Community Oncology 2.0 Information Technology – A Practical Guide: Navigating from Today to Tomorrow

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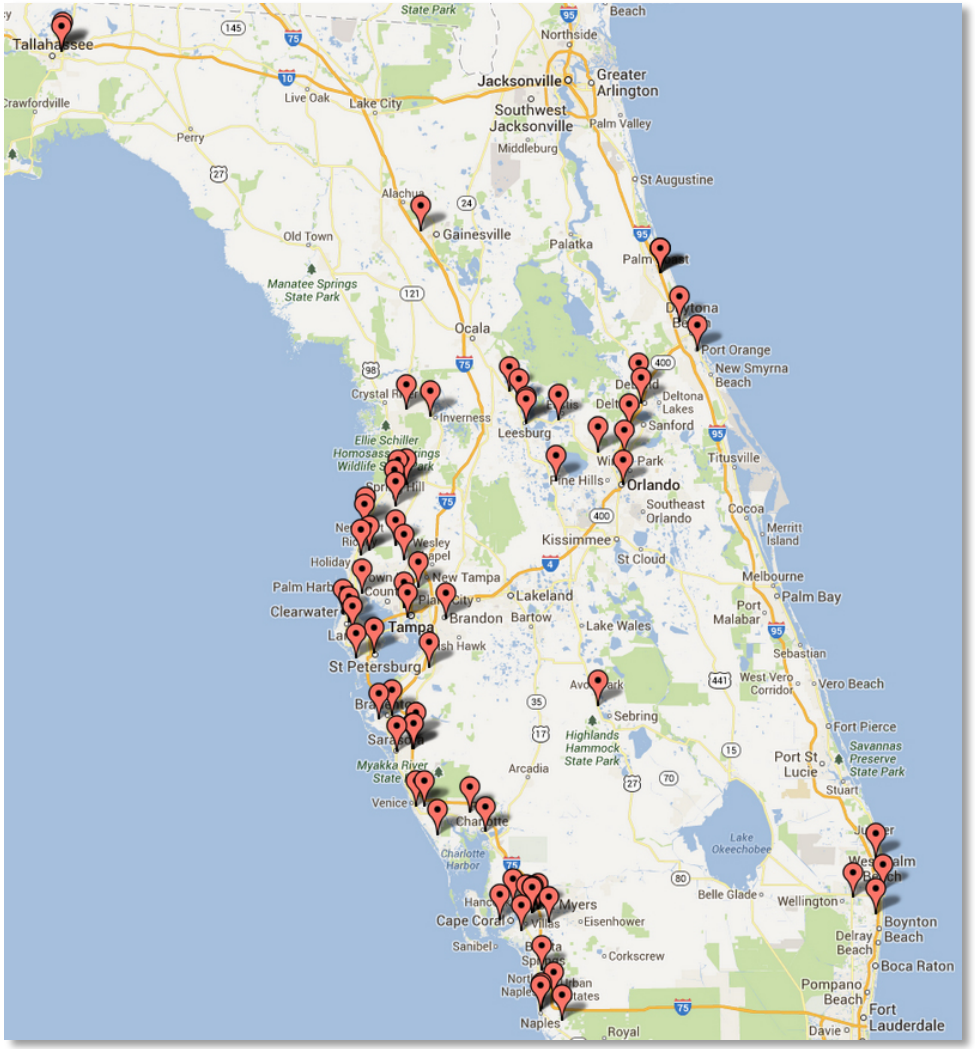
Disclosures:

- Executive Board Florida Cancer Specialists
- FLASCO, Secretary
- Director Medical Oncology, NFRMC-HCA Gainesville FL
- Customer Advisor for Altos (OncoEMR) – no financial relationship
- Data slides – adapted from Susan Weidner, ION Solutions

About Florida Cancer Specialists

- Largest privately owned oncology/hematology practice in the United States
- 81 offices (including Pathology)
- 163 physicians (135 partners)
- 100+ nurse practitioners and physician assistants
- 1,824 employees

