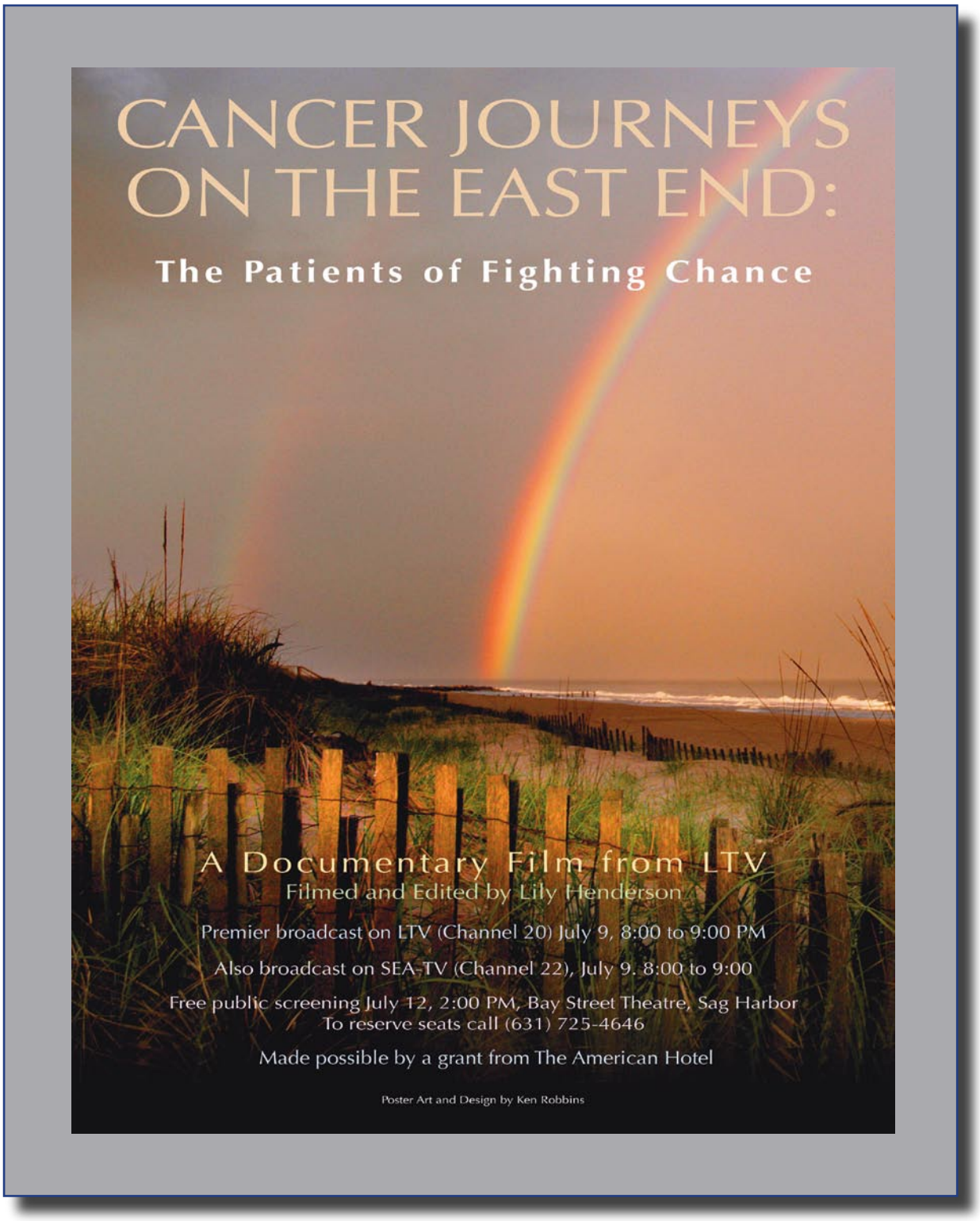
News from FIGHTING CHANCE®
Counseling and Resource Center for Cancer Patients
June 2009



