldman, S., Sandler, et al  
OXFORD UNIV PRESS INC.2020: 297-98
- **Effects of the Oncoprotein PAX3-FOXO1 on Modulation of Exosomes Function and Protein Content: Implications on Oxidative Stress Protection and Enhanced Plasticity** *FRONTIERS IN ONCOLOGY*

- Fahs, A., Ramadan, F., Ghamloush, F., Ayoub, A. J., Ahmad, F., Kobeissy, F., Mechref, Y., Zhao, J., Zhu, R., Hussein, N., Saab, R., Ghayad, S. E. 2020; 10: 1784
- **Isolated Central Nervous System Relapse Following Treatment Reduction in Low-risk Acute Lymphoblastic Leukemia at the Children's Cancer Center of Lebanon** *JOURNAL OF PEDIATRIC HEMATOLOGY ONCOLOGY*  
El-Khoury, H., Chahrour, M., Ghanem, K. M., Saifi, O., Tamim, H., El-Solh, H., Hamideh, D., Tarek, N., Saab, R., Abboud, M. R., Muwakkit, S. A. 2020; 42 (6): E428-E433
  - **Impact of the coronavirus disease 2019 (COVID-19) pandemic on pediatric oncology care in the Middle East, North Africa, and West Asia Region: A report from the Pediatric Oncology East and Mediterranean (POEM) Group** *CANCER*  
Saab, R., Obeid, A., Gachi, F., Boudiaf, H., Sargsyan, L., Al-Saad, K., Javakhadze, T., Mehrvar, A., Abbas, S., Al-Agele, Y., Al-Haddad, S., Al Ani, M., Al-Sweedan, et al 2020; 126 (18): 4235-4245
  - **Circulating Tumor Cell Detection Technologies and Clinical Utility: Challenges and Opportunities** *CANCERS*  
Habli, Z., AlChamaa, W., Saab, R., Kadara, H., Khraiche, M. L. 2020; 12 (7)
  - **Global Retinoblastoma Presentation and Analysis by National Income Level** *JAMA ONCOLOGY*  
Fabian, I., Abdallah, E., Abdullahi, S. U., Abdulqader, R. A., Boubacar, S., Ademola-Popoola, D. S., Adio, A., Afshar, A. R., Aggarwal, P., Aghaji, A. E., Ahmad, A., Akib, M. R., Al Harby, et al 2020; 6 (5): 685–95
  - **The value of diffusion weighted imaging and apparent diffusion coefficient in primary Osteogenic and Ewing sarcomas for the monitoring of response to treatment: Initial experience** *EUROPEAN JOURNAL OF RADIOLOGY*  
Asmar, K., Saade, C., Salman, R., Saab, R., Khoury, N. J., Abboud, M., Tamim, H., Makki, M., Naffaa, L. 2020; 124: 108855
  - **Global Retinoblastoma Presentation and Analysis by National Income Level.** *JAMA oncology*  
Global Retinoblastoma Study Group, Fabian, I. D., Abdallah, E., Abdullahi, S. U., Abdulqader, R. A., Adamou Boubacar, S., Ademola-Popoola, D. S., Adio, A., Afshar, A. R., Aggarwal, P., Aghaji, A. E., Ahmad, A., Akib, M. N., et al 2020
  - **Signaling pathways in Rhabdomyosarcoma invasion and metastasis** *CANCER AND METASTASIS REVIEWS*  
Ramadan, F., Fahs, A., Ghayad, S. E., Saab, R. 2020; 39 (1): 287-301
  - **The PAX3-FOXO1 oncogene alters exosome miRNA content and leads to paracrine effects mediated by exosomal miR-486** *SCIENTIFIC REPORTS*  
Ghamloush, F., Ghayad, S. E., Rammal, G., Fahs, A., Ayoub, A. J., Merabi, Z., Harajly, M., Zalzali, H., Saab, R. 2019; 9: 14242
  - **Proteomic Profiling of Rhabdomyosarcoma-Derived Exosomes Yield Insights into Their Functional Role in Paracrine Signaling** *JOURNAL OF PROTEOME RESEARCH*  
Rammal, G., Fahs, A., Kobeissy, F., Mechref, Y., Zhao, J., Zhu, R., Diab-Assaf, M., Saab, R., Ghayad, S. E. 2019; 18 (10): 3567-3579
  - **Establishment of a formal program for retinoblastoma: Feasibility of clinical coordination across borders and impact on outcome** *PEDIATRIC BLOOD & CANCER*  
Al-Haddad, C., Bashour, Z., Farah, L., Bayram, L., Merabe, Z., Ma'luf, R., Alameddine, R., Eid, T., Geara, F., Wilson, M., Brennan, R., Jeha, S., Ghanem, et al 2019; 66 (11): e27959
