COLLABORATIVE PORTFOLIO ANALYSES

Examples of approaches and benefits

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Why conduct a shared portfolio analysis?

- **Shared framework for categorizing research**
  - Analysis of trends in support across organizations
  - Identification of gaps, synergies, and opportunities for coordination or collaboration
  - Resource for identifying researchers for review panels, workshops, and working groups

What to analyze

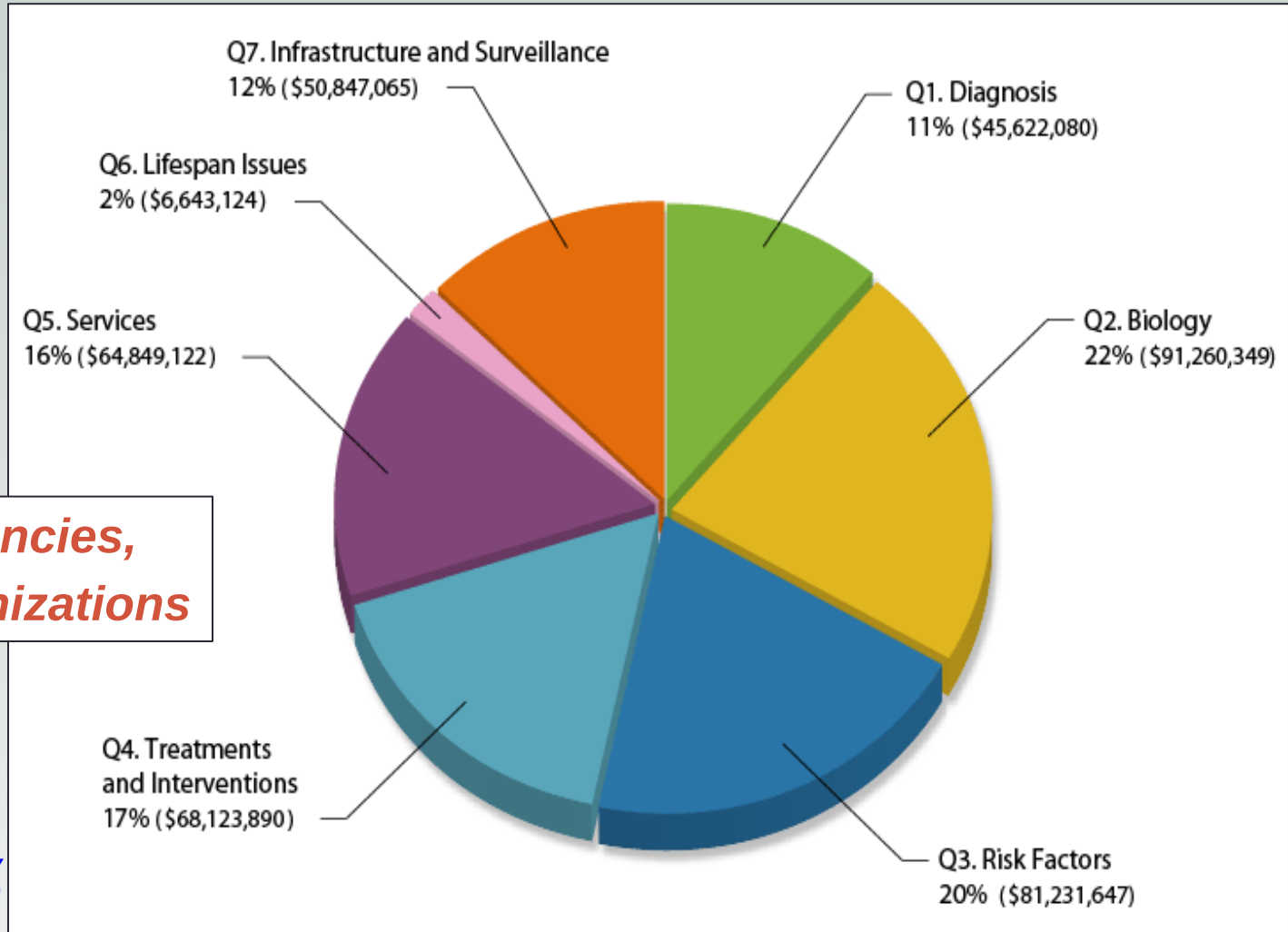
Purpose of the analysis dictates approach

- How do funded research projects align with a strategic plan or other defined priorities?
- How is support distributed across scientific topics?
- How is support distributed across stages of research? (e.g., basic, translational, clinical)
- What mechanisms of support are available across different sources? (e.g., research grants, training, resources, infrastructure, workshops/conferences, etc.)
- What trends emerge across portfolios over time?