"cancersimplified.org" is Launched by Fighting Chance as New Educational Tool

Flip Charts -- a year in the making -- explain cancer in layman's terms with distinctive use of graphics

New Website has nationwide appeal and is visited by thousands each month

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FOOTNOTES

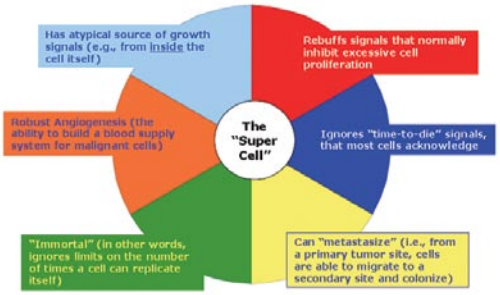
A Sampling of Flip Charts from cancersimplified . . .

PREFACE

3. What Is Cancer?

According to the American Cancer Society, cancer is a group of diseases characterized by uncontrolled growth and spread of abnormal cells; if the spread is not controlled, it can result in death.

Think of cancer as a "Super Cell," with six characteristics that fuel its growth and make it very difficult to kill.



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THE DISEASE

5. Where It Starts

Cancer causes uncontrolled growth and spread of malignant cells, so think of the disease as first occurring at the individual cellular level.

What's a Cell? Cells are the building blocks of human beings. They give our body structure, convert food into energy and handle all sorts of tasks necessary to sustain life.

How Many Are There? 100 trillion per person. If a cell was the size of a dime you would need 100 trillion dimes to fill up the Empire State Building.

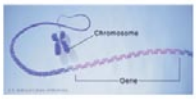
Empire State Building (106 Stories) New York City

Where's The Nucleus? At the core of every cell. The most important items inside the nucleus -- for purposes of explaining cancer -- are the genes.

This depicts a cell and its nucleus

Why Are Genes So Important? Because many scientists think that cancer is caused by defects in our genetic material. The information that makes up each gene is encoded on chromosomes that are part of molecular strands known as "DNA."

25,000... The approximate number of genes inside each nucleus of every human cell.



Here's a gene shown as one small part of a chromosome

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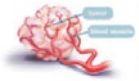
THE DISEASE

6. How It Spreads

Cancer transforms normal cells into cancer cells that then form a malignant tumor and also "metastasize" to form new tumors at other locations within the body.

From Cell to Cell The first cancer cell in someone's body started out as a seemingly normal cell that one day began mutating into a malignant cell -- over a period of several generations of cell division.

Cancer cell (in purple) after several cell divisions.



Once there are full-fledged cancer cells, they begin multiplying much more rapidly than normal cells – as they divide in a haphazard manner. As a result, these cancer cells often pile up into a non-structured mass referred to as a malignant "tumor."

From Place to Place A malignant tumor can destroy the part of the body where it originated (the "primary site") and then spread to other parts of the body where new tumors are created and even more destruction occurs. When a cancer spreads from place to place like this, it is referred to as "metastasizing."

Staging Cancer patients often ask their doctor: "How advanced is my cancer?" The disease usually is described as being at one of four stages. For example, "Stage 1" means there is evidence of a tumor but only in the tissue of origin, whereas "Stage 4" means the cancer has metastasized to a secondary site, distant from the primary site where it originated.

Lymphoma

FDG PET scan in a lymphoma patient, including brain, chest and spleen involvement

80% Cancer has metastasized in 80% of the patients who die from the disease.

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THE DISEASE

7. Why It's Harmful

When our body's organs are invaded by malignant tumors they cannot carry out their life-sustaining functions ... and death may follow.

Malignant Tumors As cancer cells multiply, the mass of cells eventually forms a malignant tumor and it will reside within human organs such as our lungs or colon.

Tumor Size Measurement of tumor size is an important part of cancer diagnosis. As the tumor size becomes larger (as a general rule) treatment of the cancer will become more challenging.

Tumor size can range from a peanut (two centimeters or smaller) to as large as a lime.

