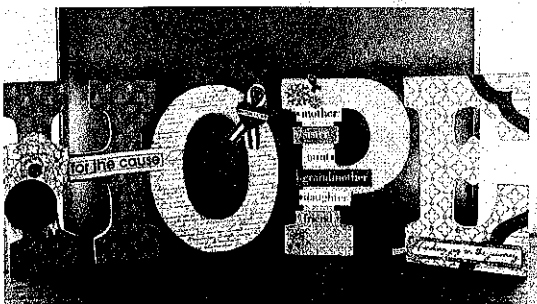
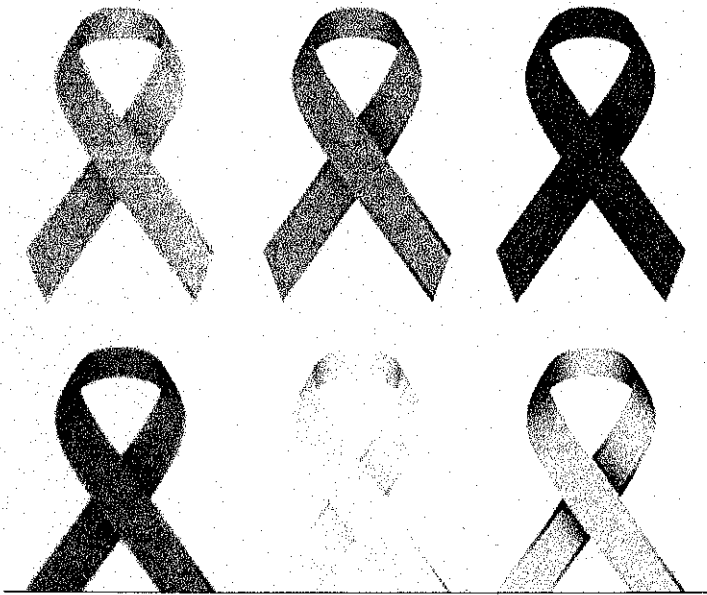




Fight the Faceless Killer

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Dr. Gingrich 3rd Period



An examination of the evolution of how we look at and respond to cancer.

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Preface

Few families in the United States of America remain unaffected by the ruthless proliferation of cancer. The following documents will illuminate the attitudes toward cancer in the United States as well as examine the progress of research programs funded by government grants and charity organizations. Cancer related diseases make up this nation's second leading cause of death, and they are often the subject of fundraisers at any number of events, such as Relay for Life. The vast majority of Americans are familiar with cancer and the efforts to cure it, but most, like myself prior to writing this, are not typically aware of the groundbreaking developments in research or their significance when they occur. We tend to focus more on the human side, rather than the scientific side, and often times this means hearing the word "cancer" and immediately losing all hope. If one person dies from it, our hastily formed assumption is typically that no progress has been made in the relevant field of research, and maybe even that it is impossible to find a cure. I hope to enlighten my audience by recognizing the monumental gains made in cancer research over the last several decades while celebrating the sources who have funded these efforts.

Research for any disease is expensive, and because cancer takes form in over two hundred varieties, it is particularly costly. Before any treatment research can begin, a source of funding must support it, and as all good things do, it usually starts within close knit communities seeking to look out for each other and do their part. This was the thought behind the enclosed community flyer advertising a Relay for Life event. Relay has raised billions of dollars and contributed heavily to cancer research all thanks to its participants, who are ordinary people found in sleepy small towns where a flyer might attract them to an event. Once a problem starts to affect enough people, the government will take notice and possibly grant huge sums of money

for research. The newspaper article describes the decision of a U.S. president to appropriate large portions of the budget to cancer research, which demonstrates the commitment of our society as a whole to fighting this faceless killer. An interview with a student who participated in Relay is included to illuminate the supportive and admiring attitude of the average American toward a cancer survivor. We are often in awe of survivors, which not only sheds light on the respect we have for people who win difficult battles, but also the surprise we have when someone is able to beat cancer. Lastly, a timeline features the major milestones in the recorded history of cancer. This embodies the progress made in this area and gives recognition to the scientists, doctors, and government officials who have enabled these lifesaving achievements.

Interview at Relay for Life with Cambridge student Jason Yang.

Q: Please introduce yourself.

A: Hi, my name is Jason Yang. I'm a junior at Cambridge High School and a member of the Beta Club.

Q: Can you explain what Relay for Life is?

