Save Up To $700 On The Corolla Silver Anniversary Extra Value Package:

Literally hundreds of millions of dollars and over twenty-five years of development have made Corolla a benchmark of quality in America. It's the kind of investment in advanced technology and sophisticated manufacturing techniques that not only makes Corollas better, but helps make them more affordable because their production is more resistance.

All of which makes the Silver Anniversary Extra Value Package Corolla even more special. Because you not only get a Corolla, but you can save up to $700 on options like air conditioning, AM/FM Cassette with four speakers, tilt steering wheel, carpeted floor mats and power windows and door locks. They're all part of a package designed to make it easier to get more Corolla for less.

About the only thing you can't afford to do is wait.

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We Spared No Expense To Make The New Corolla Affordable.

cost efficient. And it's the kind of investment that results in features like a self-diagnostic, computer-controlled driver and passenger-side air bag** system that deploys in a fraction of a second and electrical connectors that are gold-plated for longer life and greater corrosion power windows and door locks. They're all part of a package designed to make it easier to get more Corolla for less.

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STEALTHY AS A PIRATE SLIPPING FROM A COVE, the cancer cell severs the moorings that attach it to surrounding tissue. Slowly it extends one, two, three fingerlike probes and begins to creep. Then it detects the pulsating presence of a nearby capillary and darts between the cells that compose the blood-vessel wall. It dives into the red river that courses through lung and liver, breast and brain. An hour or so later, it surfaces on some tranquil shore, settles down and—at the expense of its hapless neighbors—begins to prosper.

Gradually the cancer cell invades the turf occupied by its normal counterparts, killing all those in its path. It tricks nearby cells into forming food-bearing blood vessels, then compels them to churn out growth-spurring chemicals. To shield itself from patrolling immune cells, the cancer cell sprouts spiny armor like a sea urchin’s. To expel the agents physicians send to kill it, the cancer cell deploys along its membrane a battery of tiny pumps. Is there a way to fight such a foe?

Until now, medicine has tried to overwhelm the cancer cell with brute force, slicing it out with surgery, zapping it with radiation or poisoning it with chemotherapy. All too often, however, a few cells manage to survive the onslaught and germinate, sometimes years later, into tumors that are impervious to treatment. The ability of the cancer cell to outmaneuver its attackers has long been reflected in mortality statistics. Despite gains made against cancers such as childhood leukemia and Hodgkin’s lymphoma, the overall death rate remains dismally high. This year more than half a million Americans will succumb to cancer, making it the nation’s second...
By last week researchers had found perhaps 200 cancer genes, at least three dozen of them important in human tumors. Some, known as oncogenes, turn on cell division, whereas others, called tumor-suppressor genes, are responsible for switching the process off. In their normal form, both kinds of genes work as a team, enabling the body to perform such vital tasks as replacing dead cells or repairing defective ones. But mutations in the chemical makeup of these genes can disable or kill the proteins they encode, leading to deadly forms of cancer. From Canada's McMaster University came a report identifying a copy of itself and splits in two. Ordinary division, the process by which a cell makes a backup copy, often is in error. A majority of cancer cells, they found, lack functioning copies of a normal gene found in animal and human cells. The virus had somehow stolen a perfectly good gene and put it to bad use. This finding helped lead to a general conclusion: cells become cancerous because their normal genetic machinery goes awry. The changes that initiate the damage can be viruses, radiation, environmental poisons, defective genes inherited from parents—or a combination of all of the above.

MALFUNCTION
The multiple tumor-suppressor gene that Alexander Kamb and his colleagues discovered may explain why three melanoma cells went amiss. Scientists have thus stripped away cancer's mystery and revealed the malignant cell for what it is: not an intrinsically evil villain but an ordinary machine that has broken down in very specific, and potentially repairable, ways. They have studied the life history of a cancer cell and found recurrent mutations in genes at almost every step of the way, from the initial formation of a tumor to the advanced stages of metastasis, the lethal spread of the disease through the body.

FATAL FLAWS
Cancer is not a modern disease. Some of our apelike ancestors undoubtedly suffered from it; so did the dinosaurs. In fact, says Robert Weinberg, a molecular biologist at the Massachusetts Institute of Technology, "It is a risk all multitudes of organisms share." From a human viewpoint, cancer may be nothing more than a simple glitch. "The route to therapy," he says, "seems surprisingly clear:"

That a viral gene known to cause cancer in chickens was practically a carbon copy of a normal gene found in animal and human cells. The virus had somehow stolen a perfectly good gene and put it to bad use. This finding helped lead to a general conclusion: cells become cancerous because their normal genetic machinery goes awry. The changes that initiate the damage can be viruses, radiation, environmental poisons, defective genes inherited from parents—or a combination of all of the above.

THE DEADLY TRANSFORMATION

- **DNA** contains oncogenes and tumor-suppressor genes in normal cells, these genes work together to control cell growth.
- **Mutations** turn oncogenes into cancer genes and inactivate tumor-suppressor genes.
- **Defects** in these genes, especially those that involve radiation, chemicals or viruses, allow the cell to grow in tumor.
- **Mutant cancers cells** lack tumor-suppressor genes, leading to uncontrolled cell growth.
- **Necrosis** causes cells to tissue destruction, eliminating the tumor.
- **Chemotherapy** treats tumors by destroying them.
YEARNINGS FOR IMMORTALITY

Normal cells do not live forever. Under certain circumstances, cells are actually programmed to die. One of the most fascinating features of early development, for example, is the explosive proliferation of certain types of cells, followed by mass suicide. Human embryos start with paddies for hands; it is cell death that gives them fingers. Neurons also age by the billions as the brain renews its circuitry during development. In adults, the cell-death program serves as a stern disciplinarian. Cells that become irreparably damaged are expected to fall on their swords for the greater good of the organism. "For us animals to live," says Dr. Samuel Broder, director of the National Cancer Institute, "it must contain within its cells the knowledge that they have to die. But the cancer cell divides at all cost. It's forgotten how to die."