About Florida Cancer Specialists



The Future is Bright

Enhanced Cancer Therapeutics

Better Molecular Understanding

Targeted Therapies

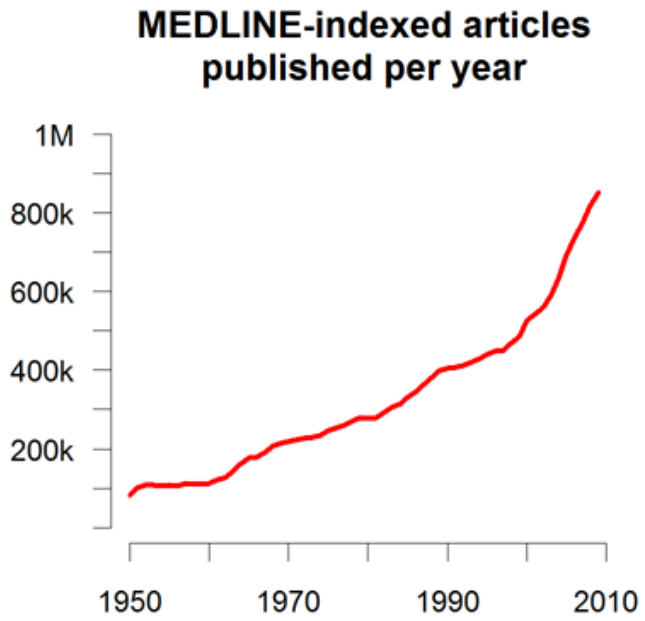
Improved Palliative Care

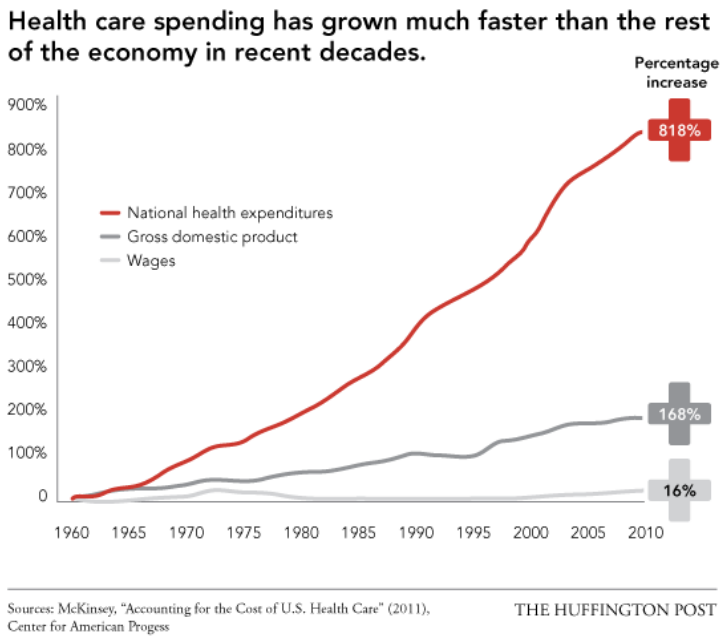
Quality of Medicine

The Challenges:

- Cost: prohibitive + unsustainable rate of growth

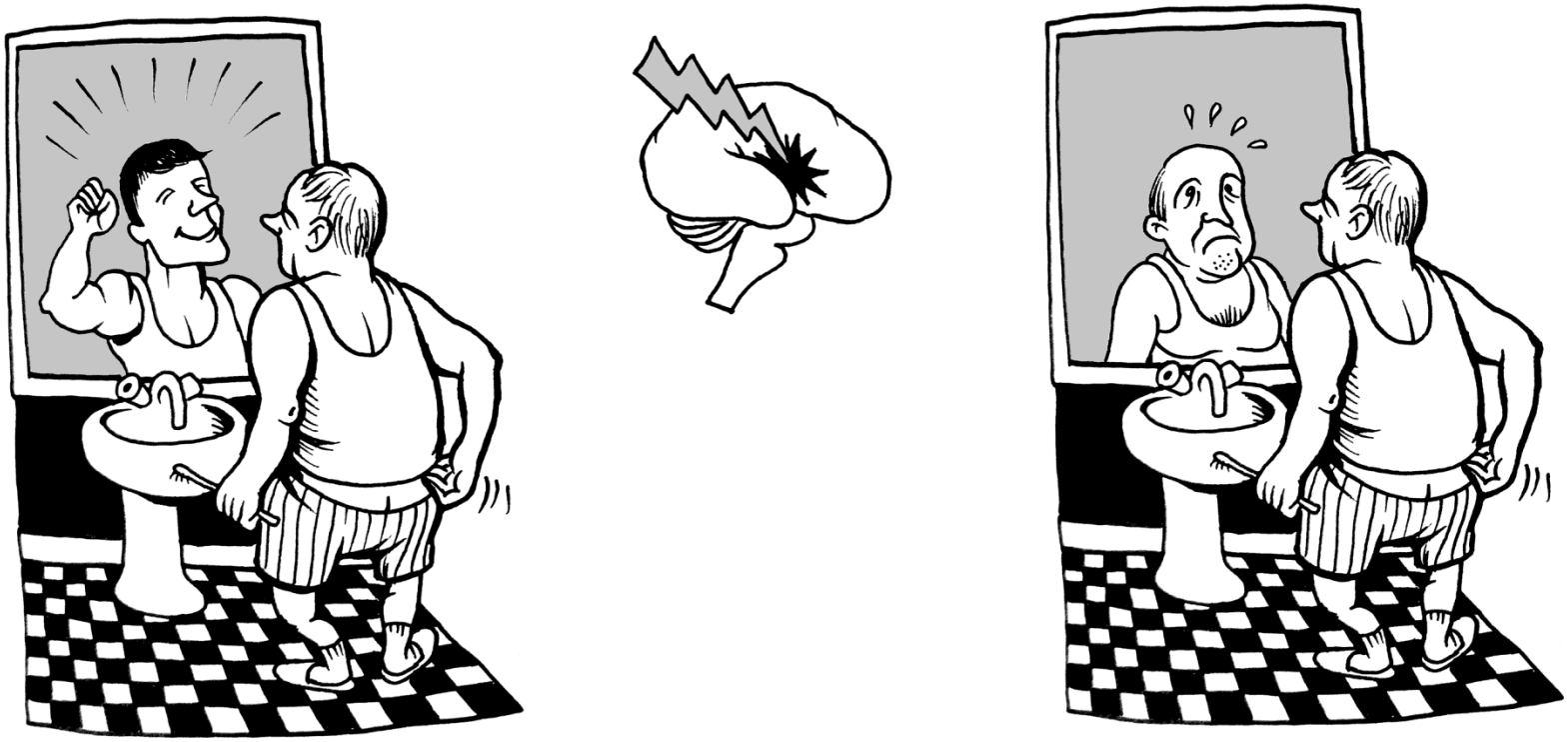
- Fragmented care
  - Multiple moving parts
    - Heterogeneous outpatient and inpatient models
    - Geography is vast
    - Social and educational differences
    - Economic disparities by individuals, cities, counties, states and larger regions
    - Difference disease states, treatments, complications
- Market competitiveness
- Reimbursement constraints, legal and operational burden