Organ Invasion Left unchecked a malignant tumor will grow larger and displace more tissue within its resident organ. Before long the organ that has been invaded will become totally dysfunctional and sustaining human life may then become impossible.

Colon tissue becomes displaced as the malignancy progresses

Very large tumor, in the middle of two lung lobes, shows how the organ can become dysfunctional (organ pictured post-autopsy)

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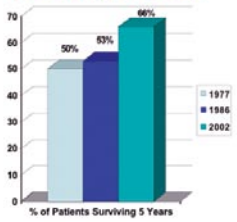
ODDS OF SURVIVAL

11. Long-Term Trends

There are over 10 million cancer survivors today in American ... and the disease is no longer considered a "death sentence."

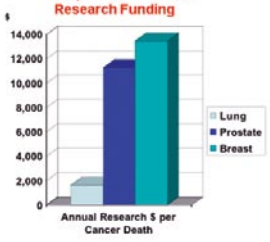
During the past 20 years cancer survival rates have improved about 1% each year, driven by biotech and its new anti-cancer drugs. Before 1986 there were limited gains in survival rates.

Survival Rates 1977 – 2002 (all cancer types combined)



Annual research spending on breast cancer -- almost $14,000 for each breast cancer death – is 13x more than annual research spending on lung cancer.

Disparities in Annual Research Funding



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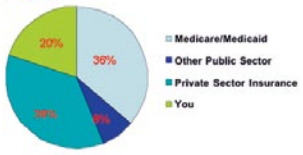
WHAT'S NEXT?

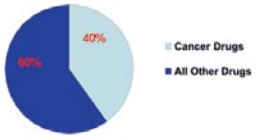
36. Who Pays the Bill?

The government's Medicare and Medicaid programs, together, pay about 36% of the $70 billion dollars in medical treatment costs for cancer patients each year. The same percentage is paid by private sector providers of health insurance.

Medical Treatment for Cancer Costs $70 billion dollars per year and here is who pays



Annual payments made by Medicare under the "Drug Benefit."



Uninsured. Of Americans who are diagnosed each year... 1 in 10 have no health insurance and do not qualify (in most cases because they are too young) for Medicare.

Largest Patient Co-Pay for Latest Anti-Cancer Drugs. Many of the most expensive drugs (including some that combat cancer) have been placed in a new "Tier 4" under the Medicare drug benefit program. For these drugs patient co-pay is based on a percentage (at least 20%) of the cost of filling a prescription. The traditional system had patients paying a fixed amount – say $10 per drug – regardless of the drug's cost. (NYT 4/14/08)

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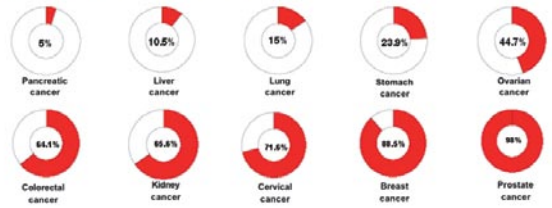
ODDS OF SURVIVAL **10. Survival Rates Today**

For three of the most prevalent cancers – prostate, breast and colon – the 5-year survival rates are well over 50%; for cancer types that are less common the survival rates are lower.

The good news: some very prevalent types of cancer -- like breast and prostate -- have now achieved high 5-yr. survival rates. But other types of cancer (including lung cancer) have low survival rates and those rates have not improved much during the past 50 years. Survival rates are shown by red slices of these pie charts:



Most Prevalent Cancers - Men

Most Prevalent Cancers - Women

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WORKING ON A CURE **13. Specialized Medical Centers**

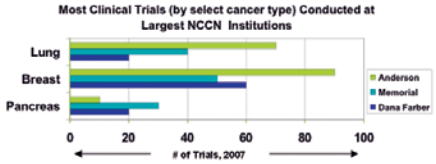
Cancer is treated at hundreds of US hospitals but there are only a handful of oncology centers that are widely considered "the best of the best."

