

MEASURING MYTHOLOGY: Startling Concepts in NCCAM Grants

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Why This Subject and Why Now?

- Interest in the spread of so-called Complementary and Alternative Medicine (CAM)
- Newly-formed local Independent Investigations Group (IIG DC)
- Previous publications

Americans reportedly are
spending \$34 billion annually*
on alternative medicine
protocols and products.

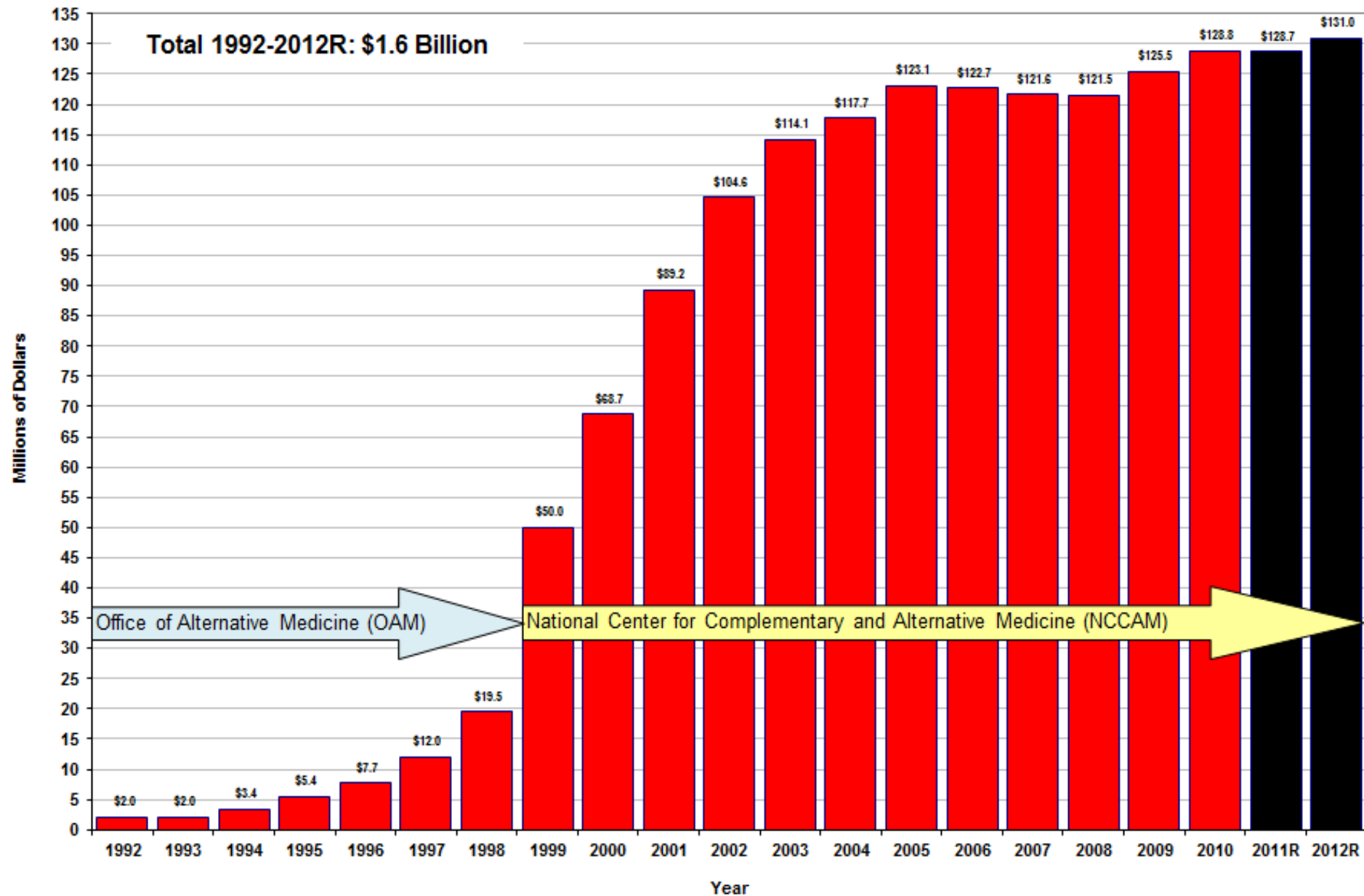
*National Health Statistics Report 18: *Costs of Complementary and Alternative Medicine (CAM) and Frequency of Visits to CAM Practitioners: United States, 2007*. 15 pp. (PHS) 2009-1250. July 30, 2009. <http://www.cdc.gov/NCHS/data/nhsr/nhsr018.pdf>