Multiple, complementary coding dimensions may be desired

IACC: Interagency Autism Coordinating Committee

- Annual analysis of portfolio alignment with *IACC Strategic Plan*
- Subcategories independent of plan objectives added for complementary view
- Helps outline gaps, opportunities



10 Federal agencies,
8 private organizations

http://iacc.hhs.gov

IADRP: International Alzheimer's Disease Research Portfolio

- Led by the National Institute on Aging (NIA) and the Alzheimer's Association, with 11 other participating organizations
- **CADRO**: Common Alzheimer's Disease Research Ontology, developed to integrate and compare research portfolios from public and private organizations in US and abroad

Three-tier classification system, with seven major categories:

- *Molecular pathogenesis and pathophysiology of AD*
- *Diagnosis, assessment and disease monitoring*
- *Translational research and clinical interventions*
- *Epidemiology*
- *Care, support, and health economics of AD*
- *Research resources*
- *Consortia and public private partnerships*

Categories stratified into research topics; divided into research themes

http://iadrp.nia.nih.gov/

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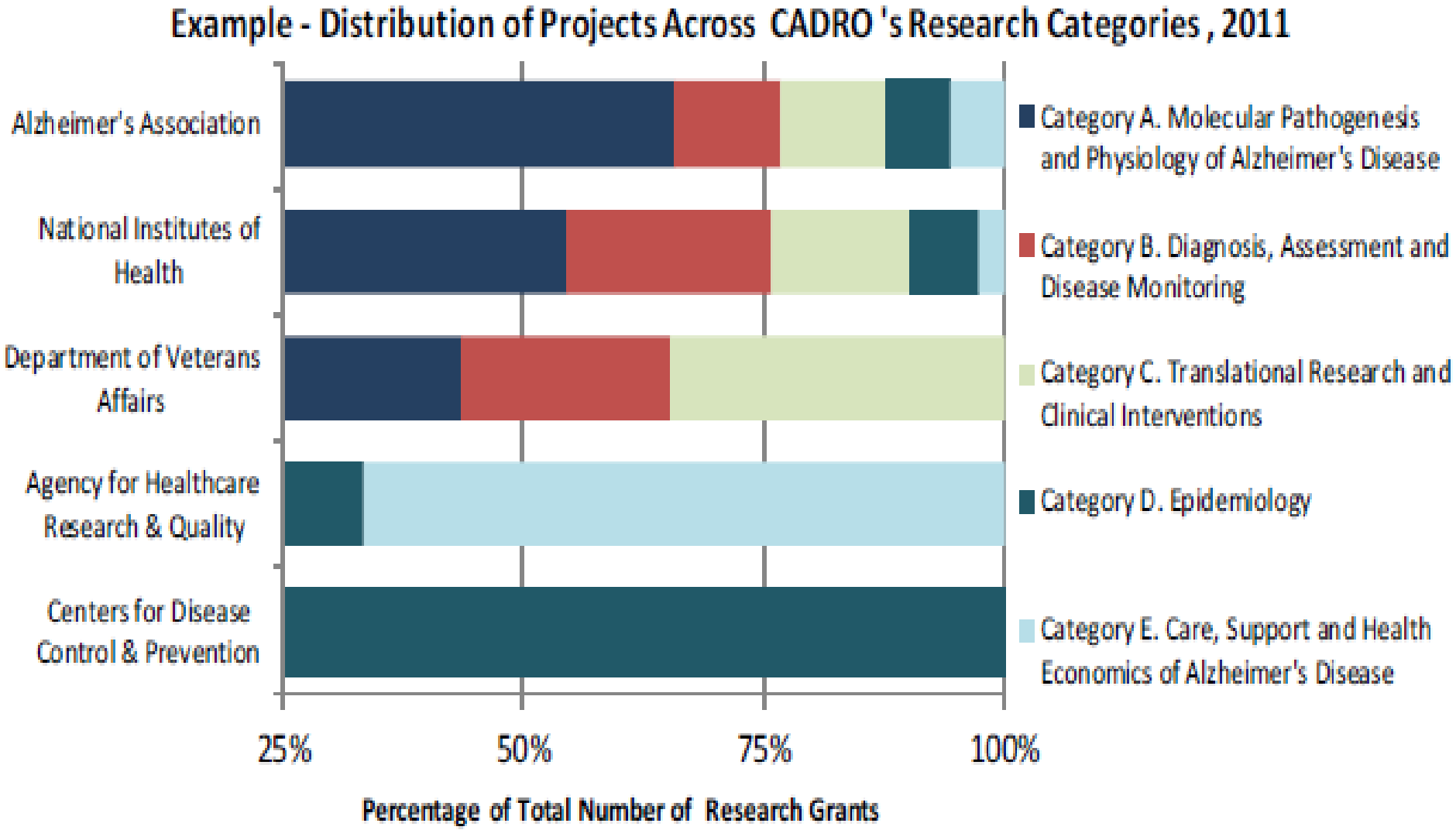