MEDLINE-indexed articles published per year
1M
800k
600k
400k
200k
1950
1970
1990
2010


Health care spending has grown much faster than the rest of the economy in recent decades.
Percentage increase
900%
800%
700%
600%
500%
400%
300%
200%
100%
0
National health expenditures
Gross domestic product
Wages
818%
168%
16%
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
Sources: McKinsey, "Accounting for the Cost of U.S. Health Care" (2011), Center for American Progess
THE HUFFINGTON POST


NEW ★ RULES

ONLY AN ONCOLOGIST CAN HANDLE !



Why IT can help Oncology in the 21st Century?

- Because is too COMPLEX
- Oncology is the IDEAL model
  - Ingredients:
    - Cost of drugs
    - Change in Reimbursement
    - ACA
    - Increase in aging population
    - Shortage of oncologists
    - Burn out rate
    - Legal pressures
      - Compliance
      - Hipaa
      - Litigation
    - Others

New "Staging System" in the economics and delivery of Oncology Care

- Value-based care
- Bundle payment
- Episodic Care
- Population Health Management (PHM)
- Shared Savings
- Pay for performance (P4P)
- Global capitation arrangements
- Accountable care organizations
- Medical Homes

How Can IT in Oncology Really Help Us ?

- "Trust me, I am a very good and efficient doctor"
- Today's reality:
  - care-ready, "deal-and-risk ready"

- ELECTRONIC MEDICAL RECORDS
- PATIENT PORTAL
- PATHWAYS
- DATA HARVESTING

Solution: must be local

Electronic Medical Records

- Oncology: about 70% adoption of EMR
  - 50% Oncology-specific EMR
- Functionality:
  - Visit notes (concise, aesthetic and content-meaningful)
  - Different ways of populating a note
    - Typing, dictating, voice recognition, macros, dragging data and others
  - Capture important information
    - Diagnosis, staging, current treatment, intent, line, duration of Rx, demographics, toxicities, history, PE, and assessment/plan

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Electronic Medical Records

- Ordering
  - Labs, radiology, pathology, records, referrals
  - Chemotherapy, other therapeutics, hydration, medications, antibiotics
- Billing
- Metrics
  - Data export, sharing, graphics, compliance with regimens or pathways