In the United States
38% of adults
12 % of children
use some form of
complementary medicine*

*National Health Statistics Report 12: *Complementary and Alternative Medicine Use Among Adults and Children: United States, 2007*. 24 pp. (PHS) 2009-1250. December 10, 2008. <http://www.cdc.gov/nchs/data/nhsr/nhsr012.pdf>

Overall OAM-NCCAM Funding 1992-2012R

Total 1992-2012R: \$1.6 Billion



The Mission of NCCAM

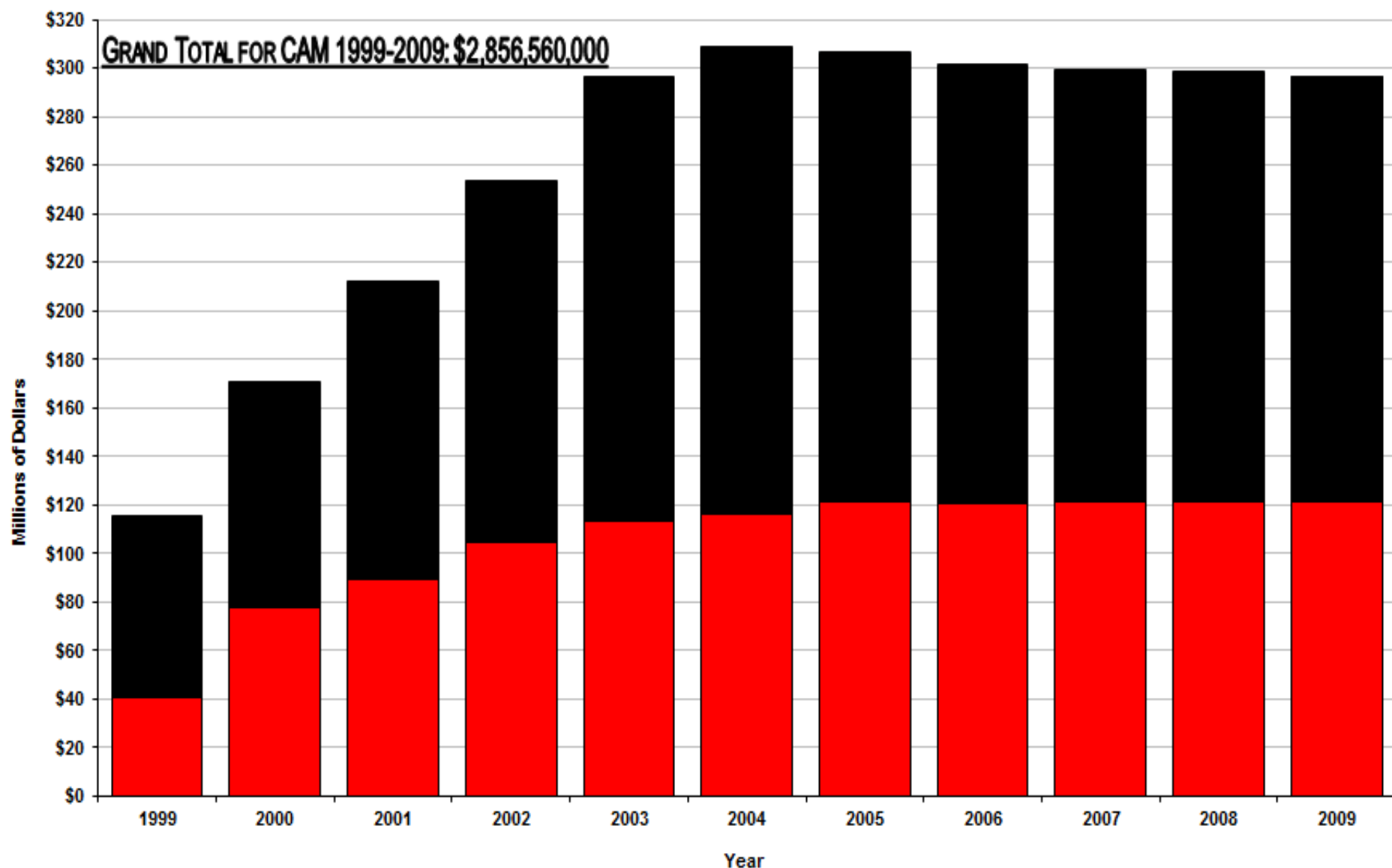
- Explore complementary and alternative healing practices in the context of rigorous science.
- Train complementary and alternative medicine researchers.
- Disseminate authoritative information to the public and professionals.