A: Relay for Life is a service event sponsored by the American Cancer Society. Participants raise money, either by asking friends and family, or by fundraising online. The money is donated to help fund cancer research and provide treatment for cancer patients. Then people from across a community come together, usually at a school's outdoor fields, and walk the track all night. Cancer survivors are introduced and get the opportunity to tell their stories and interact with others.

Q: How many times have you participated in Relay for Life?

A: I think I have been to Relay probably three or four times.

Q: What makes you keep coming back?

A: Relay is just a really great experience. You get to meet all these cancer survivors and people who are struggling to live. It's just really interesting and touching to hear their stories, as well as to learn why they do Relay.

Q: What is your favorite Relay moment?

A: I think every Relay I have been to, there has been this ceremony where we all line up on the track and they take out the bagpipes. They place the song *Amazing Grace* and shut down all the lights. Every time it is really heartwarming to walk around the track in silence and listen to the song. Usually there are paper bags, called luminaria, which are filled with candles and labeled with the names of family members or other community members who have died from cancer. Typically, the lights spell out a word that represents Relay and what it is about; the word is usually hope. The experience is almost surreal.

Q: How has Relay grown and changed since the first time you came?

A: Relay has gotten a lot bigger these past couple years. There are certainly more schools joining, and big companies or organizations have gotten involved as well.

Q: As someone who does not have cancer, what does Relay mean to you?

A: It's hard to understand what these people go through. They have cancer, and most of them are probably told they have a deadline for when they are going to pass away. None of us really have that experience, but we can all learn is that even if we don't just have a week, or a month, or even a year to live, the way that these people treasure and celebrate each moment is something we can all learn from. All these survivors or people currently afflicted are treasuring every single moment they have left to live, so why aren't we?

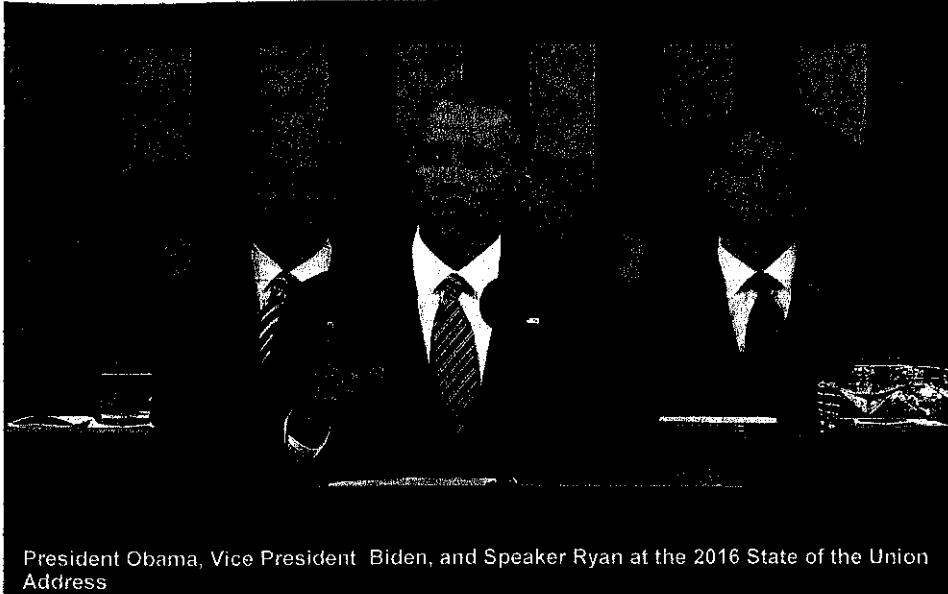
Interview Notes

I collected this interview while I was at Relay for Life, and the person I selected was not chosen at random. I already know this young man to be not only thoughtful and intelligent, but extremely vocal about the value of human life, so I believed his viewpoints on what makes Relay for Life so special would be especially inspiring. The questions I asked him aimed to establish the purpose of the event as well as what people should take away from it, and the primary takeaway from the interview was call to action delivered at the end.

Specifically, this student was asked what Relay meant to him from the perspective of a person who has never undergone cancer. He translated a feeling that most Relay participants can come to a consensus on: life is a gift and we must show our appreciation by living it to the fullest. We should not need a doctor to tell us we have limited time left to do so because none of us has permanent residence on this planet. Cancer survivors teach us this they often have lived under the condition of knowing very well that something is actively trying to kill them, but some way or another, our time will come, expected or not. In the meantime, we have to make the most of our experiences and love one another.