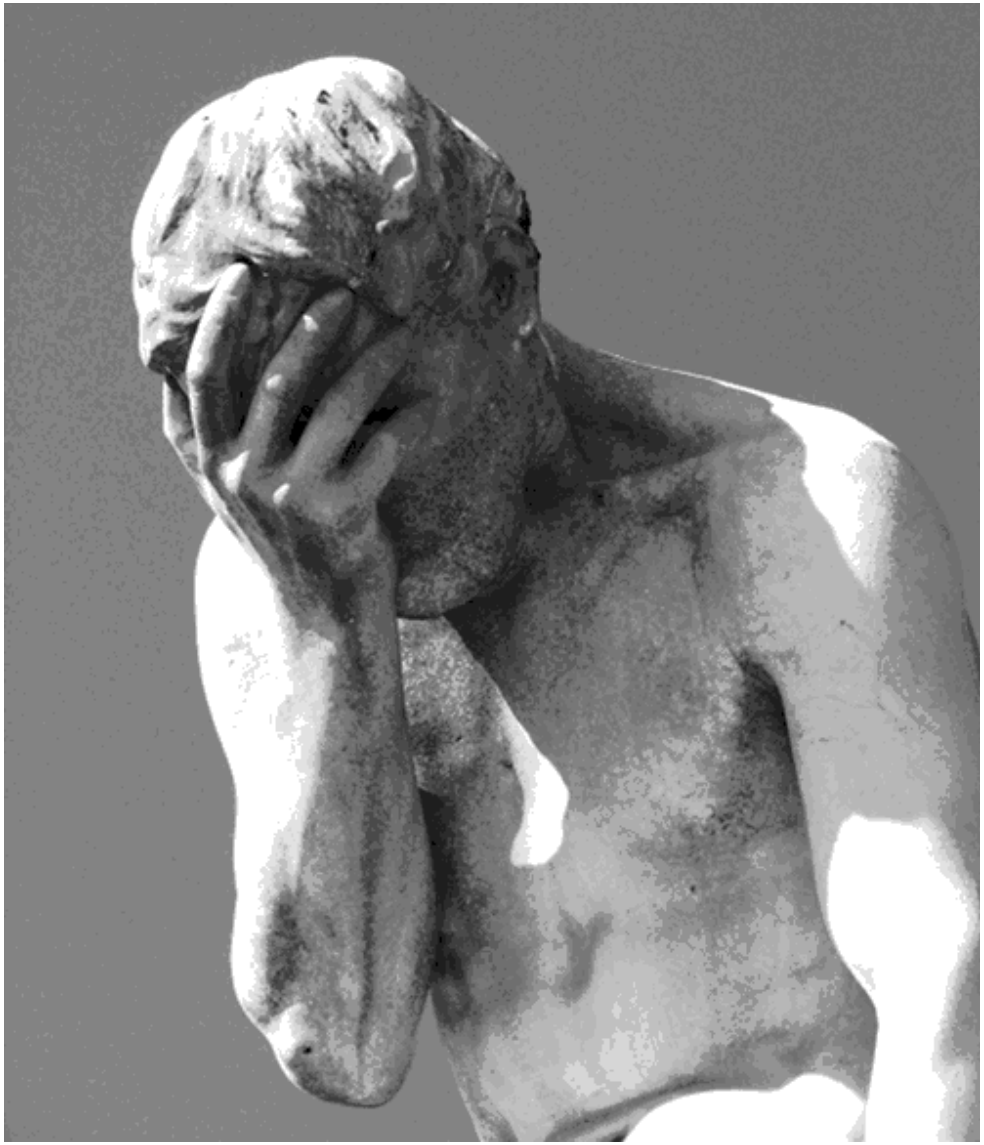
Electronic Medical Records

- Content
  - Chemotherapy orders divided by sections:
    - Diagnosis
    - Disease setting: curative vs. non-curative
    - Regimens vetted by institutions like NCCN, ASCO or others
    - Embedded orders for laboratory and imaging studies as needed
    - Ancillary medications (anti-emetics, growth factors, electrolytes, IVF, others)

Electronic Medical Records

- Content
  - Research protocols
  - Alerts for interactions, abnormal laboratory results
  - Connection to resources like uptodate.com, NCCN guidelines, medical journals
  - Ability to print out educational materials provided by well-known institutions
  - Ability to adhere to pathways

Electronic Medical Records



Electronic Medical Records

- SPECIFIC to Oncology
- Excellent implementation and product support
- Superior follow-up and responsiveness to MD needs

"EHR The Real Story"
Medical Economics Feb 2014

- Data from market and research firm MPI Group
- All specialties
  - 73% of largest practices would have chosen a different EMR
  - 66% of IM specialties would not purchased a different system
  - 50% = "cost is too high"
  - 45% = "care is worse"

"EHR The Real Story" Medical Economics Feb 2014

- Data from market and research firm MPI Group
  - 69% = no improvement in care coordination with the hospitals
    - Interference with face-to-face care
    - Less fulfilling work
    - Degradation of quality of clinical documentation
    - Less efficiency
    - Change in career satisfaction

How to choose an oncology-specific-certified EMR ?

