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(metastasis)

(benign tumor)

(Malignant tumor)

(deoxyribonucleic acid)

(DNA . . .)

)

(

(

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(genes)

(Proto-oncogenes)

(Mutation)

)

(Tumor suppressor genes)

(

(Chromosomes)

(Translocation)

)

(

(additions)

(inversion)

(

)

(deletion)



(Risk factors)

()

)

(

:

(Beckwith-Wiedemann syndrome)

(Wiskott-Aldrich syndrome)
(Li-Fraumeni syndrome)

(Epstein-Barr virus EBV)

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(HIV)
(mononucleosis)

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()

(Survival rates)

(prognosis)

(epithelial)

(acquired)

()

()

() ()

(neuroblastoma)

| | |
|---------------------------------------|--|
| | |
| Acute Lymphoblastic leukemia | |
| Acute myelogenous leukemia | |
| Hodgkin's disease | |
| Non Hodgkin's lymphoma | |
| Neuroblastoma | |
| Rhabdomyosarcoma | |
| Osteosarcoma | |
| Retinoblastoma | |
| Soft tissue Sarcoma | |
| Ewing's family of tumors | |
| Wilms' tumor | |
| central nervous system & Brain tumors | |

%3

(Retinoblastoma)

(Rhabdomyosarcoma)

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(

)
(Osteosarcoma)



(Staging)

(Grading)

(biopsy)

Computed)

(tomography scan
(Magnetic resonance imaging)

.()

.(staging)

(Grading)

(prognosis)

(favorable prognosis)
(unfavorable prognosis)

(Grading)

(differentiation)

(undifferentiated)
(high-grade tumor)

(well-differentiated)
(low-grade tumor)

- :
 - :(GX) •
 - .(Undetermined grade)
 - :(G1) 1 •
 - (Moderately) : (G2) 2 •
 - .(Intermediate grade)
 - (Poorly differentiated) : (G3) 3 •
 - (Undifferentiated) : (G4) 4 •

(Staging)

- :
 - :(Clinical-diagnostic staging) •
 - :(Surgical-evaluative staging) •
 - :(Post-surgical-treatment pathologic staging) •

:(Re-treatment staging)



:

(Radiation therapy)

(Chemotherapy)

(Bone marrow transplantation)

(Immunotherapy)

(stem cell transplantation)

(systemic)

(Neoadjuvant)

.(adjuvant)

:

(catheters)

(Intrathecal)

.(Ommaya reservoir)

)

(

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(

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.(

(ionizing radiation)

(external) (Internal)

(neoadjuvant therapy)
(adjuvant therapy)

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(Bone marrow transplant)

)

(hematopoietic cells

(Stem cells)

()

()

(Bone marrow transplant)

(Stem cells transplant)

)

(

(Autologous)

(Allogeneic)

(human leukocyte antigens HLA)

(peripheral stem cells)

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)

(Biological therapy)

(biological response modifier therapy)

:

:(Nonspecific immunotherapies)

(biological response modifiers BRMs)

(interferons)

(cytokines)

(interleukins)

.(colony-stimulating factors)

(growth factors)

(stem cells)

:(specific immunotherapies)

(Cancer vaccines)

(Monoclonal antibody therapy)

(5-year survival rates)

)

(

(prognosis)
(staging)

(Grading)

: 1990

(Granulocyte colony stimulating factor G-CSF)

(Neupogen)

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1991

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(Erythropoietin)

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(Interferon alfa)

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(interleukin-2 IL-2) 2

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(Magnetic resonance imaging MRI)

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1990

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1993



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(chickenpox)

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38.5

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(Echocardiogram)

(acetaminophen)

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2007-12- 22 :

منشورات جمعية آدم لسرطان الطفولة 2008

<http://www.adamcs.org>