ICRP: International Cancer Research Partnership

Alliance of over 50 governmental and non-governmental cancer organizations in the US, Canada, the UK, France, The Netherlands, Australia, and Japan

- ***Common Scientific Outline (CSO)***, a classification system organized around seven scientific areas in cancer research:
  - *Biology*
  - *Etiology (causes of cancer)*
  - *Prevention*
  - *Early Detection, Diagnosis, and Prognosis*
  - *Treatment*
  - *Cancer Control, Survivorship, and Outcomes Research*
  - *Scientific Model Systems*
- Complementary cancer type/site coding
- Portfolio analyses based on the CSO have identified gaps to address through strategic planning and joint initiatives
- CSO widely used/adapted by other organizations (US and abroad) for cancer research and biomedical research more generally

https://www.icrpartnership.org/

ICRP Data Report 2005-2008

Table 2: CSO profile of high investment cancer sites (all partners) in the calendar year 2008
(Investment (USD $M))

SITE	CSO1 Biology	CSO2 Etiology	CSO3 Prevention	CSO4 Early detection, diagnosis & prognosis	CSO5 Treatment	CSO6 Cancer control, survivorship & outcomes	CSO7 Scientific model systems	2008 Total
Bladder	$4.2	$9.4	$3.2	$7.9	$5.7	$3.0	$1.0	$34.4
Breast	$238.4	$133.7	$53.3	$168.7	$226.1	$141.5	$33.8	$995.7
Colorectum	$49.1	$65.7	$49.1	$50.2	$60.9	$66.2	$11.2	$352.5
Corpus uteri	$4.2	$6.2	$1.6	$1.7	$8.7	$3.2	$.6	$26.1
Haematological malignancy	$153.2	$83.0	$10.4	$43.0	$227.0	$27.6	$23.4	$567.5
Kidney	$11.1	$4.1	$1.6	$5.3	$17.2	$3.4	$1.9	$44.5
Lung	$37.2	$42.7	$44.2	$43.3	$60.7	$59.4	$11.4	$298.7
Melanoma of skin	$22.7	$16.1	$8.5	$17.4	$53.3	$4.3	$6.0	$128.2
Ovary	$24.5	$20.2	$7.6	$31.6	$54.4	$8.1	$5.2	$151.7
Pancreas	$22.6	$15.2	$3.9	$18.0	$37.5	$4.1	$6.0	$107.4
Prostate	$90.3	$47.2	$35.8	$70.0	$117.7	$47.4	$12.3	$420.7
Thyroid	$4.9	$5.0	$.5	$1.5	$1.7	$1.3	$.6	$15.5
Other sites	$139.1	$144.4	$58.2	$104.1	$205.8	$70.9	$36.0	$758.5
Not site specific	$402.1	$74.5	$51.6	$82.7	$214.9	$69.7	$41.6	$937.2
TOTAL	**$1203.6**	**$667.5**	**$329.6**	**$645.4**	**$1291.7**	**$510.1**	**$190.9**	**$4838.8**

https://www.icrpartnership.org/Publications/ICRP_Report_2005-08.pdf

General themes and lessons

- Typical (initial) approach:
  - participating organizations agree to a common coding framework
  - each funding organization contributes and codes their own portfolios

- The common coding framework should be
  - Relevant – align with goals for the analysis
  - Simple – balance complexity with feasibility
  - Multi-dimensional – to enable complementary analyses
  - Standardized – categories should be clearly defined
  - Consistent – robust across users and time
  - Flexible – enough to allow for emerging concepts

Discussion

- Would a shared portfolio analysis by ICARE members be useful?
- What types of questions should a shared analysis address? What categories for scientific content or type of funding should be included?
- How would we carry out the analysis? What would be the roles and responsibilities of ICARE members?
- How frequently would we want to update the analysis?
- Identify potential next steps and volunteers for small working group