

Brachytherapy

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Brachytherapy, also known as sealed source radiotherapy or endocurietherapy, is a form of radiotherapy where a radioactive source is placed inside or next to the area requiring treatment. Conversely, external beam radiotherapy, or teletherapy, is the application of radiation that has been externally produced by a linear accelerator. Brachytherapy is commonly used to treat localized prostate cancer and cancers of the head and neck. Brachy is from a Greek word for "short", so brachytherapy roughly translated is short distance therapy. Brachytherapy can be split into five main types: * Mold brachytherapy. Superficial tumours can be treated using sealed sources placed close to the skin. Dosimetry is often performed with reference to the Manchester system; a rule-based approach designed to ensure that the dose to all parts of the target volume is within 10% of the prescription dose. * Surface Applicator is usually called Strontium plaque therapy and is used for very superficial lesions less than 1 mm thick. The plaque is a hollow, thin silver casing that encloses a radioactive Strontium-90 powdered salt. The beta particles produced from Strontium's radioactive decay have a very shallow penetration. Typically the Sr90 plaque is placed on the bed of a resected pterygium. A stat dose of around 10-12 Gy is delivered by timing the contact. As the electrons only penetrate a few mm of air, radiation protection issues are slightly less but very different to other radiation sources. Cleaning the plaques that are placed on the eye sclera is required but must be gentle because the silver casing is thin and easily damaged. Strontium belongs to the same chemical class as Calcium, i.e., an alkaline earth metal, and so will co-locate in the bone if any strontium salt makes contact with the eye and is absorbed. Operators can prevent exposure to the beta rays by facing the applicator away from their bodies. * Interstitial brachytherapy. Here the sources are inserted into tissue. The first treatments of this kind used needles containing Radium-226, arranged according to the Manchester system, but modern methods tend to use Iridium-192 wire. Iridium wire can be arranged either using the Manchester or the Paris system; the latter was designed specifically to take advantage of the new nuclide. Prostate cancer treatment with Iodine-125 seeds is also classified as interstitial brachytherapy. For details of the gamma emitters please see commonly used gamma emitting isotopes. * Intracavitary brachytherapy places the sources inside a pre-existing body cavity. The most common applications of this method are gynaecological in nature, although it can also be performed on the nasopharynx. * Intravascular brachytherapy places a catheter with the sources inside the vasculature. The most common application of this method is the treatment of coronary in-stent restenosis, although the therapy has also been investigated for use in the treatment of peripheral vasculature stenoses. ([From the Wikipedia article Brachytherapy.](#))

Recent Publications on Brachytherapy:



- [The accuracy of the sentinel lymph node concept in early stage squamous cell vulvar carcinoma.](#)
OBJECTIVE: The purpose of the study was to determine the feasibility and... 20th November, 2009
Department of Brachytherapy, The Maria Sklodowska-Curie Memorial Cancer- Gynecol Oncol. 2009