Total Complementary and Alternative Medicine Funding by NIH Center/Institute 1999–2009

- National Center for Complementary and Alternative Medicine (NCCAM)
- National Cancer Institute (NCI) and Other NIH Centers/Institutes

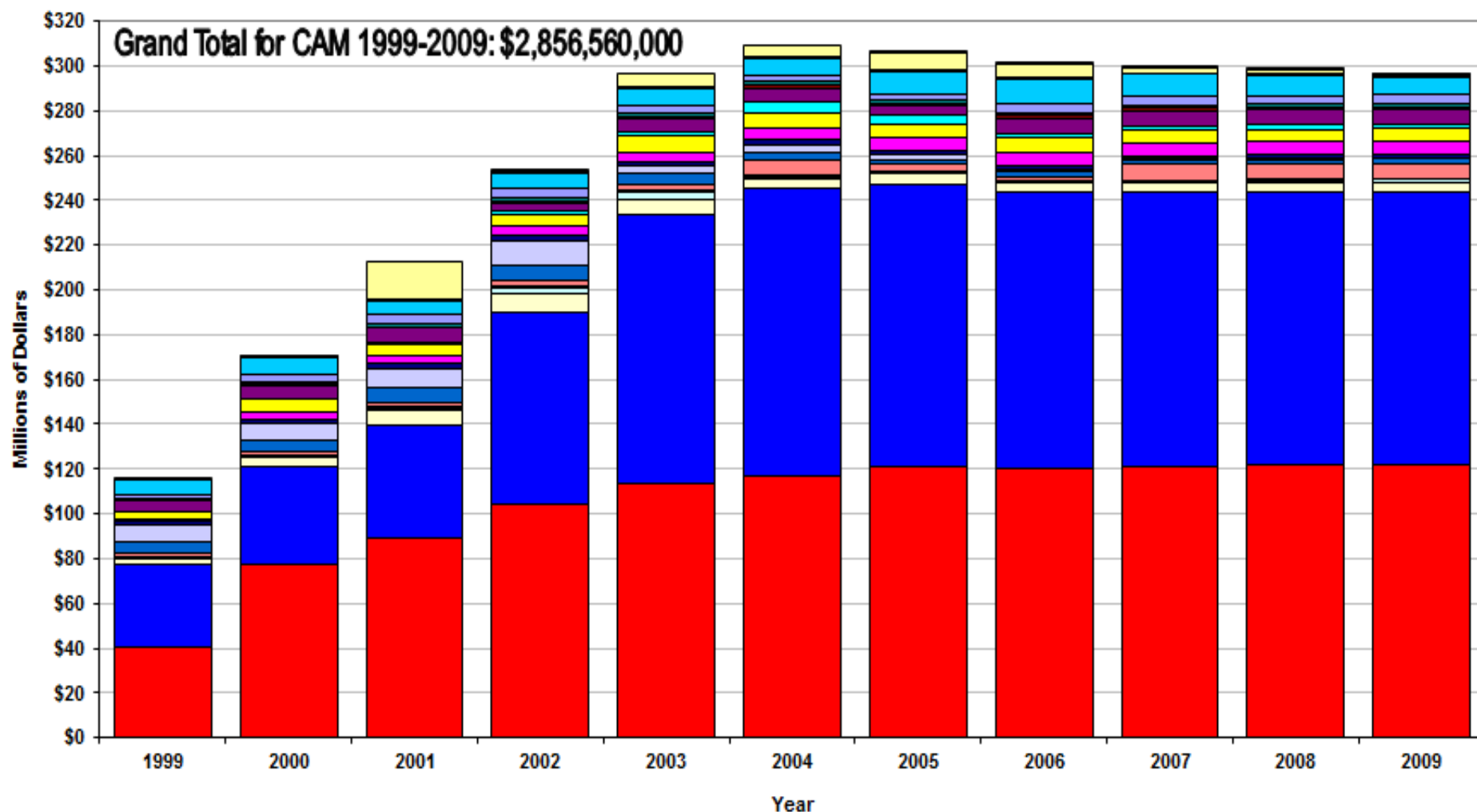
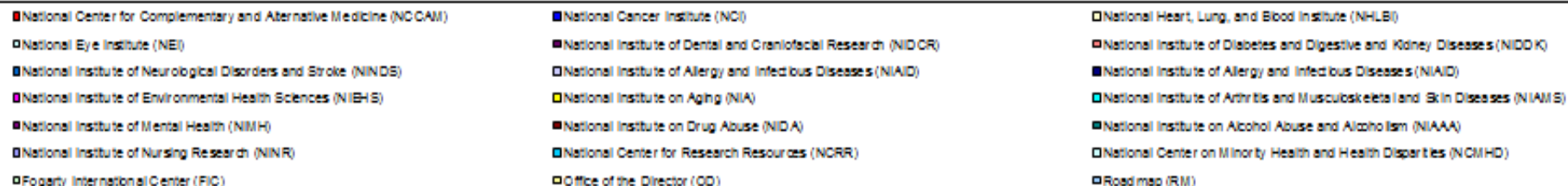
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■ National Center for Complementary and Alternative Medicine (NCCAM) ■ National Cancer Institute (NCI) and Other NIH Centers/Institutes



Total Complementary and Alternative Medicine Funding by NIH Center/Institute 1999-2009

Detailed Breakout



Interventions

- Botanicals \$193 million
- Acupuncture \$144 million
- Mind body \$157 million
 - Subset with yoga \$11 million
- Magnets \$2 million
- Distance Healing \$22 million
 - *Reiki, Qigong, Therapeutic Touch, and prayer*

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Can Magnets Affect the Body?

- Depend on iron for oxygen delivery
 - Hemoglobin and myoglobin
- Hemoglobin molecule consist of four amino acids—each of which contains one iron atom
- Total iron in an average human body = 3-4 grams
- Hold a magnet to your skin—does the blood rise to that spot?

