



SERVICES OFFERED

**GUIDE TO
COMPREHENSIVE
CANCER CARE**

**PATIENT / FAMILY
RESOURCE CENTER**

SELF CARE GUIDES

TESTS & PROCEDURES

**COMPLEMENTARY /
ALTERNATIVE CARE**

HOME

In the Know

Connecting Patient / Family Library Patrons To Information, Ideas and Resources

November 2004

from

The Duke Patient/Family Resource Center

The Duke Patient/Family Resource Center is:

- A lending library offering books, audio and video tapes, magazines and free brochures dealing with cancer and certain blood disorders and with issues of coping, survivorship, caregiving, and grieving
- Open 8:30 to 5:00 every day the Morris Clinics are open
- Located in the White Zone, first floor, of the Morris Cancer Clinic, Room 15123.
- Our phone number is 919-684-6955. Our email address is FamilyLibrary@mc.duke.edu

Resource Center Coordinator: [Harriet Whitehead, PhD](#)

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NEWS AND REVIEWS

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RESEARCH NEWS FLASH

Nanotechnology Gets Big! In September of this year, the announcement came out that the National Cancer Institutes are making a multimillion dollar bet on nanotechnology as a promising avenue in the battle against cancer. The NCI plan would include setting up key “Centers of Cancer Nanotechnology Excellence” where the engineering and physical science expertise can come together with the cancer biology expertise. It would include setting up cross-disciplinary training and multi-disciplinary research teams. It would include funding of product-oriented development initiatives; and providing basic research grants to individuals working on cancer and nanotech projects.

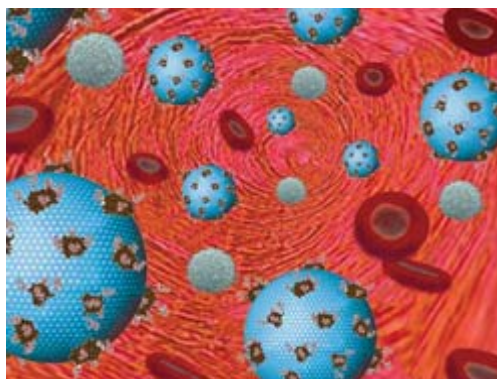
What exactly is “nanotech” and why is it suddenly looming so large in the cancer world? I can’t find the derivation of the term, but basically nanotechnology is the science of controlling and making things out of particles that are unimaginably small. As one website explainer puts it:

Nanoparticles are very small, ranging from about 1 nanometre to 100 nanometres in size. A nanometre is one billionth of a metre, or about 7 gold atoms across. Putting it in perspective, a nanometre is to a metre what a dime is to planet Earth.

<http://www.birchmountain.com/Pages/nanoparticles.html>

Materials, processes, and even little “systems” can nowadays be constructed out of bits of matter smaller than a molecule.

Think about this. Smaller than a molecule, or even the same size as a molecule means, of course, smaller than a living cell; smaller even than many parts of a living cell. Small enough to go inside a cell and interact with its machinery. Small enough, in other words, to interact with those malfunctioning genetic elements of the cell that cause it to become a cancer. To really fight cancer, the NCI has decided, you have to get down on its level.



To give you some examples of “nano” concepts that are in the works:

1. I wrote in an earlier newsletter (March 2004) about the “little gold shells.” Here a monoclonal antibody, a biological product designed to seek out the relevant cancer cells, is bonded with nanoparticles made of gold. This concoction is infused into the body and the little gold shells, guided by their monoclonal antibody, attach to the cancer cells wherever these may be. The body is then irradiated with “near infra-red radiation,” which passes harmlessly through normal tissue, but heats gold. The result? Cooked cancer cells.
2. Then there’s the imaging side of the cancer battle. To find cancer and to gauge how it is responding to treatment, doctors resort to an array of sophisticated imaging processes: CT scanning, PET scanning, and Magnetic Resonance Imaging, to name the three most familiar ones. But the current state-of-the-art can detect only tumors that have arrived at the size of about a billion cells (pin-head sized tumors). Nanotech imaging promises to bring this down to 100,000 cell tumors. No more sitting around wondering if there are “micro-metastases” in the patient’s body.
3. Is the treatment working? A possible new way to tell whether a treatment is working is to have readily detectible nanoparticles that bind to the tumor cells but are released back into the bloodstream when a cell dies. A blood test would then reveal whether there has been significant tumor cell death after a single treatment. If not, the oncologist can switch the patient to a new type of treatment. The ability to stay ahead of the tumor is greatly magnified.
4. Getting really ambitious, one can envision the rise of “smart” nanodevices that could double as both therapeutic agents and damage-report agents. It is even conceivable that little “protein factories” (like cells!) could be constructed on a nanoscale, then introduced into the patient’s body to continuously produce the protein that keeps a certain cancer at bay.
5. Finally, in the area of pure research, nanodevices and chip-based “nanolabs” can be employed to track the movements of cells, and even the movements of molecules around in their natural environment, the living body. With such tools, scientists could penetrate the secrets of how a cancer process starts and how it develops.