- Nov 16. ([DOI Direct Link](#))
- [Urinary, climacteric and sexual symptoms 1 year after treatment of cervical cancer without brachytherapy.](#)
*Objective. Prospective studies elucidating the impact of the treatment of...*20th November, 2009
 Department of Clinical Sciences, Obstetrics and Gynecology, University- J Psychosom Obstet Gynaecol. 2009 Dec;30(4):269-274.
 - [Imaging of prostate cancer local recurrences: why and how?](#)
*OBJECTIVE: Because prostate cancer local recurrences can be efficiently...*19th November, 2009
 Universite de Lyon,- Eur Radiol. 2009 Nov 17. ([DOI Direct Link](#))
 - [Risk of cataract extraction among adult retinoblastoma survivors.](#)
*OBJECTIVE: To investigate the risk of cataract extraction among adult...*18th November, 2009
 Radiation Epidemiology Branch, Division of Cancer Epidemiology and- Arch Ophthalmol. 2009 Nov;127(11):1500-4. ([DOI Direct Link](#))
 - [Robotic Assisted Laparoscopic Salvage Prostatectomy for Radiation Resistant Prostate Cancer.](#)
*PURPOSE: We report on outcomes of robotic assisted laparoscopic radical...*17th November, 2009
 Department of Urology, City of Hope, Duarte, California.- J Urol. 2009 Nov 11. ([DOI Direct Link](#))
 - [Hypofractionated Boost to the Dominant Tumor region with Intensity Modulated Stereotactic Radiotherapy for Prostate Cancer: A Sequential Dose Escalation Pilot Study.](#)
*PURPOSE: To evaluate the feasibility, tolerability, and preliminary...*17th November, 2009
 Servei de Radio-oncologia, Institut Oncologic Teknon, Barcelona, Spain;- Int J Radiat Oncol Biol Phys. 2009 Nov 10. ([DOI Direct Link](#))
 - [A Population-Based Study of Subsequent Primary Malignancies after Endometrial Cancer: Genetic, Environmental, and Treatment-Related Associations.](#)
*PURPOSE: To examine the risk of subsequent primary malignancies (SPMs) in...*17th November, 2009
 Department of Radiation Oncology, Huntsman Cancer Hospital, University of- Int J Radiat Oncol Biol Phys. 2009 Nov 10. ([DOI Direct Link](#))
 - [Trends in non-metastatic prostate cancer management in the Northern and Yorkshire region of England, 2000-2006.](#)
*Background:Our objective was to analyse variation in non-metastatic...*12th November, 2009
 Northern and Yorkshire Cancer Registry and Information Service, Level 6,- Br J Cancer. 2009 Nov 10. ([DOI Direct Link](#))
 - [\[Prostate cancer treatments in Belgium\]](#)
*The authors present a flyover of current management of prostate cancer....*11th November, 2009
 Service d'Urologie, Hopital Erasme, Bruxelles.- Rev Med Brux. 2009 Sep;30(4):270-8.
 - [A dosimetric selectivity intercomparison of HDR brachytherapy, IMRT and helical tomotherapy in prostate cancer radiotherapy.](#)
*BACKGROUND AND PURPOSE: Dose escalation in order to improve the...*10th November, 2009
 Department of Radiation Oncology, Liege University Hospital, Liege,- Strahlenther Onkol. 2009 Nov;185(11):736-42. Epub 2009 Nov 10. ([DOI Direct Link](#))
 - [Use of gold markers for setup in image-guided fractionated high-dose-rate brachytherapy as a monotherapy for prostate cancer.](#)
*BACKGROUND AND PURPOSE: In order to use a single implant with one...*10th November, 2009
 Department of Radiation Oncology with Division of Medical Radiation- Strahlenther Onkol. 2009 Nov;185(11):731-5. Epub 2009 Nov 10. ([DOI Direct Link](#))
 - [Chemoradiation in locally advanced cervical carcinoma: An analysis of cisplatin dosing and other clinical prognostic factors.](#)
*OBJECTIVES: The aim of this study was to evaluate the effect of number of...*10th November, 2009
 Division of Gynecologic Oncology, Department of Obstetrics and Gynecology,- Gynecol Oncol. 2009 Nov 4. ([DOI Direct Link](#))
 - [Interobserver variation in rectal and bladder doses in orthogonal film-based treatment planning of cancer of the uterine cervix.](#)
*Orthogonal film-based treatment planning is the most commonly adopted...*7th November, 2009
 Radiation Physics Division, Regional Cancer Centre, Trivandrum, Kerala-695- J Med Phys. 2008

- Oct;33(4):154-7. ([DOI Direct Link](#))
- [A new method of anatomically conformal vaginal Cuff HDR brachytherapy.](#)
*OBJECTIVE: HDR brachytherapy to the vaginal cuff using rigid intracavitary...*7th November, 2009
 Department of Radiation Oncology, Washington University School of- Gynecol Oncol. 2009 Nov 3. ([DOI Direct Link](#))
 - [Axenfeld-Rieger ocular anomaly and retinoblastoma caused by constitutional chromosome 13q deletion.](#)
*Axenfeld-Rieger (AR) ocular anomaly might be due to deletions of different...*9th October, 2009
 Department of Child Neurology, Hospital Sant Joan de Deu, Barcelona,- *Pediatr Blood Cancer.* 2009 Nov 19. ([DOI Direct Link](#))

BioNews Results for Brachytherapy

- [Inter V Medical gets exclusive rights from IsoRay to sell Cesium-131 Brachytherapy seeds in Canada](#)
PharmaBiz: Nov 21 2009 7:08AM Matching: brachytherapy
- [L.A. Zoo Rhino Completes New Skin Cancer Treatment](#)
CBS3 Philadelphia: Nov 19 2009 12:04AM Matching: brachytherapy
- [IsoRay Announces Distribution Agreement in Canada](#)
Genetic Engineering News: Nov 18 2009 1:22PM Matching: brachytherapy
- [L.A. Zoo Rhino Completes New Skin Cancer Treatment](#)
CBS 13: Nov 18 2009 10:32AM Matching: brachytherapy
- [L.A. Zoo Rhino Completes New Skin Cancer Treatment](#)
WCBS-TV: Nov 18 2009 12:01AM Matching: brachytherapy
- [L.A. Zoo Announces Successful Cancer Treatment of Rhinoceros With Electronic Brachytherapy](#)
Pharmacy Choice: Nov 17 2009 5:06AM Matching: brachytherapy
- [L.A. Zoo Announces Successful Cancer Treatment of Rhinoceros With Electronic Brachytherapy](#)
Interest!ALERT: Nov 17 2009 2:32AM Matching: brachytherapy
- [L.A. Zoo Rhino Completes New Skin Cancer Treatment](#)
CBS 11 News: Nov 17 2009 9:42PM Matching: brachytherapy
- [L.A. Zoo Rhino Completes New Skin Cancer Treatment](#)
KDKA: Nov 17 2009 9:21PM Matching: brachytherapy
- [L.A. Zoo Rhino Completes New Skin Cancer Treatment](#)
KPIX-TV5: Nov 17 2009 8:22PM Matching: brachytherapy
- [L.A. Zoo Announces Successful Cancer Treatment of Rhinoceros With Electronic Brachytherapy](#)
Individual.com: Nov 17 2009 9:55AM Matching: brachytherapy
- [L.A. Zoo Rhino Completes New Skin Cancer Treatment](#)
KCAL 9: Nov 17 2009 3:12AM Matching: brachytherapy
- [L.A. Zoo Announces Successful Cancer Treatment of Rhinoceros With Electronic Brachytherapy](#)
Street Insider: Nov 16 2009 8:59PM Matching: brachytherapy
- [L.A. Zoo Announces Successful Cancer Treatment of Rhinoceros With Electronic Brachytherapy](#)
NewsBlaze: Nov 16 2009 8:59PM Matching: brachytherapy
- [L.A. Zoo Announces Successful Cancer Treatment of Rhinoceros With Electronic Brachytherapy](#)
PR Newswire via Yahoo!: Nov 16 2009 8:53PM Matching: brachytherapy