Magnetic Fields

- MRI – 300 thousand gauss
- Commercial alleged 'healing magnets' – 300 gauss
- Refrigerator magnet – 50 gauss
- Earth's magnetic field – 0.5 gauss
- Magnetic field generated by the human body – 0.000004 gauss

Testing Magnetic Therapy

- Baylor and other studies.*
 - 1995-1998 Magnetic mattress pads**
 - *Fibromyalgia*
 - 1999 the Federal Trade Commission's (FTC) "*Operation Cure. all*" and successful lawsuit, brought by the National Council Against Health Fraud
 - 2000-2008 NCCAM funding continued
 - *Arthritis, carpal tunnel syndrome, migraines*
-
- *Magnet Therapy: A Skeptical View*, Stephen Barrett, MD (<http://www.quackwatch.com/04ConsumerEducation/OA/magnet.html>)
 - *Static Magnetic Fields for Treatment of Fibromyalgia: A Randomized, Controlled Trial* (<http://www.ncbi.nlm.nih.gov/pubmed/11246937>)

Distance Healing

- Reiki
- Qigong
- Therapeutic Touch
- Prayer

Good information on these and others related to them at <http://www.skeptdic.com>

“....Therapeutic touch,.... increased the growth of normal bone cells in culture dishes, but decreased the growth of bone cancer cells.”

- Washington Post March 17, 2009

??