- http://www.klasresearch.com/emr_software (KLAS)
- ASCO booth
- Oncology Electronic Health Record Field Guide
- Contact different practice leaders; consulting services
  - http://www.emrconsultant.com/specialty-specific-emr-reference-guide/oncology-specific-emr-ehr-software/
  - https://www.advisory.com/research/oncology-roundtable/tools/2009/oncology-emr-selection-implementation-toolkit

How to choose an oncology-specific-certified EMR ?

- GPO's
- Vendor demonstration
- Is there a best EMR in oncology ?
  - Decision is local, size, number of clinics
  - Other specialties (radiation oncology, surgical oncology, pathology)
  - Cost
  - Alignment with local interest (hospital vs other practices ?)

What are some of the players ?

- Epic Systems Corporation
- McKesson / US Oncology
- Elekta - IMPAC Medical Systems, Inc.
- Altos Solutions, Inc.
- Varian Medical Systems
- Allscripts
- Partners Healthcare System
- NextGen Healthcare
- GE Healthcare
- UT MD Anderson Cancer Center
- Cerner Corporation

EMR attributes for the present or near future

- Mobile adaptability (apps)
- Ability of really collecting and export metrics
  - Toxicities, PFS, OS, toxicities, patient demographics, disease molecular nuances
  - Cost of treatment (bundle payment, at risk contracts, value-based cancer care, other models)
  - In-built pathways
  - Clinical research !
- Increased efficiencies within offices

- SOLUTION:
  - VENDOR – PRACTICE RELATIONSHIP
  - PRIORITIZATION OF PROJECTS

Patient Portal

- Enhancement and development are needed
  - Appointment scheduling
  - Patient – office messaging
    - New problems
    - Medication refills
    - Questions
  - Patient education access via vetted materials within the portal
  - Intake forms (demographics, history, past medical history and others)
  - Updated medication list
  - Financial counseling, electronic signatures, consent forms
  - Support
    - Foundations
    - Support groups
    - Ancillary service

Patient Portal

- Increased efficiencies
- Less burden on staff
  - Adaptability to each practice
- Less burden on providers
- Improved information exchange
  - Patients with lab, radiology reports
  - Improved cost by avoiding duplication
  - Better quality of care
- Empowering patients and families
  - Education
  - Satisfaction
  - Responsibility

Pathways

- Definition:
  - Detailed, evidence-based, physician-generated, institution-vetted management tool to assist in standardization of choice of chemotherapy drugs, dosing, schedule, and ancillary studies
  - Cons:
    - Cookie Cutter medicine ?
    - Generalization of care instead of personalized ?
    - More computer time ?

Pathways

- Pros:
  - State of the art care;
  - Standardization of approaches but with specific and personalized care;
  - Potential improvement in research accrual
  - Safety
  - Cost prediction
  - Cost containment

Pathways

- Practices have distinct:
  - Geography
  - Payer mix
  - Market forces
  - EMR capabilities
  - Physician "outlook" or goals
  - Relationship with payers

- One size does not fit all

Pathways

- Ideally deployed from EMR for each payer, each disease, staging, curative vs non-curative intent, molecular features
- PROCESS
  - NCCN
  - ASCO
  - Institution-built pathways
  - UPMC
    - Via Oncology
  - USONC
  - P4 Healthcare
  - Others

Do pathways work ?

- "Done right, it has to"
  - Quality
  - Safety
  - Cost estimation
  - Allocation of resources
- Fee-for-service =

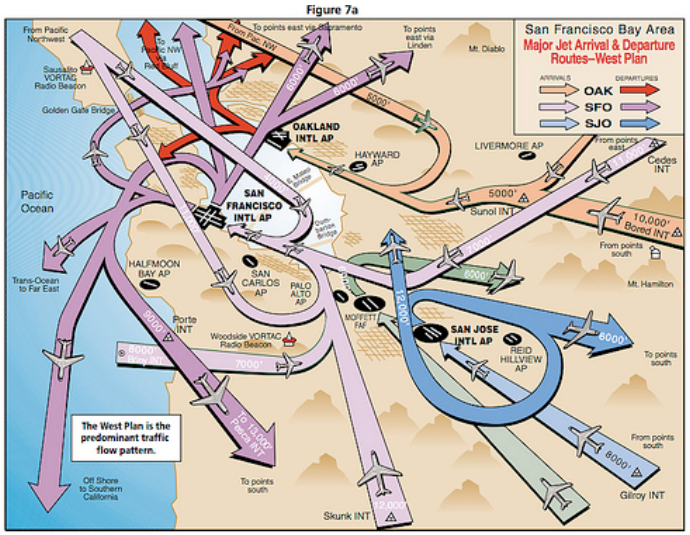
- "Value-Based Cancer Care"
  - Tools
  - Metrics
  - Results

Examples:

