

# Health Economics and Outcomes Research in journals with a high Impact Factor

Lucy Hyatt,<sup>1</sup> Sarah Petrig,<sup>1</sup> Elena Rossi<sup>1,2</sup>

<sup>1</sup>Amgen (Europe) GmbH, Zug, Switzerland; <sup>2</sup>SDA BOCCONI, Milan, Italy

## ABSTRACT

**Objective:** HEOR is increasingly important for gaining and maintaining access to treatments. We assessed whether HEOR studies are published in the high-tier journals distributed most widely to clinicians. **Research design and methods:** A PubMed search was used to assess the total number of articles published in each clinical journal with a high IF (>10) (n=24) between August 2008 and July 2011. A keyword search yielded the number of HEOR papers which was used to calculate the percentage of HEOR papers (%HEOR) published per journal in the same period. **Results:** The 24 journals covered general or specialist medicine, and had a total circulation of 1,031,412. The %HEOR published per journal between 2008 and 2011 ranged from 0.19% (American Journal of Human Genetics) to 17.67% (BMJ) (mean, 7.20%). Of 6 journals in the %HEOR upper quartile, 5 were in general medicine, including Archives of Internal Medicine and Annals of Internal Medicine. The %HEOR published between 2008 and 2011 in the journal with the highest IF, the New England Journal of Medicine, was 4.24%. There was no pattern of increase in %HEOR between 2008/9 and 2010/11. There was no relationship between %HEOR and either IF or journal base country. **Conclusion:** HEOR papers comprise a low proportion of articles published in journals with IF>10. Despite the increasing importance of HEOR for access, no pattern of increase in %HEOR publications was evident in high IF clinical journals from 2008 to 2011.

## OBJECTIVE

- Health economics and outcomes research (HEOR) is increasingly important for gaining and maintaining access to treatments
- We assessed whether HEOR is published in the high-tier journals distributed most widely to clinicians

## METHODS

- A PubMed search was used to assess the total number of articles published between August 2008 and July 2011 in each of the 24 clinical journals with a high Impact factor (IF; >10), as provided by Journal Citation Reports 2010 (from 10.0 for European Heart Journal to 53.4 for New England Journal of Medicine)
- The journals, covering general and specialist medicine, have a total circulation  $\geq 1,031,412$  (PLoS Medicine is available online only, and therefore no circulation figures are available)
- A keyword search yielded the number of HEOR papers in each journal in each time period. Manual search of titles provided by keyword removed those not reporting in HEOR data
  - Key words: Access, Cost, Quality, Budget, Life year, Resource, Systematic review, Treatment compar\*, Persist, Complain\*, Adhere, Economic, Social, Outcome, Payer/payor, Reimburse/re-imburse, Management
- These numbers were used with the total number of articles in each journal in each time period to calculate the percentage of HEOR papers (%HEOR) published per journal in each time period
  - Counts were made by 2 authors (LH, SP)

### Journal impact factor (IF) and circulation by therapy area

Journal	IF (2010)	Circulation <sup>†</sup>	Total papers August 2008 to July 2011
<b>Cardiac &amp; Cardiovascular Systems (CCS)</b>			
European Heart Journal (Eur Heart J)	10.046	21,653	1017
Journal of the American College of Cardiology ( J Am Coll Cardiol)	14.292	32,745	1244
Circulation*	14.429	9345	1379
<b>Neurology (N)</b>			
The Lancet Neurology (Lancet Neurol)	21.659	1772	289
Annals of Neurology (Ann Neurol)*	10.746	6513	564
<b>Critical Care Medicine (CCM)</b>			
American Journal of Respiratory and Critical Care Medicine (AJRCCM)*	10.191	17,800	872
<b>Gastroenterology &amp; Hepatology (G&amp;H)</b>			
Gastroenterology	12.032	19,000	1180
Hepatology	10.885	5950	1203
Gut	10.614	3700	647
<b>Genetics &amp; Heredity (GH)</b>			
The American Journal of Human Genetics (Am J Hum Genet)	11.680	5598	521
<b>Haematology (H)</b>			
Circulation*	14.429	9345	1379
Blood	10.558	16400	4197
<b>Infectious Diseases (ID)</b>			
The Lancet Infectious Diseases (Lancet Infect Dis)	16.144	1685	214
<b>Medicine, General &amp; Internal (GM)</b>			
The New England Journal of Medicine (N Engl J Med)	53.484	146,000	684
The Lancet	33.633	29,103	860
JAMA (Journal of the American Medical Association)	30.011	315,121	694
Annals of Internal Medicine (Arch Intern Med)	16.729	130,000	530
PLoS Medicine ( PLoS Med)	15.617	Online Only	334
BMJ (British Medical Journal)	13.471	116,639	730
Archives of Internal Medicine (Arch Intern Med)	10.639	61,981	609
<b>Oncology (O)</b>			
Journal of Clinical Oncology)	18.970	24,980	2271
The Lancet Oncology (Lancet Oncol)	17.764	1691	360
Journal of the National Cancer Institute (J Natl Cancer Inst)	14.697	1500	452
<b>Psychiatry (P)</b>			
The American Journal of Psychiatry (Am J Psychiat)	12.759	33,331	335
Archives of General Psychiatry (Arch Gen Psychiat)	10.782	28,905	370