- Quoting from the paper

“In conclusion, Therapeutic Touch appears to increase human osteoblast DNA synthesis, differentiation and mineralization, and decrease differentiation and mineralization in a human osteosarcoma-derived cell line.”

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- Authors state
 - *“Although there is no knowledge to date on what type of energy may be emanating from a TT practitioner’s hands, it is conjectured that TT may affect biological changes through altering biomagnetic fields.”*
- Remember
 - Human fields generated by physiology = 4 millionths of a gauss
 - No humans have been found who have large magnetic fields emanating from their hands

Energy Healing on “...cholesterol-fed rabbits”

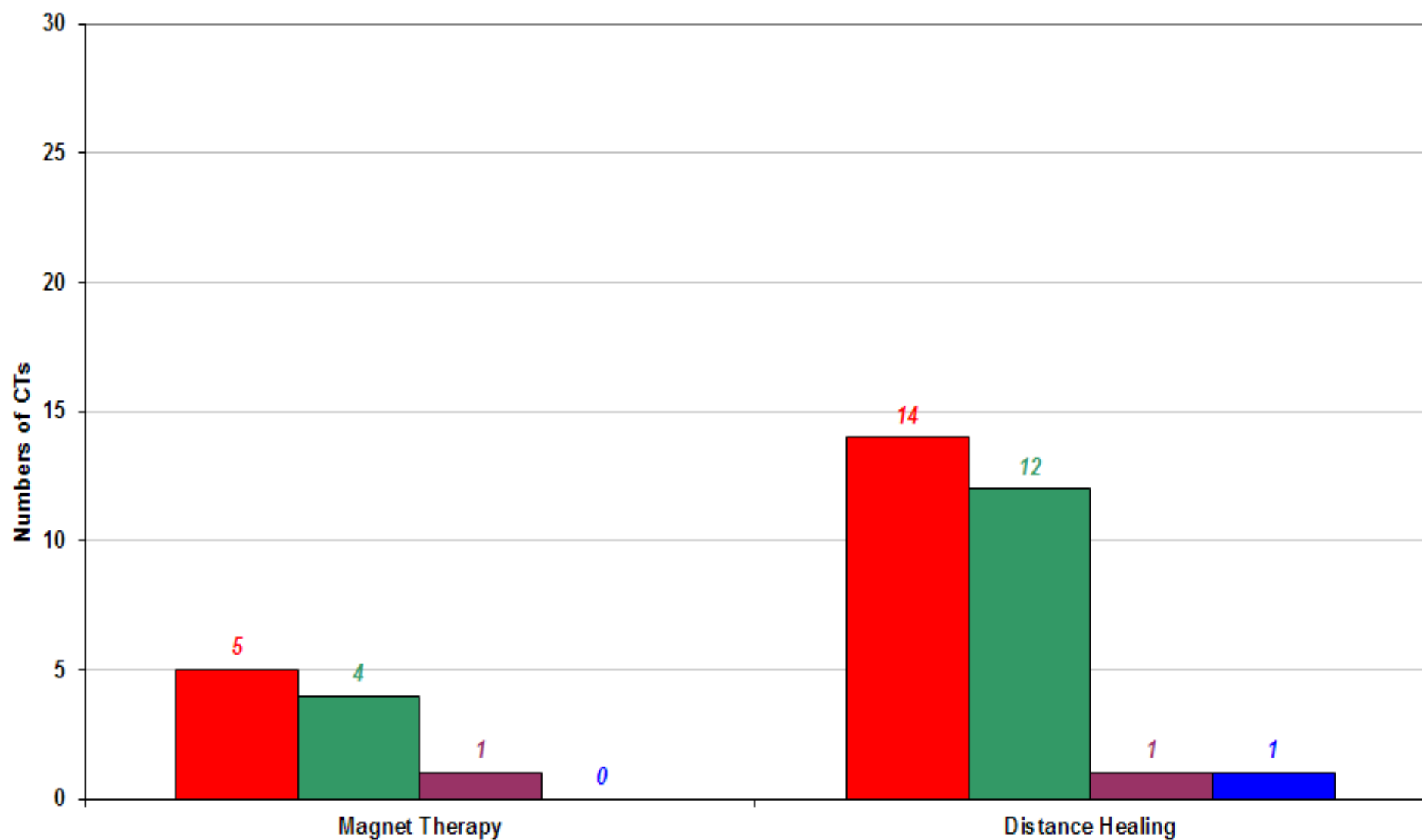
- Reiki practitioner at the Cleveland Clinic received over a quarter of a million dollars.
- “...*Specific Aims of the present application are: ... to evaluate the possibility that energy healing treatments may decrease the progression of atherosclerosis in a rabbit model of cholesterol-induced atherosclerosis...*”
- No publications were found for results of studies on these fatty rabbits.