- Aetna study
  - 35% decrease in cost of management of NSCLC patient for 12 months with same overall survival
- BCBS/UPMC
  - Major cost reduction by better use of resources
    - Drug selection
    - Laboratory
    - Radiology
- More publications are forthcoming and needed

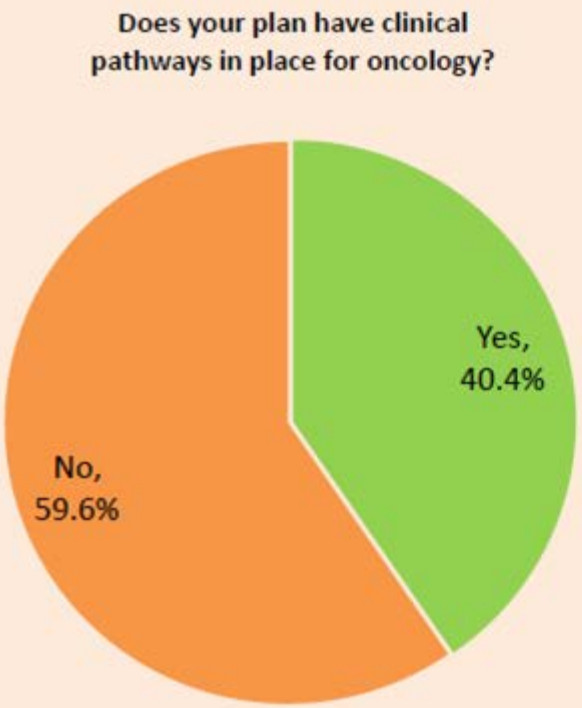
Can pathways prevent medical errors, improve career satisfaction in Oncology?

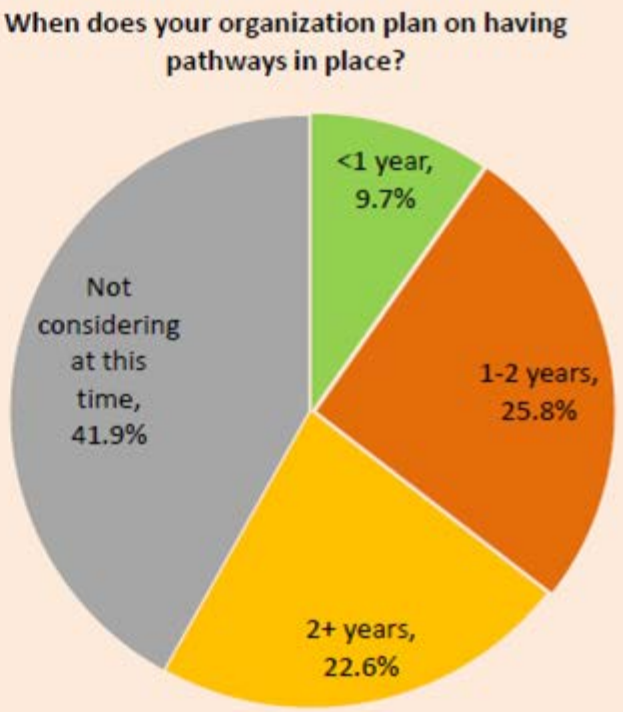
- Time is short
  - Patient load
  - "Extra-curricular" obligations
- Data is geometrically expanding
  - Many thousands of publications per year
  - Number of journals
  - Meetings
- Complexity of medicine
- Intricacy of business of oncology