\*Journals with several possible therapy areas: Circulation (also Peripheral Vascular Disease); Annals of Neurology (also Neurosciences); American Journal of Critical Care and Respiratory Medicine (also Respiratory system)

<sup>†</sup>Data from Journal Selector, Sylogent, accessed September 2011

## RESULTS

- The %HEOR published per journal between August 2008 and July 2011 ranged from 0.19% (Am J Hum Genet) to 17.67% (BMJ) (mean, 7.20%) (Fig. 1)
  - Of 6 journals in the upper quartile, 5 were in general medicine: BMJ, Archives of Internal Medicine, Annals of Internal Medicine, PLoS Medicine and JAMA (total circulation  $\geq 623,741$ ) (Fig. 1 and 2)
  - The %HEOR published between August 2008 and July 2011 in the journal with the highest IF, the New England Journal of Medicine, was in the lowest quartile (4.24%) (Fig. 1 and 3)
- There was no relationship between %HEOR and either IF (Fig. 3) or journal base country (Fig. 5)
- There was no pattern of increase in %HEOR between August 2008–July 2009 and August 2010–July 2011 (Fig. 5)

Figure 1. %HEOR papers in each journal and all journals (Total)

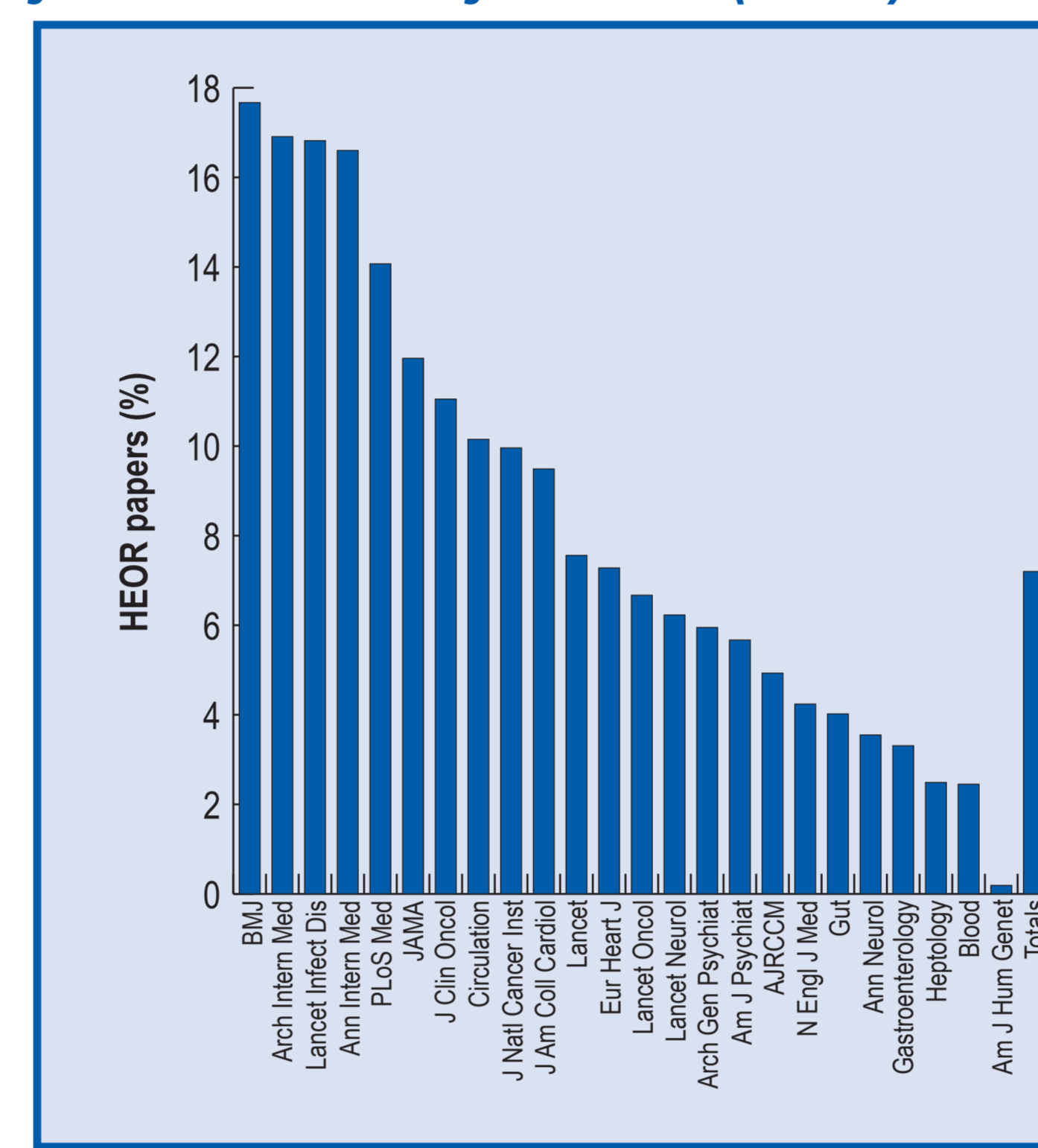


Figure 2. %HEOR papers in each journal, grouped by therapy area

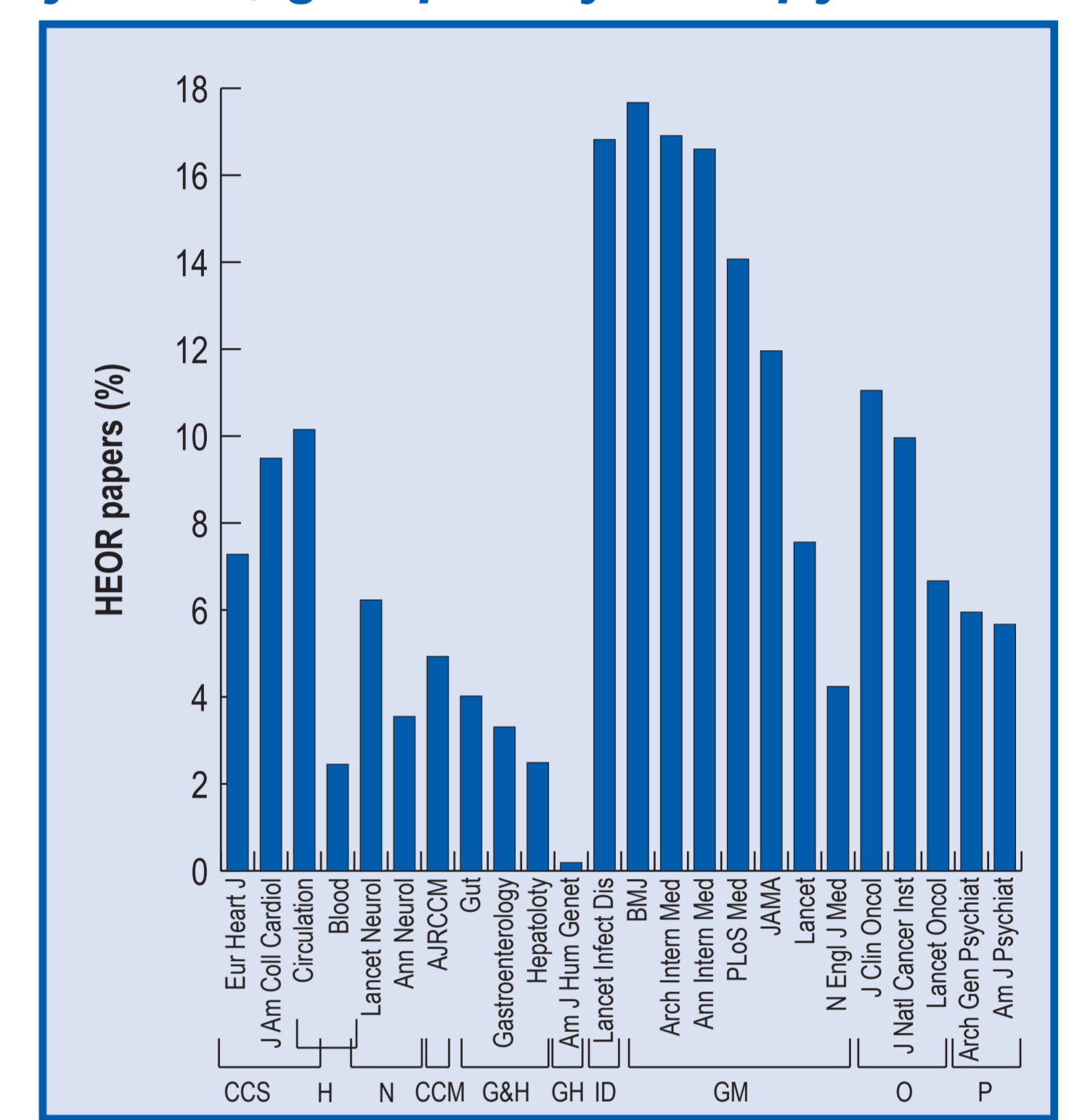