  - **Illness cognition and health anxiety in parents of children with cancer** *JOURNAL OF PSYCHOSOCIAL ONCOLOGY*  
Bilani, N., Jamali, S., Chahine, A., Zorkot, M., Homsy, M., Saab, M., Saab, R., Nabulsi, M., Chaaya, M. 2019; 37 (6): 713-728
  - **Identifying barriers to treatment of childhood rhabdomyosarcoma in resource-limited settings: A literature review** *PEDIATRIC BLOOD & CANCER*  
Papyan, R., Tamamyan, G., Danielyan, S., Tananyan, A., Muradyan, A., Saab, R. 2019; 66 (7): e27708
  - **Clinical Prognostic Factors and Outcome in Pediatric Osteosarcoma: Effect of Delay in Local Control and Degree of Necrosis in a Multidisciplinary Setting in Lebanon** *JOURNAL OF GLOBAL ONCOLOGY*

- Abou Ali, B., Salman, M., Ghanem, K. M., Boulos, F., Haidar, R., Saghie, S., Akel, S., Muwakkit, S. A., Ei-Solh, H., Saab, R., Tamim, H., Abboud, M. R. 2019; 5: 1-8
- **Spirituality among parents of children with cancer in a Middle Eastern country** *EUROPEAN JOURNAL OF ONCOLOGY NURSING*  
Doumit, M. A., Rahi, A. C., Saab, R., Majdalani, M.  
2019; 39: 21-27
  - **The histone deacetylase inhibitor Suberoylanilide Hydroxamic Acid (SAHA) as a therapeutic agent in rhabdomyosarcoma** *CANCER BIOLOGY & THERAPY*  
Ghayad, S. E., Rammal, G., Sarkis, O., Basma, H., Ghamloush, F., Fahs, A., Karam, M., Harajli, M., Rabeh, W., Mouawad, J. E., Zalzali, H., Saab, R.  
2019; 20 (3): 272-283
  - **Infantile myofibromatosis: review of imaging findings and emphasis on correlation between MRI and histopathological findings** *CLINICAL IMAGING*  
Naffaa, L., Khalifeh, I., Salman, R., Itani, M., Saab, R., Al-kutoubi, A.  
2019; 54: 40-47
  - **Genetic polymorphisms in candidate genes are not associated with increased vincristine-related peripheral neuropathy in Arab children treated for acute childhood leukemia: a single institution study** *PHARMACOGENETICS AND GENOMICS*  
Zgheib, N. K., Ghanem, K. M., Tamim, H., Aridi, C., Shahine, R., Tarek, N., Saab, R., Abboud, M. R., El-Solh, H., Muwakkit, S. A.  
2018; 28 (8): 189-195
  - **Genomics of adult and pediatric solid tumors.** *American journal of cancer research*  
Rahal, Z., Abdulhai, F., Kadara, H., Saab, R.  
2018; 8 (8): 1356-1386
  - **CHARACTERISTICS OF PATIENTS  $\geq$  10 YEARS OF AGE WITH DIFFUSE INTRINSIC PONTINE GLIOMA: A REPORT FROM THE INTERNATIONAL DIPG REGISTRY**  
Erker, C., Lane, A., Chaney, B., Escorza, N., Fuller, C., Saab, R., Kieran, M., Packer, R., Nazarian, J., Minturn, J., Dodgshun, A., Parkin, S., Foreman, et al  
OXFORD UNIV PRESS INC.2018: 63
  - **CD4-positive lymphoepithelial-like carcinoma: Report of unusual case.** *Avicenna journal of medicine*  
Aziz, L., Saab, R., Eid, T., Al-Abadi, M. A.  
2018; 8 (2): 58-62
  - **Displaced Children With Cancer in Lebanon: A Sustained Response to an Unprecedented Crisis** *CANCER*  
Saab, R., Jeha, S., Khalifeh, H., Zahreddine, L., Bayram, L., Merabi, Z., Abboud, M., Muwakkit, S., Tarek, N., Rodriguez-Galindo, C., El Solh, H.  
2018; 124 (7): 1464-1472
  - **Interplay between p53 and Ink4c in spermatogenesis and fertility** *CELL CYCLE*  
Zalzali, H., Rabeh, W., Najjar, O., Ammar, R., Harajly, M., Saab, R.  
2018; 17 (5): 643-651
  - **Routine surveillance imaging after end of therapy for pediatric extracranial tumors: A retrospective analysis** *PEDIATRIC BLOOD & CANCER*  
Lakkis, F., Alaiwi, S., Naffaa, L., Atweh, L., Khoury, N., Abboud, M., Muwakkit, S., Tarek, N., El Solh, H., Saab, R.  
