

Electronic Brachytherapy: Overused and Overpriced?

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The introduction of high-density radiation electronic brachytherapy (eBX) for the treatment of nonmelanoma skin cancers has induced great angst within the dermatology community.¹ The *Current Procedural Terminology* (CPT) code 0182T (high dose rate eBX) reimburses at an extraordinarily high rate, which has drawn a substantial amount of attention. Some critics see it as another case of overutilization, of sucking more money out of a bleeding Medicare system. The financial opportunity afforded by eBX has even led some entrepreneurs to purchase dermatology clinics so that skin cancer patients can be treated via this modality instead of more traditional and less costly techniques (personal communication, 2014).

Among radiation oncologists, high-density radiation eBX is considered to be an important treatment option for select patients who have skin cancers staged as T1 or T2 tumors that are 4 cm or smaller in diameter and 5 mm or less in depth.² Additionally, ideal candidates for nonsurgical treatment options such as eBX include patients with lesions in cosmetically challenging areas (eg, ears, nose), those who may experience problematic wound healing due to tumor location (eg, lower extremities) or medical conditions (eg, diabetes mellitus, peripheral vascular disease), those with medical comorbidities that may preclude them from surgery, those currently taking anticoagulants, and those who are not interested in undergoing surgery.

A common criticism of eBX is that there is little data on long-term treatment outcomes, which will soon be addressed by a 5-year multicenter, prospective, randomized study of 720 patients with basal cell carcinoma and squamous cell carcinoma led by the University of California, Irvine, and the University

of California, San Diego (study protocol currently with institutional review board). Another criticism is that some manufacturers of eBX devices gained the less rigorous US Food and Drug Administration Premarket Notification 510(k) certification; however, this certification is quite commonplace in the United States, and an examination of the data actually shows a lower recall rate with this method when compared to the longer premarket approval application process.³ A more important criticism of eBX might be that radiation therapy is associated with a substantial increase in skin cancers that may occur decades later in irradiated areas; however, there remains a paucity of studies examining the safety data on eBX during the posttreatment period when such effects would be expected.

In practice, the forces for good and evil are not only limited to those who utilize eBX. It is widely known that CPT codes for Mohs micrographic surgery also have been abused—that is, the procedure has been used in circumstances where it was not absolutely necessary⁴—which led to an effort by dermatologic surgery organizations to agree on appropriate use criteria for Mohs surgery.⁵ These criteria are not perfect but should help curb the misuse of a valuable technique, which is one that is recognized as being optimal for the treatment of complex skin cancers. One might suggest forming similar appropriate use criteria for eBX and limiting this treatment to patients who either are older than 65 years, have serious medical issues, are currently taking anticoagulants, are immobile, or simply cannot handle further dermatologic surgeries.

The American Medical Association has developed new Category III CPT codes for treatment of the skin with eBX that will become effective January 2016.⁶ These codes take into consideration the need for a radiation oncologist and a physicist to be present for planning, dosimetry, simulation, and selection of parameters for the appropriate depth. Although I do not know the reimbursement rates for these new codes yet, they will likely be substantially less than the current payment for treatment with eBX. That said, the gravy train has left the station, and those who have invested in the devices for eBX will either see the benefit of continued treatment for

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their patients or divest themselves of eBX now that the reimbursement will be more modest.

Some of my dermatology colleagues, who also are some of my very good friends, have a visceral and absolute objection to the use of any form of radiation therapy, and I respect their opinions. However, eBX does play a role in treating cutaneous malignancies, and our radiation oncology colleagues—many who treat patients with extensive, aggressive, and recurrent skin cancers—also have a place at the table.

Speaking as a fellowship-trained dermatologic surgeon and a department chair, I am very aware that the teaching we provide today for our dermatology residents and fellows is likely to be their modus operandi for the future, a future in which the Patient Protection and Affordable Care Act will force physicians to carefully choose quality of care over personal gain and where financial rewards will be based on appropriate utilization and measurable outcomes. Electronic brachytherapy is one tool amongst many. I have a plethora of patients in their 70s and 80s who have given up on surgery for skin cancer and who would prefer painless treatment with eBX, which allows for the appropriate use of such a controversial therapy.

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QUICK POLL QUESTION



Should dermatologists suggest electronic brachytherapy to their patients with nonmelanoma skin cancer?

- a. No, dermatologists should continue treating these patients, not radiation oncologists
- b. Yes, it provides an alternative treatment for patients who need one
- c. Maybe, but the data are not conclusive

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