Figure 3. %HEOR papers, by Impact Factor

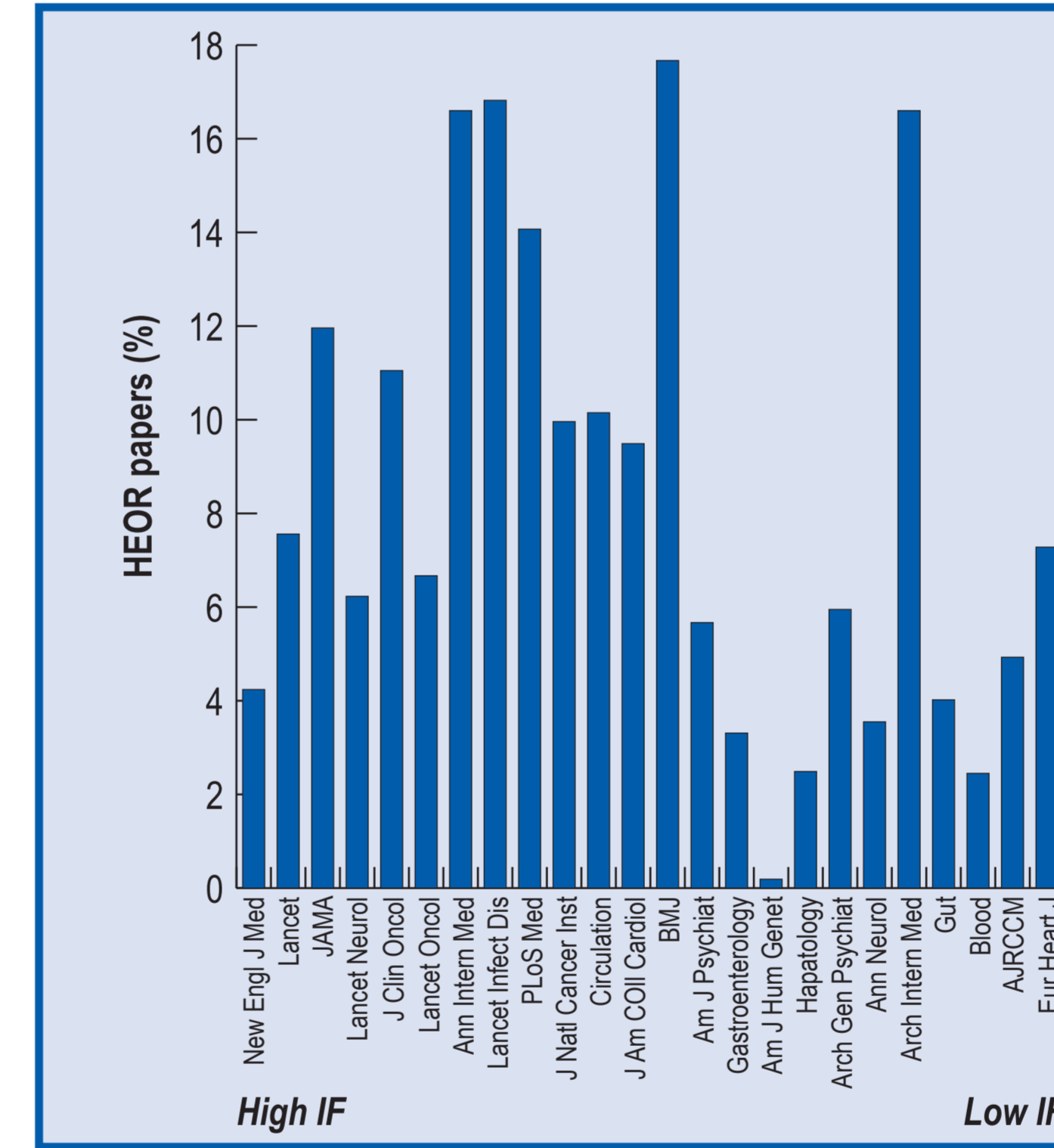


Figure 4. %HEOR papers, by country of main editorial office

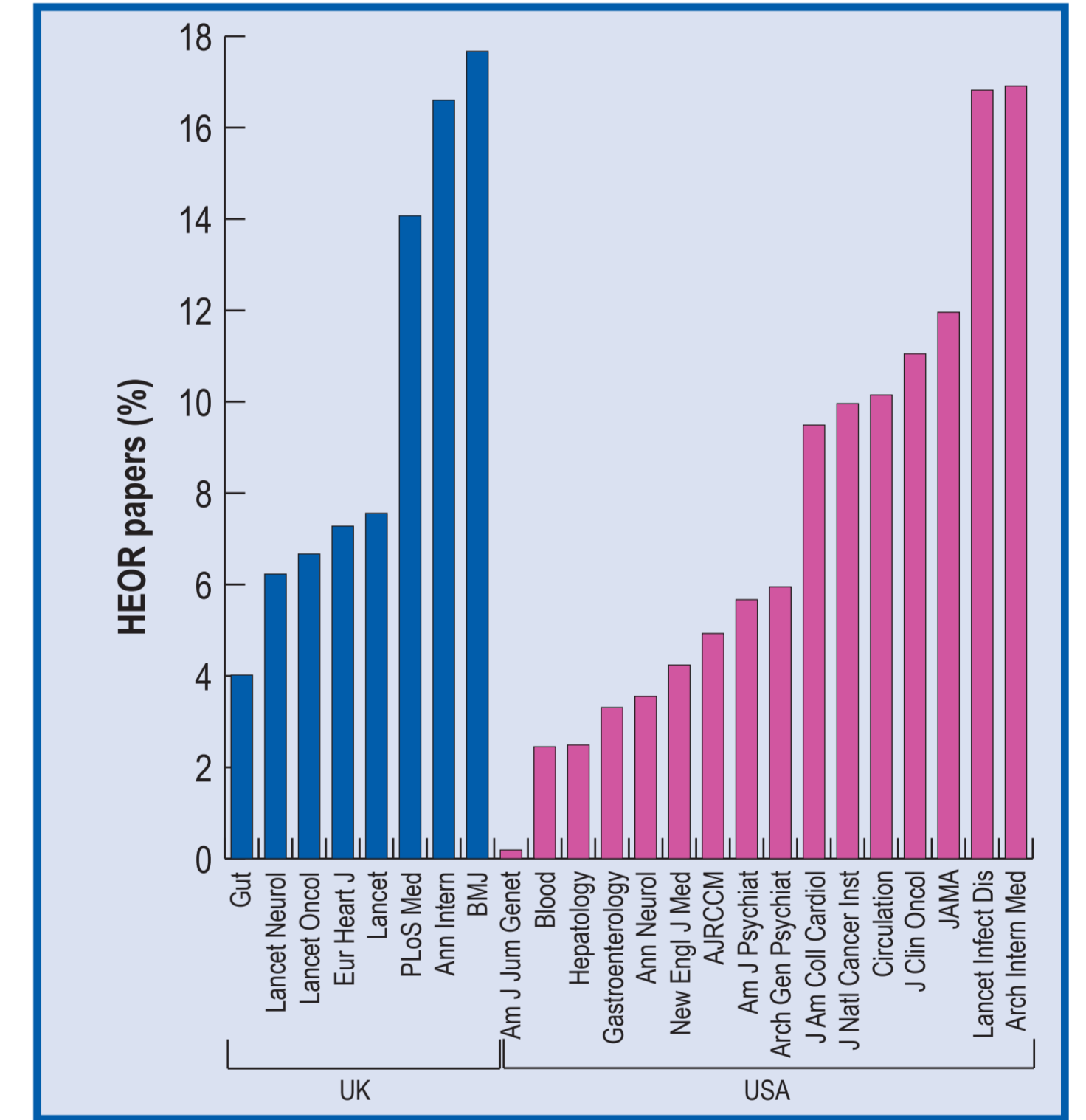
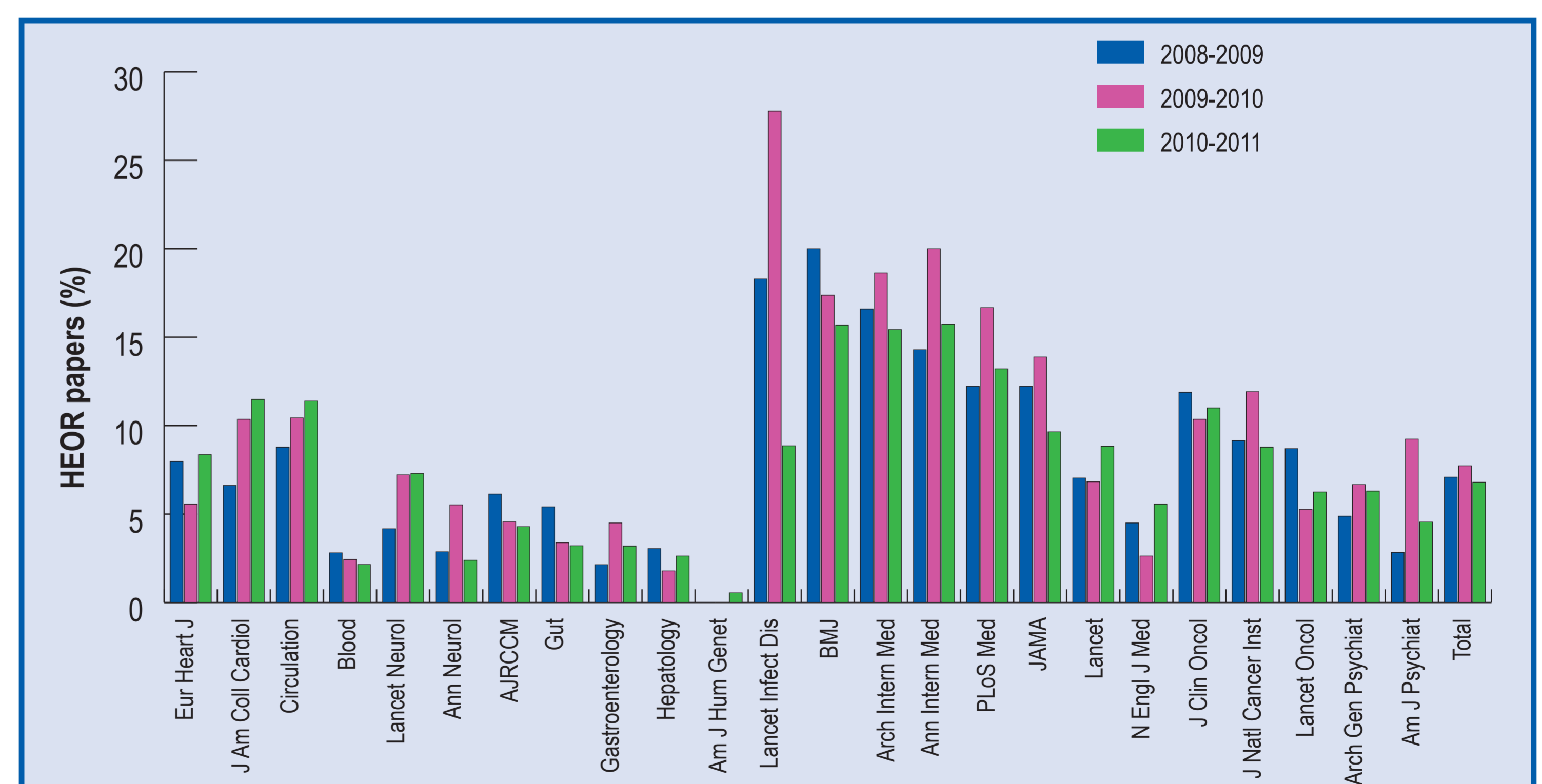


Figure 5. %HEOR papers in each of the three 1-year periods



## CONCLUSIONS

- HEOR papers comprise a low proportion of articles published in high-tier journals (IF>10)
- Despite the increasing importance of HEOR for access, no pattern of increase in %HEOR publications was evident in high IF clinical journals from August 2008 to July 2011

## ACKNOWLEDGEMENTS

- The authors would like to thank Amgen for time to conduct this research and colleagues for helpful review of the abstract and poster, particularly Bill Aurora and Juli Clark of Amgen, Inc. and Michael Hamann and Bonnie Molloy of Amgen (Europe) GmbH