Lack of Reporting—Pro or Con

- From a policy standpoint, it is not sufficient to enact laws or regulations that mandate the publication of results for taxpayer-research funded.
- These exist and we're well aware of that.
- The disturbing thing that we noted during our study was that the mandate seems to be ignored. Very few results—negative or positive—were found for NCCAM-funded studies.

NCCAM-Funded Magnet Therapy & Distance Healing Clinical Trials

CTs Funded CTs Completed CTs with Publications Posted CTs with Results Reported



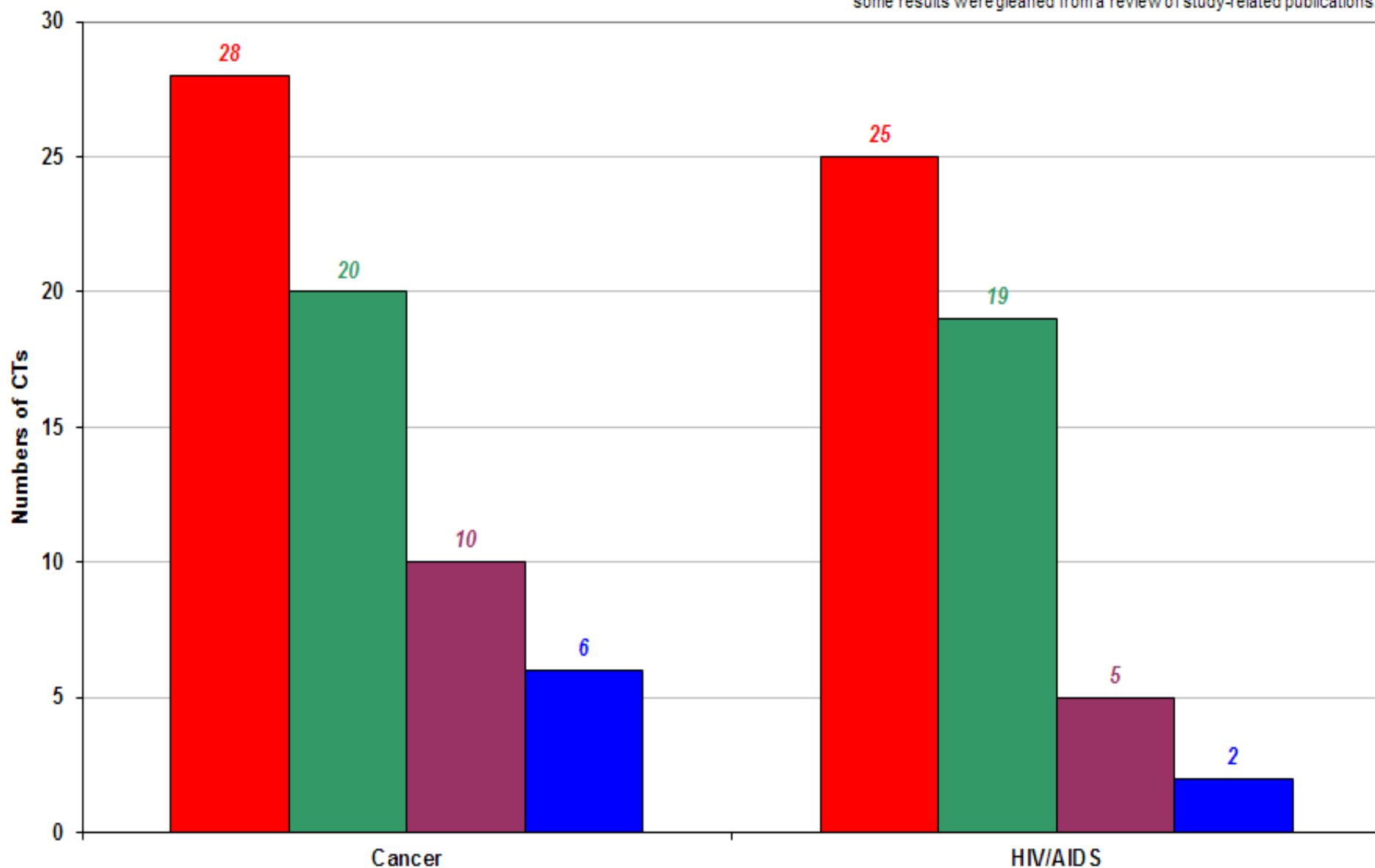
Medical Conditions

- Cancer
- HIV/AIDS
- Diabetes

NCCAM-Funded Cancer & HIV/AIDS Clinical Trials

■ CTs Funded ■ CTs Completed ■ CTs with Publications Posted ■ CTs with Results Reported*

* No results were specifically reported on clinicaltrials.gov website, but some results were gleaned from a review of study-related publications.



Examples of startling concepts funded by NCCAM

PROTOCOL	FUNDING
Maharishi Vedic Medicine	\$ 0.4 million
Magnetic Fields	\$2 million
Mushroom Extract	\$3 million
Distance Healing*	\$22 million
Soy	\$54 million
Botanicals	\$193 million
Acupuncture	\$78 million
Mind-body	\$157 million

* Reiki, Qigong, Therapeutic Touch, and prayer

One of the more startling concepts in '*mind-body medicine*' was over one-third of a million dollars spent to study "Transfer of Neural Energy Between Humans"

Is it really conceivable that "a conscious state could exert a biological effects at a distance?"

Acupuncture awards 1998 to present

488 grants \$144 million

arthritis

back pain

dental pain

Parkinson's

fibromyalgia

heart disease

irritable bowel

various cancers

vocal chord injuries

urinary incontinence

... and many more

58 clinical trials but no positive results

*Nothing ever dies but vivid imaginations persist—
acupuncture combined with ultrasound , electric shock, herbs, etc.*

A recent publication in the peer reviewed medical journal, *PAIN*, studied the literature since 2000, across all languages, and concluded “*that numerous systematic reviews have generated little truly convincing evidence that acupuncture is effective in reducing pain.*” This paper also reported on adverse effects of the protocol.