2018; 65 (1)
  - **Pediatric cancer pathology review from a single institution: Neuropathology expert opinion is essential for accurate diagnosis of pediatric brain tumors** *PEDIATRIC BLOOD & CANCER*  
Merabi, Z., Boulos, F., Santiago, T., Jenkins, J., Abboud, M., Muwakkit, S., Tarek, N., Zaatari, G., Jeha, S., El-Solh, H., Saab, R.  
2018; 65 (1)
  - **Cerebral sinus venous thrombosis during childhood acute lymphoblastic leukemia therapy: Risk factors and management** *PEDIATRIC BLOOD & CANCER*  
Ghanem, K., Dhayni, R. M., Al-Aridi, C., Tarek, N., Tamim, H., Chan, A. C., Saab, R., Abboud, M. R., El-Solh, H., Muwakkit, S. A.  
2017; 64 (12)
  - **Fludarabine-based reduced intensity regimen for matched related donor hematopoietic stem cell transplantation in acquired severe aplastic anemia** *CURRENT RESEARCH IN TRANSLATIONAL MEDICINE*  
Ghanem, K. M., Kharfani-Dabaja, M. A., El-Solh, H., Harris, N., Kreidieh, N., Nehme, R., Muwakkit, S. A., Saab, R., Bazarbachi, A., Abboud, M. R.  
2017; 65 (3): 115-119

- **Predictors of benzodiazepine use among parents of children with cancer: a cross-sectional study from Lebanon** *PSYCHO-ONCOLOGY*  
Fayad, D., Genadry, K., Hanna, K., Itani, A., Kibbi, N., Rustam, L., Saab, R., Nabulsi, M.  
2017; 26 (8): 1225-1228
- **Multisite external validation of a risk prediction model for the diagnosis of blood stream infections in febrile pediatric oncology patients without severe neutropenia.** *Cancer*  
Esbenshade, A. J., Zhao, Z., Aftandilian, C., Saab, R., Wattier, R. L., Beauchemin, M., Miller, T. P., Wilkes, J. J., Kelly, M. J., Fernbach, A., Jeng, M., Schwartz, C. L., Dvorak, et al  
2017
- **Collaborative Pediatric Bone Tumor Program to Improve Access to Specialized Care: An Initiative by the Lebanese Children's Oncology Group** *JOURNAL OF GLOBAL ONCOLOGY*  
Saab, R., Merabi, Z., Abboud, M. R., Muwakkit, S., Noun, P., Gemayel, G., Bechara, E., Khalifeh, H., Farah, R., Kabbara, N., El-Khoury, T., Al-Yousef, R., Haidar, et al  
2017; 3 (1): 23-30
- **NUDT15 and TPMT genetic polymorphisms are related to 6-mercaptopurine intolerance in children treated for acute lymphoblastic leukemia at the Children's Cancer Center of Lebanon** *PEDIATRIC BLOOD & CANCER*  
Zgheib, N. K., Akika, R., Mahfouz, R., Aridi, C., Ghanem, K. M., Saab, R., Abboud, M. R., Tarek, N., El Solh, H., Muwakkit, S. A.  
2017; 64 (1): 146-150
- **Mandibular melanotic neuroectodermal tumor of infancy: a role for neoadjuvant chemotherapy** *EUROPEAN ARCHIVES OF OTO-RHINO-LARYNGOLOGY*  
Maroun, C., Khalifeh, I., Alam, E., Akl, P., Saab, R., Moukarbel, R. V.  
2016; 273 (12): 4629-4635
- **Exosomes derived from embryonal and alveolar rhabdomyosarcoma carry differential miRNA cargo and promote invasion of recipient fibroblasts** *SCIENTIFIC REPORTS*  
Ghayad, S. E., Rammal, G., Ghamloush, F., Basma, H., Nasr, R., Diab-Assaf, M., Chelala, C., Saab, R.  
2016; 6: 37088
- **The synthetic retinoid ST1926 as a novel therapeutic agent in rhabdomyosarcoma** *INTERNATIONAL JOURNAL OF CANCER*  
Basma, H., Ghayad, S. E., Rammal, G., Mancinelli, A., Harajly, M., Ghamloush, F., Dweik, L., El-Eit, R., Zalzal, H., Rabeh, W., Pisano, C., Darwiche, N., Saab, et al  
2016; 138 (6): 1528-1537
- **Wilms tumor: Successes and challenges in management outside of cooperative clinical trials.** *Hematology/oncology and stem cell therapy*  
Rabeh, W., Akel, S., Eid, T., Muwakkit, S., Abboud, M., El Solh, H., Saab, R.  