WASHINGTON POST

January 2016



President Obama, Vice President Biden, and Speaker Ryan at the 2016 State of the Union Address

"For the loved ones we've all lost, for the families we can still save, let's make America the country that cures cancer once and for all"

- President Barack Obama

President Obama Announces National Cancer Moonshot Initiative

January 13, 2016

By: Elizabeth Phillips

Washington Post Staff Reporter

No matter what your political views are, President Obama has just announced a new program that you will most certainly be on board with. In his last State of the Union Address, the president announced the National Cancer Moonshot Initiative, to be overseen by Vice President Biden, whose son Beau tragically who succumbed to brain cancer in May of 2015. The goal is to expedite the progress of government-funded cancer research by accomplishing a decade's worth of work in a shorter five year period. Ultimately, President Obama intends for the United States to become "the country that cures cancer once and for all".

While this language is appealing, the hard work remains to be done. Projected studies predict that cancer will take the lives of approximately 600,000 Americans in 2016, while an additional million plus cases will be diagnosed. The new program will help coordinate efforts in cancer research between multiple cabinet departments, including but not limited to the Food and Drug Administration, Department of Veterans' Affairs, the Department of Defense,

- *ISIS Loses Gains in Iraq*
- *Michelle Obama's Legacy*
- *Relay for Life Success*
- *Cambridge High School Number Three in the Nation*
- *Does Special K Vanilla Almond Cereal Really Make You Live Longer?*
- *Dogs Voted Most Universally Adored Animal*
- *Can Trump Make America Great Again?*
- *Mass Graves Left by Boko Haram Found in Nigeria*

and the Department of Health and Human Services. This diversified group is designed to utilize the unique strengths of each department to maximize potential progress, as well as diminish the barriers of information sharing between researchers. This will redress a major concern rampant in the scientific community regarding the bureaucratic red tape that bogs down collaboration and slows advancements.

As a start, the 2016 federal budget will appropriate a staggering \$195 million to cancer research. Funds will be used mainly to support efforts in the areas of immunotherapy, genomic analysis, and early detection.

While the launch of the Moonshot Initiative will doubtless make great strides in researching cures among government institutions, each and every American can still make a difference by supporting organizations such as the American Cancer Society or the Susan G. Komen Foundation. There are countless opportunities available to participate in fundraising events and show solidarity with cancer patients and survivors. Until the moment cancer is shut down for good, we all have the ability and the responsibility to answer the call.

“Cancer does not discriminate— it strikes young and old, family and friends, neighbors and co-workers”.

- White House Press Office



Vice President Biden discusses the Moonshot Initiative on ABC News

Newspaper Article Notes

Complaining about the government and its inefficiency or ineffectiveness is a daily activity for a majority of Americans, but every once in a while it does something that truly benefits the people it represents. Money spent on cancer research is inherently not wasteful. Because cancer does not discriminate, the funds used to fight it assist every socioeconomic level, ethnic group, or gender in the nation. I wanted to highlight governmental contributions to the battle against cancer in order to remind people that we are in this together as a nation, and that our fellow citizens are part of this with us and that nobody has to be alone when dueling their disease.

I pulled largely from President Obama's State of the Union Address from 2016 to demonstrate that cancer research is still a top priority, even though the effort has been going on for quite some time. It is a current issue that the man holding the highest office in the land believed important enough to discuss in his speech to Congress. The effort goes beyond appropriation of tax dollars; President Obama has included in his Cancer Moonshot Initiative measures to redirect multiple cabinet departments to include cancer research programs that will coordinate together. I hope this makes us all feel more patriotic and appreciative of each other.

● Relay For Life

Saturday May 14, 2016

Web Bridge Middle School

4455 Web Bridge Road Alpharetta, Georgia

Dress Code: purple

Join the Beta Club this Saturday for this year's Relay for Life Event! Not only will you receive plenty of service hours, but you will have the opportunity to make a huge difference in our community and countless others across the world. Each participant is asked to raise at least one hundred dollars, and all funds go directly to the American Cancer Society. Relay also allows the whole community to gather in one place and celebrate cancer survivors. Opening ceremonies include an introduction of the survivors, which will demonstrate the far reach of cancer throughout all ages, races, and genders. Year after year, Relay delivers inspiration and makes all attendees appreciative of the lives they have been gifted. Your time

and effort can create a world with more birthdays and less cancer.



