

# Impact Of Alternative Data Sources on Projected vs. Official Case Counts

June 2016

# Background

- ❑ ACS publishes annual projections
- ❑ How do projections compare to official case counts?
- ❑ Has reporting from outpatient sources affected the comparison?

# Methods

- ❑ **USCS incidence counts compared to ACS 2008-2013**
- ❑ **Absolute difference determined for major sites**
  - Evaluated at 24-, 36-, 48-, 60-, 72-, and 84-month periods
  - Grouped by over-estimation, comparable to estimates, under-estimation
- ❑ **Distribution by Type of Reporting Source 2008-2013**
  - Evaluated at 24-, 36-, 48-, 60-, 72-, and 84-month periods
  - Grouped by increased, no change, decreased reporting

# Official vs. Projected Case Counts by Diagnosis Year, 24-month Point

	Official	Projected	Difference
2008	1,486,984	1,437,180	49,804
2009	1,501,544	1,529,560	-28,016
2010	1,470,664	1,596,670	-126,006
2011	1,543,764	1,479,350	64,414
2012	1,540,245	1,638,910	-98,665
2013	1,570,432	1,660,290	-89,858

# Percent of Official v Projected by Diagnosis Year, 24-month Point

	2008			2009			2010			2011			2012			2013		
	USCS 11--24-month point			USCS 12--24-month point			USCS 13--24-month point			USCS 14--24-month point			USCS 15--24-month point			USCS 16--24-month point		
	M/F	MALE	FEMALE	M/F	MALE	FEMALE	M/F	MALE	FEMALE	M/F	MALE	FEMALE	M/F	MALE	FEMALE	M/F	MALE	FEMALE
All Sites																		
Oral Cavity and Pharynx																		
Digestive System																		
Esophagus																		
Stomach																		
Small Intestine																		
Colon excluding Rectum																		
Rectum and Rectosigmoid Junction																		
Anus, Anal Canal and Anorectum																		
Liver and Intrahepatic Bile Duct																		
Pancreas																		
Respiratory System																		
Larynx																		
Lung and Bronchus																		
Bones and Joints																		
Soft Tissue including Heart																		
Skin excluding Basal and Squamous																		
Melanoma of the Skin																		
Other Non-Epithelial Skin																		
Breast																		
Cervix Uteri																		
Corpus and Uterus, NOS																		
Ovary																		
Vulva																		
Prostate																		
Testis																		
Urinary System																		
Urinary Bladder																		
Kidney and Renal Pelvis																		
Eye and Orbit																		
Brain and Other Nervous System																		
Endocrine System																		
Thyroid																		
Other Endocrine including Thymus																		
Lymphoma																		
Hodgkin Lymphoma																		
Non-Hodgkin Lymphoma																		
Myeloma																		
Leukemia																		
Acute Lymphocytic Leukemia																		
Chronic Lymphocytic Leukemia																		
Acute Myeloid Leukemia																		
Chronic Myeloid Leukemia																		

Over-estimated  
(<15%)

Over-estimated  
(6-15%)

Comparable  
(within 5%)

Under-estimated  
(6-15%)

Under-estimated  
(>15%)

# Percent of Official v Projected by Diagnosis Year, 24-month Point v 2015 Submission

	2008						2009						2010						2011						2012					
	24-Month Point			84-Month Point			24-Month Point			72-Month Point			24-Month Point			60-Month Point			24-Month Point			48-Month Point			24-Month Point			36-Month Point		
	M/F	MALE	FEMALE	M/F	MALE	FEMALE	M/F	MALE	FEMALE	M/F	MALE	FEMALE	M/F	MALE	FEMALE	M/F	MALE	FEMALE	M/F	MALE	FEMALE	M/F	MALE	FEMALE	M/F	MALE	FEMALE	M/F	MALE	FEMALE
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Over-estimated  
(<15%)

Over-estimated  
(6-15%)

Comparable  
(within 5%)

Under-estimated  
(6-15%)

Under-estimated  
(>15%)

# Difference in Reporting from Other Sources by Diagnosis Year

	2009	2010	2011	2012	2013
All Sites					
Oral Cavity and Pharynx					
Digestive System					
Esophagus					
Stomach					
Small Intestine					
Colon excluding Rectum					
Rectum and Rectosigmoid Junction					
Anus, Anal Canal and Anorectum					
Liver and Intrahepatic Bile Duct					
Pancreas					
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Chronic Lymphocytic Leukemia					
Acute Myeloid Leukemia					
Chronic Myeloid Leukemia					



# Pathology and Physician Reporting

- ❑ **Significant increase in ePath implementation**
  - 1 lab 2006 – 24 labs 2016
- ❑ **Significant increase in CCRs receiving ePath**
  - 18 states 2006 - >40 states 2016
- ❑ **ONC 2014 physician survey**
  - 83% of office-based physicians adopted EHR
  - 74% adopted a certified EHR
    - 67% in 2013
  - Majority used certified EHRs regardless of MU participation
- ❑ **42 CCRs have declared readiness for MU**
  - 19 have received data



# Official vs. Projected Case Counts by Diagnosis Year, 2015 Submission

	Official	Projected	Difference	
			24-month	2015 Sub
2008	1,548,656	1,437,180	49,804	111,476
2009	1,563,425	1,529,560	-28,016	33,865
2010	1,554,858	1,596,670	-126,006	-41,812
2011	1,580,736	1,479,350	64,414	101,376
2012	1,565,926	1,638,910	-98,665	-72,984
2013	1,570,432	1,660,290	-89,858	

# Conclusions

- ❑ Trends in over- and under-estimation by cancer site
- ❑ Over-estimation higher in cancer sites frequently diagnosed in outpatient settings
- ❑ Reporting from other sources increased
  - Especially melanoma, prostate, and CLL
- ❑ eMaRC Plus deployment
- ❑ NPCR Program Standard for electronic reporting

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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the  
Centers for Disease Control and Prevention.