2016; 9 (1): 20-5
- **Effect of Malnutrition at Diagnosis on Clinical Outcomes of Children With Acute Lymphoblastic Leukemia** *JOURNAL OF PEDIATRIC HEMATOLOGY ONCOLOGY*  
Yazbeck, N., Samia, L., Saab, R., Abboud, M. R., Solh, H., Muwakkit, S.  
2016; 38 (2): 107-110
- **p53 Restoration in Induction and Maintenance of Senescence: Differential Effects in Premalignant and Malignant Tumor Cells** *MOLECULAR AND CELLULAR BIOLOGY*  
Harajly, M., Zalzal, H., Nawaz, Z., Ghayad, S. E., Ghamloush, F., Basma, H., Zainedin, S., Rabeh, W., Jabbour, M., Tawil, A., Badro, D. A., Evan, G. I., Saab, et al  
2016; 36 (3): 438-451
- **Approach to Non-Neutropenic Fever in Pediatric Oncology Patients-A Single Institution Study** *PEDIATRIC BLOOD & CANCER*  
Abou Ali, B., Hirmas, N., Tamim, H., Merabi, Z., Hanna-Wakim, R., Muwakkit, S., Abboud, M., El Solh, H., Saab, R.  
2015; 62 (12): 2167-2171
- **CDK2 Transcriptional Repression Is an Essential Effector in p53-Dependent Cellular Senescence-Implications for Therapeutic Intervention** *MOLECULAR CANCER RESEARCH*  
Zalzal, H., Nasr, B., Harajly, M., Basma, H., Ghamloush, F., Ghayad, S., Ghanem, N., Evan, G. I., Saab, R.  
2015; 13 (1): 29-40
- **Indocyanine Green-Enhanced Thermotherapy for Retinoblastoma.** *Ocular oncology and pathology*

- Al-Haddad, C. E., Abdulaal, M., Saab, R. H., Bashshur, Z. F.  
2014; 1 (2): 77-82
- **Cytomegalovirus retinitis in children and young adults with acute lymphoblastic leukemia in Lebanon** *LEUKEMIA & LYMPHOMA*  
Samia, L., Hamam, R., Dbaibo, G., Saab, R., El-Solh, H., Abboud, M., Muwakkit, S.  
2014; 55 (8): 1918-1921
  - **Caregivers' Perception of Drug Administration Safety for Pediatric Oncology Patients** *JOURNAL OF PEDIATRIC ONCOLOGY NURSING*  
Harris, N., Badr, L., Saab, R., Khalidi, A.  
2014; 31 (2): 95-103
  - **Outcome of Ewing sarcoma in a multidisciplinary setting in Lebanon.** *Pediatric blood & cancer*  
Abou Ali, B., Nader, R., Tamim, H., Eid, T., Boulos, F., Khoury, N., Akel, S., Haidar, R., Saghie, S., Abboud, M., Muwakkit, S., El-Solh, H., Saab, et al  
2014; 61 (8): 1472-5
  - **Premalignancy and Cellular Senescence** *TUMOR DORMANCY, QUIESCENCE, AND SENESENCE, VOL 2: AGING, CANCER, AND NONCANCER PATHOLOGIES*  
Abbas, H. A., Saab, R., Hayat, M. A.  
2014: 195-206
  - **A Case of Pitt-Hopkins Syndrome With Absence of Hyperventilation** *JOURNAL OF CHILD NEUROLOGY*  
Inati, A., Abbas, H. A., Korjian, S., Daaboul, Y., Harajeily, M., Saab, R.  
2013; 28 (12): 1698-1701
  - **Cyclophosphamide and Topotecan as First-line Salvage Therapy in Patients With Relapsed Ewing Sarcoma at a Single Institution** *JOURNAL OF PEDIATRIC HEMATOLOGY ONCOLOGY*  
Farhat, R., Raad, R., Khoury, N. J., Feghaly, J., Eid, T., Muwakkit, S., Abboud, M., El-Solh, H., Saab, R.  
2013; 35 (5): 356-360
  - **Complete heart block in a patient with acute lymphoblastic leukaemia: teicoplanin as a possible cause and review of literature** *JOURNAL OF CLINICAL PHARMACY AND THERAPEUTICS*  
Sharif-Yakan, A., Arabi, M., Musharrafieh, U. M., Bitar, F. F., Saab, R., Abboud, M. R., Muwakkit, S.  
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  - **Calcaneal osteosarcoma: a rare cause of heel pain in the paediatric population.** *BMJ case reports*  
Taslakian, B., Issa, G., Saab, R., Jabbour, M. N., Khoury, N. J.  
2013; 2013
  - **Congenital infantile fibrosarcoma: Association with bleeding diathesis** *AMERICAN JOURNAL OF CASE REPORTS*  
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