- Where is the "best" place for a cancer patient to get treatment or a second opinion? There are 2 important "certifications" to look for ...

Designations by the ("NCI") and the Nat'l Comprehensive Cancer Network ("NCCN")

Designations	Awarded by	# in the USA	Significance
Comprehensive Cancer Center	NCI	39	Have programs that treat virtually all cancer types; research and community outreach are chief priorities.
NCCN Member	NCCN	21	An exclusive alliance of the "best of the best" cancer centers (all are also CCC-designated).

- It is very helpful to know -- by specific cancer type -- which NCCN Hospitals are conducting the most clinical trials, and hence are more knowledgeable about that cancer.



1,500

The number of clinical trials are ongoing annually at the NCCN Hospitals.

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TREATMENTS **20. How Chemo Works**

Chemo is like "carpet-bombing" whereas the new cell-targeted drugs are like "smart-bombs."

The Target ... chemo drugs are attracted to fast-growing cells, a chief characteristic of many cancer cells.

Ready ... unless a cell can divide and replicate itself, the cell will die. Stopping cell division can stop cancer.

Aim ... all chemo drugs impair or disrupt cell division -- but they do so at different stages in the cell cycle.

Chemo drugs work at different cycles in the cells replication. For example, the chemo agent 5FU works at the "S Phase." A chemo "cocktail" could have three different agents each working at different phases of the cell cycle. There are about 60 approved chemo agents that can be effective in different combinations.

Collateral Damage ... chemo also kills other fast growing cells in the body -- like those found in hair and intestines; that explains side effects like hair loss and nausea.

Fire ... "cell kill" happens when chemo thwarts cell division; unable to replicate itself the cancer cells die off.

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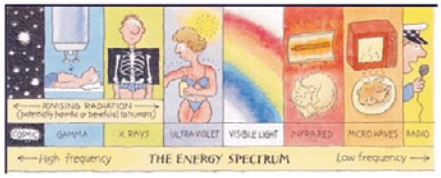
TREATMENTS **22. Damaged Atoms**

Radiation attacks cancer at the level of the atom, whereas chemo is attacking at the cellular level of a Cell.

An Atom – protons and neutrons in the center, orbited by electrons.

Atoms & Cells An Atom is the smallest living unit of **matter**. A cell is the smallest unit of **living things**. A cell has plenty of atoms combined into molecules -- like DNA.

What's Radiation It's one of the waves of energy that travel through our world; in fact, it's powerful enough to dislodge an electron from its atomic orbit, leaving the atom damaged and in an "ionized" state.



What Happens When Atoms Are Damaged? When atoms (that are part of the DNA Molecule) get damaged by radiation the result is that chromosomes cannot properly replicate themselves. Unable to divide and grow, the cancer cell (before long) dies off.

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NEW DRUGS **24. Monoclonal Antibodies ("mabs")**

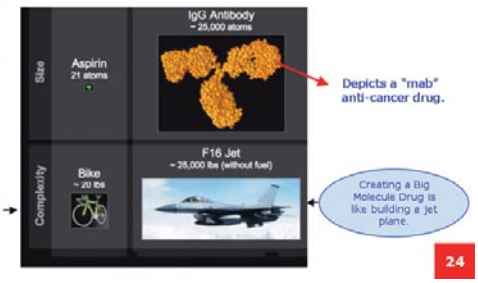
Antibodies are part of our immune system, but are in short supply when called upon to help kill cancer cells. So science has tried to "mass produce" key antibodies that come from mice and then are "humanized"; these cloned antibodies then can be used in treating cancer.

mono ... refers to a single antibody with very specific cancer-killing properties that is to be mass produced.

clonal ...refers to a process of duplicating a cell (in this case one with special cancer-killing properties) through a process of special cell engineering.

antibody ... they are proteins in the immune system that help destroy foreign bodies (like a virus or cancer cells).

mabs are made... from thousands of atoms linked together in a very complex structure, and sometimes called "Big Molecule Drugs." There also are "Small Molecule Drugs" and some of them are used to treat cancer; but they are derived from synthesizing chemicals and typically are made up of less than 100 atoms.