Cambridge High School Beta Club at Relay last year



• Celebrate Life

When the sun goes down at Relay for Life, all participants share a very special moment in the form of a silent lap. The bagpipes play a mournful rendition of *Amazing Grace* while we all walk a lap around the track in silence. The only visible lights come from luminaria, which are paper bags featuring names of loved ones lost to cancer.

All luminaria cost only one dollar and serve as additional sources of revenue for the American Cancer Society. You can add as many as you like for whichever friends and family you have who have died from cancer. This is an excellent way to remember them while fighting the disease that took them prematurely.



Example of Luminaria during Silent Lap

Neighborhood Flyer Notes

Disease is not a pretty word, and cancer is even more terrible. Cancer patients and survivors often describe being pitied by friends, family, or strangers. This may be the natural sympathetic reaction of people who have not experienced cancer, but it makes those who are afflicted feel more helpless or possibly outcasted. I gathered this feeling from hearing speeches at Relay for Life from cancer survivors. The neighborhood flyer for Relay for Life is meant to portray the efforts to fund cancer research in a more positive light, one that does not appear sad or scary. We all already know how bad cancer is, so there is no reason to ostracize cancer patients by showing gruesome images of bodily degradation or using especially gloomy diction. The flyer features the sun and a blue sky, which are symbolic of the brighter future given to us all by donations to cancer research programs.

A flyer that would be hung up around a neighborhood pool, in a recreation center, or a school ensures that a wide variety of people are informed about the event. Curing cancer of all forms serves the best interests of everyone in a community, so funding research should be a widespread effort. This form of communication alerts parents that the event is open to families and that meeting survivors is a rewarding experience or their children.

Timeline of Developments in Cancer Research

3,000 B.C.

Cancer is described in formal writing for the first time in ancient Egypt. The excerpt was part of textbook detailing how to handle surgery.

1846

Anesthesia is successfully used in surgery for the first time. This will allow tumors to be removed with less pain more frequently.

1878

Thomas Beatson introduces hormones as a factor in developing cancer, which leads to hormone therapy as a new treatment.

1955

The Cancer Chemotherapy National Service Center is established in the

1971

Richard Nixon signs the National Cancer Act into law. This allocates government funds to cancer treatment research on a large scale for the first time.

2016

Reports indicate that cancer mortality rates have fallen in the United States by 23% since 1991. The gains are even more significant for pediatric cancer; children were only 10% likely to survive cancer in 1966, but they are now 90% likely to survive.

1761

The scientific basis for oncology is laid in Italy by Giovanni Morgagni of Padua. He was the first to analyze autopsies and relate the causes of death to what he found.

1855

Rudolf Virchow uses a microscope to determine how cells cause the physical effects of cancer.

1915

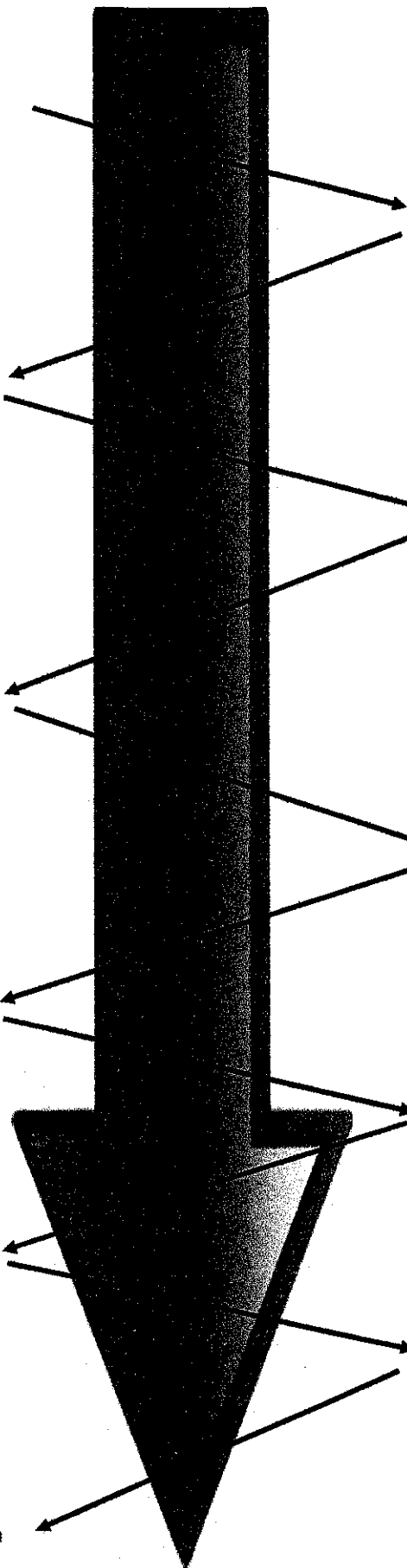
In Japan, Katsusaburo Yamagiwa and Koichi Ichikawa support the theory that certain substances can cause cancer using coal tar.