INSPIRATIONAL BOOKS



Kitchen Table Wisdom and *My Grandfather's Blessings* by Rachel Naomi Remen are standout additions to our collection of books devoted to finding psychological strength in the face of life-threatening illness. Rachel Remen came to Duke last spring to speak to the "Power of Knowledge" gathering that the Duke Cancer Patient Support Program sponsors each year. She held us spellbound with her well crafted stories taken from the lives of patients and doctors she has dealt with in her role as cancer physician and counselor. Each story comes wrapped in a thoughtful observation. Here is a small example:

"Perhaps the most important thing we bring to another person is the silence in us. Not the sort of silence that is filled with unspoken criticism or hard withdrawal. The sort of silence that is a place of refuge, of rest, or acceptance of someone as they are. We are all hungry for this other silence. It is hard to find. In its presence we can remember something beyond the moment, a strength on which to build a life. Silence is a place of great power and healing. Silence is God's lap.

"A highly skilled AIDS doctor once told me that she keeps a picture of her grandmother in her home and sits before it for a few minutes every day before she leaves for work. Her grandmother was an Italian-born woman who held her family close. Her wisdom was of the earth. Once when Louisa was very small, her kitten was killed in an accident. It was her first experience of death and she had been devastated. Her parents encouraged her not to be sad, telling her that her kitten was in heaven now with God. Despite these assurances, she had not been comforted. She had prayed to God, asking Him to give her kitten back. But God did not respond.

"In her anguish she had turned to her grandmother and asked, "Why?" Her grandmother had not told her that her kitten was in heaven as so many of the other adults had. Instead, she had simply held her and reminded her of the time when her grandfather had died. She, too, had prayed to God, but God had not brought Grandpa back. She did not know why. Louisa had turned into the soft warmth of her grandmother's shoulder then and sobbed. When finally she was able to look up, she saw that her grandmother was crying as well.

"Although her grandmother could not answer her question, a great loneliness had gone and she felt able to go on. ..."My grandmother was a lap, Rachel, " she told me, "a place of refuge. I know a great deal about AIDS, but what I really want to be for my patients is a lap. A place from which they can face what they have to face and not be alone."

My Grandfather's Blessings, pp. 164-165

WEBSITES FOR CAREGIVERS

<http://familycaregiving101.org/>

The spiritual strength we need, as patients or as caregivers, can be usefully supplemented with a certain amount of organization. When a patient comes home from the hospital, the home should be organized with the patient's needs in mind. When someone needs to call the insurance company, that person should take a few minutes to be well prepared for the discussion. When you come to the hospital, it helps to know a little bit about how to get around. One good place to start is at the website given above, which leads you to a wonderful network of tip-lists and links to caregiver resources. While oriented to caring for the elderly, many of the concerns cover ill or disabled folks of all ages.

<http://www.caregiving.com/>

One of the links suggested by familycaregiving101 (above) is [caregiving.com](http://www.caregiving.com/), where you encounter more of the warm fuzzy stuff and a more interactive focus. There are Yahoo! support groups for different categories of caregiver, and an "Ask Denise" feature where you can seek answers tailored to your particular needs.

RESOURCE CENTER HAS NEW SHELVING PLAN

We've done a little reorganizing in the Resource Center in order to give more prominence to books on cancers other than breast. Breast Cancer still occupies its original position on the leftmost bookcase visible from the doorway, but underneath it, you will find a shelf that has one or more works on Bladder Cancer, Brain Cancer, Colorectal Cancer, Hodgkin's & Non-Hodgkin's Lymphoma, Leukemia, Lung Cancer, Ovarian and other Gynecological Cancers. Occupying a shelf all it's own on the rightmost front bookcase, is Prostate Cancer. Below Prostate Cancer, one finds Complementary Therapies, Cancer Treatments and Caregiving.

This necessitated shifting the Coping and Inspiration Books to the

back half of the room. Turn the corner of the front bookcases, and you will find Coping and Inspiration books, books for helping children cope, and the Fitness and Nutrition guides. The backmost wall continues to house books on Grief and Dying, Guidebooks, Humor, and Pain and Symptom Management.

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