Payers and pathways

Figure 1. **Payer plans to implement oncology clinical pathways**

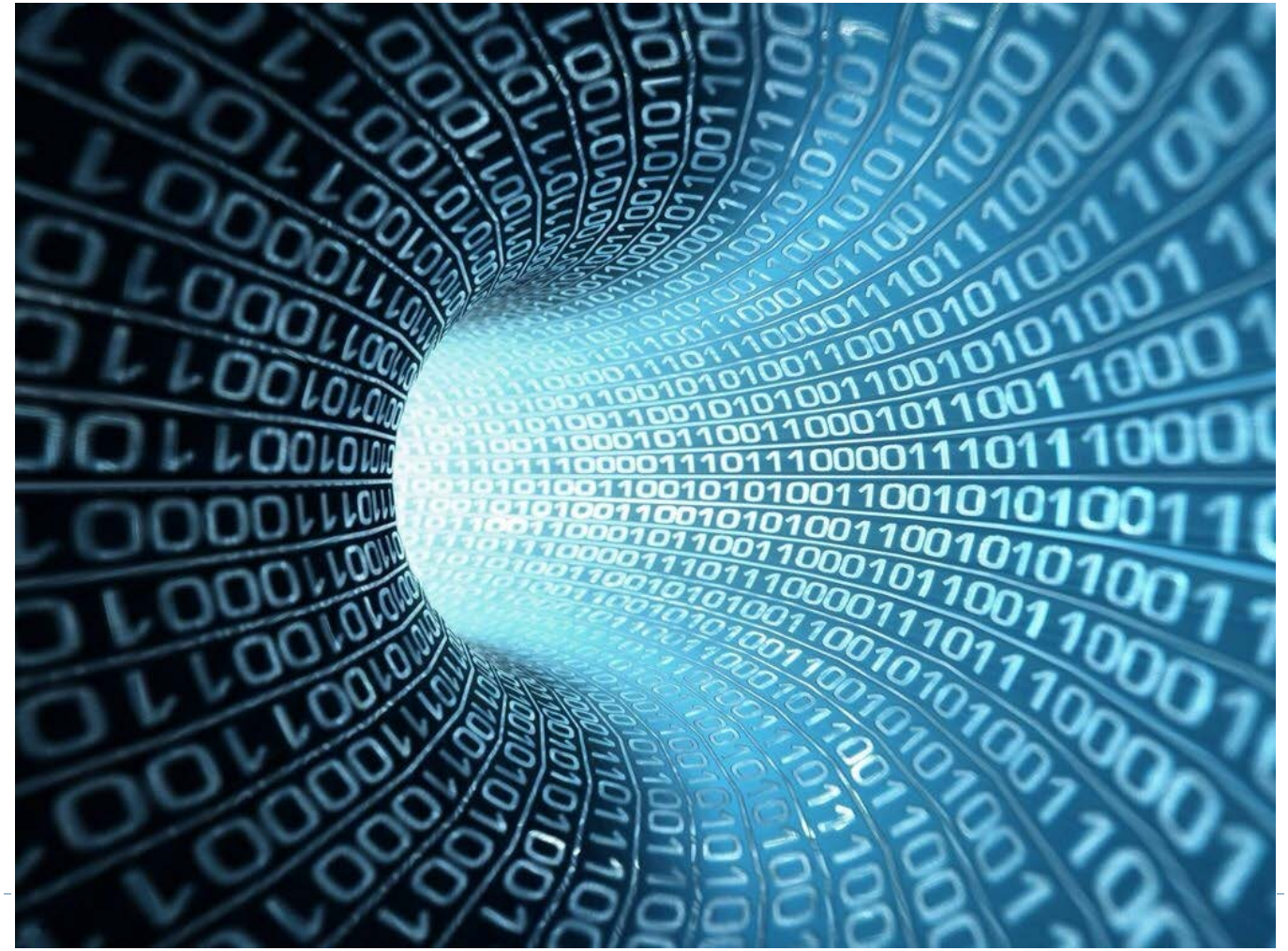




Source: Reimbursement Intelligence Oncology Series, 2012

Data Harvesting

- Is the data in our practice worth anything ?



Data

- BIG DATA = today is a big headache
  - 2.7 zettabytes of data exist in the digital universe today
  - 35 zettabytes of data will be generated annually by 2020
  - 60% growth in structured and unstructured data annually
- Poor data can cost businesses 20-30% of their operating revenue
- Unavailable or wrong data costs US businesses $600B annually
- Poor data or "lack of understanding of the data" are cited as the #1 reason for overrunning project or initiative costs

The Challenge

- Analysis of large datasets, much of it is unstructured
  - Physician notes
    - Diagnosis, staging, treatment intent, line of treatment
    - Toxicities
    - Assessment and Plan
  - Radiology reports
  - Some labs and pathology (when imported as an image – PDF)
  - How to extract such data:
    - Manually ?
    - Automated – optical reading and computer analysis
      - Do we have such technology?
    - Hybrid systems

Who may want our data?

- Pharmaceutical R&D
  - Patterns of practice
  - Real world toxicities
  - Duration of therapies
- Payers
  - Diagnose opportunities of decreasing hospitalizations, ER visits
  - Management of drug expenses
  - Coordination of care via multiple services
  - Patient access to care
  - Risk-saving-sharing contracts
- Oncologists
  - Quality of care delivered

Who may want our data?

- Oncologists
  - Understand your patient population
  - Size, growth trends
  - Higher risk patients
  - Evaluate economic situation
  - Current cost by disease state
  - Incorporation of additional procedures/tests to ensure drug coverage
  - Being able to demonstrate the quality of care

Who wants our data?