Impact of NCCAM on Medical Education

- NCCAM's influence has penetrated the medical education system, lending false respectability to integrative medicine courses in medical curricula and programs at hospitals and clinics at esteemed medical institutions.
- Marcus and McCullough, professors of Bioethics and Medicine at Baylor, evaluated the CAM education grants awarded by NIH to schools of medicine.
 - They concluded that “these . . . curricula . . . fail to meet the generally accepted standards of evidence-based medicine. By tolerating this situation, health professions schools are not meeting their educational and ethical obligations to learners, patients, or society.”

Brigham and Women's Hospital Osher Center is a affiliated with Harvard Medical Center

Two course offerings featured:

- **Reiki** ("During this class you will receive a reiki level one attunement. This attunement enables you to become a channel for this universal healing energy which will be with you for your lifetime. From this point on you will be a reiki practitioner. With level one reiki you will be able to do healing on yourself, friends, family and pets.")
- **Foot reflexology** ("Reflexology is founded on the principle that there are points on the feet that affect every organ, gland and tissue of the body. By stimulating these points or reflexes properly one can help to relieve many health problems by releasing stress and muscle tension, balancing energy, and expelling toxins. This allows the body to rejuvenate in a safe and natural way.")

NCCAM Offers

CAM On-Line Education Series

<http://nccam.nih.gov/training/videolectures>

- **Just a few examples from 10 courses offered for Continuing Education Units or general education aimed at health care professionals but available to consumers as well:**
 - Mind-Body Medicine
 - Acupuncture: An Evidence-Based Assessment
 - Manipulative and Body-Based Therapies: Chiropractic and Spinal Manipulation
 - Integrative Medicine
 - Health and Spirituality

Impact of NCCAM on Public Awareness

NCCAM's promotion of questionable complimentary and alternative medicine extends beyond the medical community to the public at large.

- NCCAM maintains a web site meant to inform the public about the validity of complimentary and alternative medical treatments.
- The web site leaves the mistaken impression that biochemistry and biological physics are undeveloped fields of inquiry.
- Misleading qualifiers are used to maintain a false level of uncertainty regarding the legitimacy of disproven treatments and techniques.

Impact of NCCAM on Health Insurance

SEC. 2706.

NON-DISCRIMINATION IN HEALTH CARE

“A group health plan and a health insurance issuer offering group or individual health insurance coverage **shall not discriminate with respect to participation under the plan or coverage against any health care provider who is acting within the scope of that provider's license or certification under applicable State law.**”

Opportunity Cost

- Cost in US –18.5 % of government revenues spent on health care
 - 3% = \$5.5 million spent on Alternative Medicine



\$5.5 million could, for example, fund scholarships for medical students willing to work in rural areas, a more urgent public health need.

The Paucity Of Peer Reviewed Medical Publications Associated With These Awards Raises Several Policy Questions That Can Be Debated

- Should the medical research community and congressional oversight committees be apprised of negative results?
- Should funding be redirected to scientifically based centers?
- How might these policy issues be addressed by the Department of Health and Human Services and congressional oversight?
- What are the implications for increased cost in health care delivery resulting from mandates in the health care bill (Patients Protection and Affordable Care Act) which require paying for delivery of alternative medicine?

Conclusions and Recommendations

- Ignorance of science, the lack of publications in peer reviewed medical or science journals and the failure to report clinical trials in scientific medical journals have demonstrated the failure, despite the expenditure of \$2 billion taxpayer dollars over nearly 20 years, to confirm cures based not on scientific evidence but rather on cultural mythology.
- We strongly recommend that the National Center for Complementary and Alternative Medicine be defunded or abolished, and that responsibility for scientific testing of concepts of alternative medicine (integrative medicine) be absorbed into the administrative mantle of the other nineteen centers and institutes at NIH. Further, we suggest that the continued funding of CAM concepts that have been shown to be ineffective be immediately discontinued.

Any Questions?