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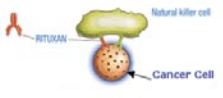
NEW DRUGS **25. "Big 3" Blockbuster Drugs**

A "blockbuster" drug is one with annual sales of over $1 billion, and three monoclonal antibodies -- with the trade names Rituxan, Avastin and Herceptin -- are now members of this exclusive club, and are becoming commonplace in treating some of the major cancers.

Rituxan (Rituximab)

$2.5 Billion in '07 Sales

For: Non-Hodgkins Lymphoma



The Rituxan antibody binds to a cancer cell and labels it for destruction by the immune system's killer cells.

Avastin (Bevacizumab)

$2.4 Billion in '07 Sales

For: Colon, Lung & Breast Cancer

Avastin inhibits a growth factor for cancer (called "VEGF") and that reduces blood supply to the tumor.

Herceptin (Trastuzumab)

$1.7 Billion in '07 Sales

For: Breast Cancer

Herceptin antibody (in orange) restrains a cancer growth factor (in purple) from joining with, and being activated by) a special protein (in pink and known as "HER2").

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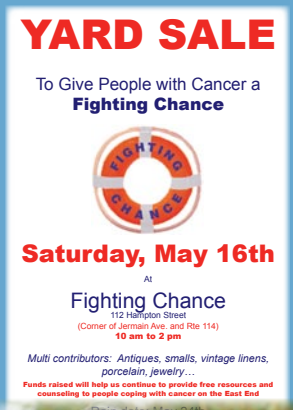
From the Chairman

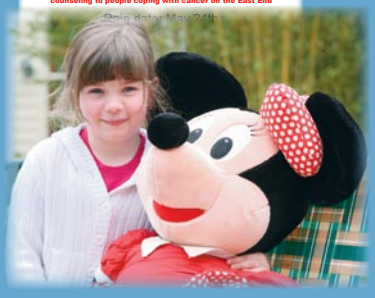
LTV was established in 1984 as a non-profit television station, serving the East End of Long Island -- the same area served by Fighting Chance. We were honored when LTV spoke with us in mid-2008 about doing a documentary about the patients we serve at Fighting Chance.

Duncan Darrow
Chairman of the Board

Thus was born the film we simply call "Journeys" that profiles seven cancer patients who received support from Fighting Chance. All are survivors today.

This newsletter also introduces our readers to a new non-profit -- called cancersimplified.org -- that grew out of Fighting Chance and is focused on explaining cancer in layman's terms. We have found that our patients feel far more empowered with just a bit of "Biology 101" -- in other words, some basic insights about what cancer cells are doing to them and how science plans to kill those cells. This newsletter shows you just a few of the 40-some flip charts, but if you would like to view all of them, they are free on the website (www.cancersimplified.org).





photos: C.B. Grubb

The WHITE GARDEN at Fighting Chance

photos by Duncan Darrow & C.B. Grubb

Upcoming Workshops at Fighting Chance

Hope, Health & Healing,
A group for people treated for cancer.
Join Karrie Robinson, LCSW & Carol Mason
Tuesdays: 3rd Tuesday of the Month
6/16, 7/21, 8/18
12:00 ‚Äì 1:30 PM
Fighting Chance Office

Caregivers Group:
Caregiving can be both a rewarding and stressful experience. Please join Dr. Bill Di Scipio, Ph. D. for supportive discussion.
Mondays: 3rd Monday of the Month
6/15, 7/20, 8/17
6:00 ‚Äì 7:30 PM
Fighting Chance Office

Men and Cancer:
An Educational Support Group For Men. Please join Dr. Bill Di Scipio, Ph. D for supportive discussion.
Mondays: 4th Monday of the Month
6/22, 7/27, 8/24;
6:00 - 7:30 PM
Fighting Chance Office