Brachytherapy Patents:

- 7547274- [Radioactive member and method of making](#)
- 7563223- [Tumescent skin spacing method](#)
- 7563324- [System and method for coating an implantable medical device](#)
- 7564946- [Orthovoltage radiotherapy](#)
- 7567694- [Method of placing constraints on a deformation map and system for implementing same](#)
- 7572228- [Devices for fixing a sensor in a lumen](#)
- 7574251- [Method and system for adapting a radiation therapy treatment plan based on a biological model](#)
- 7578780- [Brachytherapy applicator for delivery and assessment of low-level ionizing radiation therapy and methods of use](#)
- 7578781- [Device for placement of needles and radioactive seeds in radiotherapy](#)
- 7582050- [Apparatus for hyperthermia and brachytherapy delivery](#)
- 7582281- [Ethylenedicysteine \(EC\)-drug conjugates compositions and methods for tissue specific disease imaging](#)
- 7563222- [Methods and apparatus for intraocular brachytherapy](#)
- 7560531- [Cln101 antibody compositions and methods of use alone and in combination with prostate specific antigen and other cancer markers](#)
- 7559905- [HIFU probe for treating tissue with in-line degassing of fluid](#)
- 7547317- [Methods of performing procedures in the spine](#)
- 7547687- [Therapeutic treatment methods](#)
- 7547794- [Compositions useful as inhibitors of protein kinases](#)
- 7553377- [Apparatus and method for electrostatic coating of an abluminal stent surface](#)
- 7553486- [Anti-VEGF treatment for radiation-induced vasculopathy](#)
- 7554090- [Apparatus and process for dose-guided radiotherapy](#)
- 7554275- [Proton accelerator complex for radio-isotopes and therapy](#)
- 7556596- [Adaptive intracavitary brachytherapy applicator](#)
- 7557106- [Substituted pyrimidines useful as protein kinase inhibitors](#)
- 7557251- [Production of gossypol co-crystals](#)
- 7582875- [Monolithic active pixel dosimeter](#)
- 7585976- [Hemiasterlin derivatives and uses thereof](#)
- 7608077- [Method and apparatus for spinal distraction and fusion](#)
- 7608240- [Nanotubes for cancer therapy and diagnostics](#)
- 7609809- [System and method of generating contour structures using a dose volume histogram](#)
- 7612172- [Nucleic acids and corresponding proteins entitled 282P1G3 useful in treatment and detection of cancer](#)
- 7615208- [Metal ion-labeled bis-aminoethanethiol-targeting ligand conjugates, compositions, and methods for tissue-specific disease imaging](#)
- 7615379- [Nucleic acid and corresponding protein entitled 193P1E1B useful in treatment and detection of cancer](#)
- 7615554- [Erastin and erastin binding proteins, and uses thereof](#)
- 7618362- [Spacer apparatus for radiation and ablation therapy](#)
- 7618432- [Valvuloplasty devices and methods](#)
- 7618627- [Method of increasing radiation sensitivity by inhibition of beta one integrin](#)
- 7604799- [EphA4 Antibodies](#)

- 7604700- [Stent mandrel fixture and method for selectively coating surfaces of a stent](#)
- 7604645- [Ultrasound probe support and stepping device](#)
- 7588528- [Brachytherapy apparatus for dispensing medication](#)
- 7589119- [Methods for treating or preventing metastatic cancer using benzopyranone compounds](#)
- 7595379- [Antibodies and related molecules that bind to PSCA proteins](#)
- 7596207- [Method of accounting for tumor motion in radiotherapy treatment](#)
- 7598043- [Use of vascular endothelial growth factor receptor 1+ cells in treating and monitoring cancer and in screening for chemotherapeutics](#)
- 7598245- [Aminotriazole compounds useful as inhibitors of protein kinases](#)
- 7598350- [Human anti-epidermal growth factor receptor antibody](#)
- 7601113- [Brachytherapy apparatus and methods of using same](#)
- 7601725- [Thienopyrimidines useful as Aurora kinase inhibitors](#)
- 7604586- [Radioactive therapeutic apparatus](#)
- 7620147- [Orthovoltage radiotherapy](#)

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