1964

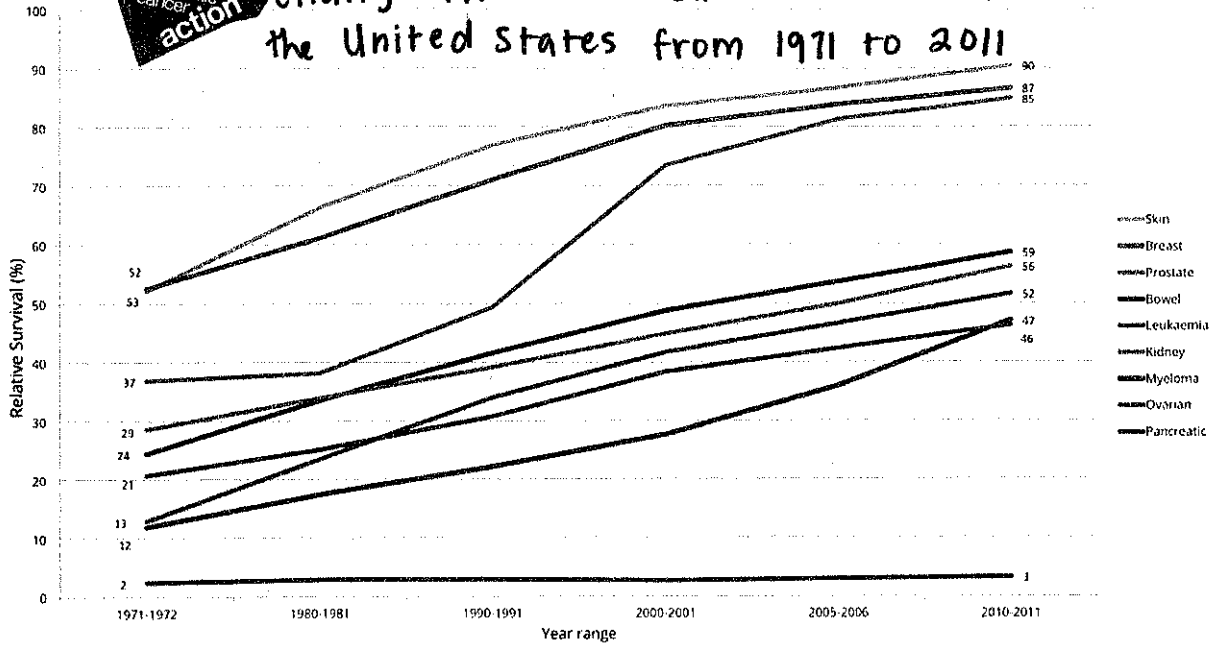
The United States Surgeon General releases report on smoking and its relation to lung cancer and other chronic and deadly illnesses.

2001

The human genome is mapped, allowing researchers to analyze individuals' genes and determine the genetic causes of cancer.



Cancer action Change in Cancer Survival Rate in the United States from 1971 to 2011



Timeline Notes

I created my timeline of cancer research by synthesizing information from the American Cancer Society Website, as well as Cancer Research Journal. The latter source includes a good deal of historical context when necessary to explain what catalyzes increased rates of discovery. This may include wars or other changes in lifestyle. Lifestyles, such as smoking cigarettes, are of the utmost importance when researching disease because such habits make increase the susceptibility to developing the disease. A timeline is helpful because it condenses centuries worth of events into a relatively small number of achievements so we can gauge more holistically what sort of progress we have made in a certain area, the rate at which that progress has changed, and what external factors may be affecting this progress. Isolating individual years that are so far apart establishes the importance of each time period.

The final milestone on the timeline is from the present year, 2016, and to me it may be the most important fact of all. It boasts about the drastic reduction in mortality rates from cancer in the United States in recent decades. I want people to understand that although cancer is an ongoing national battle, it is not hopeless. Much has been done and there is much left to do, but there is no harm in celebrating in the meantime.

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