The tumor-suppressor gene p53 is often described as "the guardian of the genome" because it keeps watch over DNA during cell division. When damage occurs, p53 commands other genes to bring cell division to a halt. If repairs are made, then p53 allows the cell cycle to continue. But in some cases, if the damage is too serious to be patched, p53 activates other genes that cause the cell to self-destruct. Mutations in p53, which have been detected in more than 50% of all human cancers, are thus extremely dangerous. In laboratory cultures, some cancer cells that possess mutant versions of p53 do not die when challenged by antitumor agents, while those that have normal p53 genes go belly-up.

Two forms of the cell-death program are in the making: one for programs like wound healing, which allows damaged cells to be repaired; and the other for programs like cell suicide, which is activated when cells that can no longer divide must die. Over the course of their development, certain cells have learned to stop the cell cycle but not to die. In this case, the cell cycle is a local enzyme called telomerase, which lengthens the ends of the chromosomes. In contrast, tumor cells put into permanent dormancy are destined to die. When cells are deprived of nutrients or turned off by antitumor agents, they self-destruct via a program called "apoptosis," or programmed cell death.

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"It was like a shot for measles or mumps. I do not expect any side effects, except to feel better."  

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**Jack Swepston, 48, Pancreatic Cancer.** On March 31 this Dallas dentist traveled to the National Cancer Institute in Bethesda, Maryland, to receive a new type of anticancer vaccine. Prepared by a team of researchers, including Drs. David Carbone and Patricia Steeg of the University of Texas Southwestern Medical Center, the vaccine was a synthetic version of a mutant protein fragment found in Swepston's tumor. The hope is that the immune system will learn to recognize this target and destroy the cells that make it. "I haven't felt a significant improvement yet," he says, "but the doctors are tremendously excited."  

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**The Big Killers**  

<table>
<thead>
<tr>
<th>Cancer Type</th>
<th>5-Year Survival Rate</th>
<th>Age-Adjusted Mortality Rate</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 5</th>
</tr>
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<tbody>
<tr>
<td>Lung</td>
<td>153,000 172,000 13%</td>
<td>56,000 149,000 58%</td>
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<tr>
<td>Colon/Rectum</td>
<td>46,000 182,000 79%</td>
<td>38,000 200,000 77%</td>
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<tr>
<td>Breast</td>
<td>25,900 27,000 3%</td>
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<tr>
<td>Lymphoma</td>
<td>22,750 52,900 78%</td>
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<tr>
<td>Prostate</td>
<td>19,100 28,600 38%</td>
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<tr>
<td>Leukemia</td>
<td>13,600 24,000 39%</td>
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<tr>
<td>Kidney</td>
<td>11,300 27,600 55%</td>
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<tr>
<td>Bladder</td>
<td>10,600 51,200 79%</td>
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<tr>
<td>Uterus</td>
<td>10,500 46,000 67%</td>
<td></td>
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<tr>
<td>Skin/Melanoma</td>
<td>9,600 32,000 84%</td>
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**Targets for Cancer Fighters**  

**GUARDING THE MASTER SWITCH**  
Until last week, 60s, the subject of some 1,000 scientific papers in 1993 alone, was considered the most important cancer gene. The Journal of Science even named it Molecula of the Year. But now there is a new contender for salmon跑道区的 cea, an Alexander Kamb and his colleagues refer to the multiple tumor-suppressor gene they have just discovered. "Multiple" refers to the fact that defects in this gene can cause many kinds of cancer, including melanoma, lung, breast and brain tumors. In fact, functional copies of MTS1 may be missing in more than 50% of all human cancers. What makes MTS1 so significant is its clear role in the cell division cycle. A cell divides when it needs to, but in response to specific signals, such as growth factors produced by white blood cells repairing a wound. These signals are picked up by receptors on the membranes of the cell and passed along—like batons in a high-speed relay—to the interior, all the way to the nucleus. Not surprisingly, many oncogenes, including one called ras, the first oncogene ever identified, are now involved in this type of signaling pathway. But there are other molecules that determine whether the cell should heed these signals. And the small protein produced by MTS1 appears to be among the most important in this division. Last year researchers at New York's Cold Spring Harbor Laboratory discovered that a protein they called p53 killed an embryonic cell by inducing apoptosis: it is a growth promoter. Last week it became clear that p53 and the MTS1 protein are one and the same.  

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**For cancer fighters Theoretically, any gene that goes away in a cancer cell can be a way to its destruction. But those that directly influence a cell's decisions to divide are spurring particular interest. The protein made by the MTS1 gene seems exceptionally promising, for it has characteristics suggesting it may easily become a target for drug development. MTS1 and a gene known as nm23, first identified by researchers at the National Cancer Institute in Bethesda, Maryland, to receive a new type of anticancer vaccine. Prepared by a team of researchers, including Drs. David Carbone and Patricia Steeg of the University of Texas Southwestern Medical Center, the vaccine was a synthetic version of a mutant protein fragment found in Swepston's tumor. The hope is that the immune system will learn to recognize this target and destroy the cells that make it. "I haven't felt a significant improvement yet," he says, "but the doctors are tremendously excited:"