- Research Networks
  - Analysis of patient population with specific diseases
  - 3% US enrollment in trials !
- Practice management companies or services
  - Data can drive better analysis of cost
  - How to allocate resources
- GPO's
  - Volume, type of drug, supplies
  - Better contracting
- Benchmarking
  - Intra and inter-practices attributes

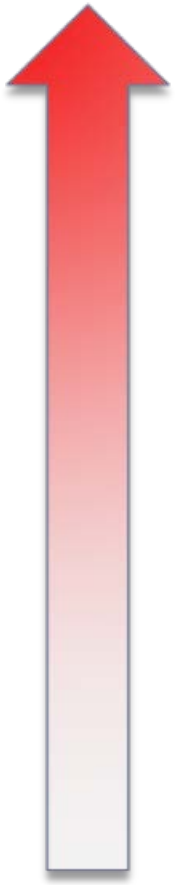
Who wants our data?

- Billing & Accounting
  - Payment estimations and planning
  - Improvement of denial rate and resolution times
  - Betterment of financial effectiveness and operations
    - Less cost
    - Less personnel
    - Shorter billing/revenue cycle

$300,000,000,000.00 annually

Who can benefit from data?

- Possibly all of us, BUT:
  - Larger practices
  - Vaster geographical distributions
  - Electronically savvy practices
  - More structure data
    - Charts
    - Ordered tests
    - Results
    - Costs
  - More interfaces with laboratory, pathology
  - Practices with real data harvesting tools or vendors



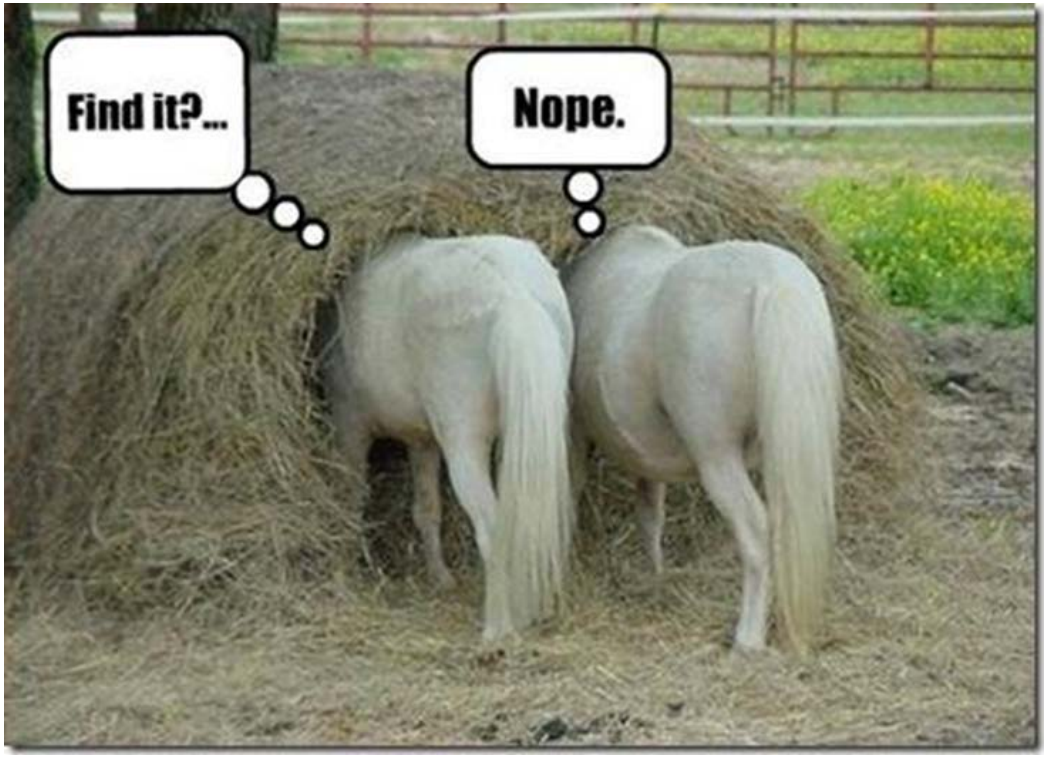
Critical

- Large aggregated data
  - Meaningful and diverse patient populations
  - Allow comparative information
- State-of-the art analytic tools
  - Hardware
  - Software
  - Statisticians
  - Data professionals
    - Collection of raw data
    - Transform in a meaningful product
    - Devise predictive models
    - Monetization by different parties

Data = is it a gold mine ?

Who can help your practice with data ?

- EMR
- GPO's
- Data companies
- Others



Take Home Message

- EMR
- PATIENT PORTALS
- PATHWAYS
- DATA

- SUCCESS:
  - CRITICAL MASS
  - QUALITY AND DELIVERY OF CARE
  - REAL VALUE PROPOSITION
  - METRICS AND BENCHMARKING
  - CARE READY
  - DEAL-RISK READY CONTRACTS

Thank you

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