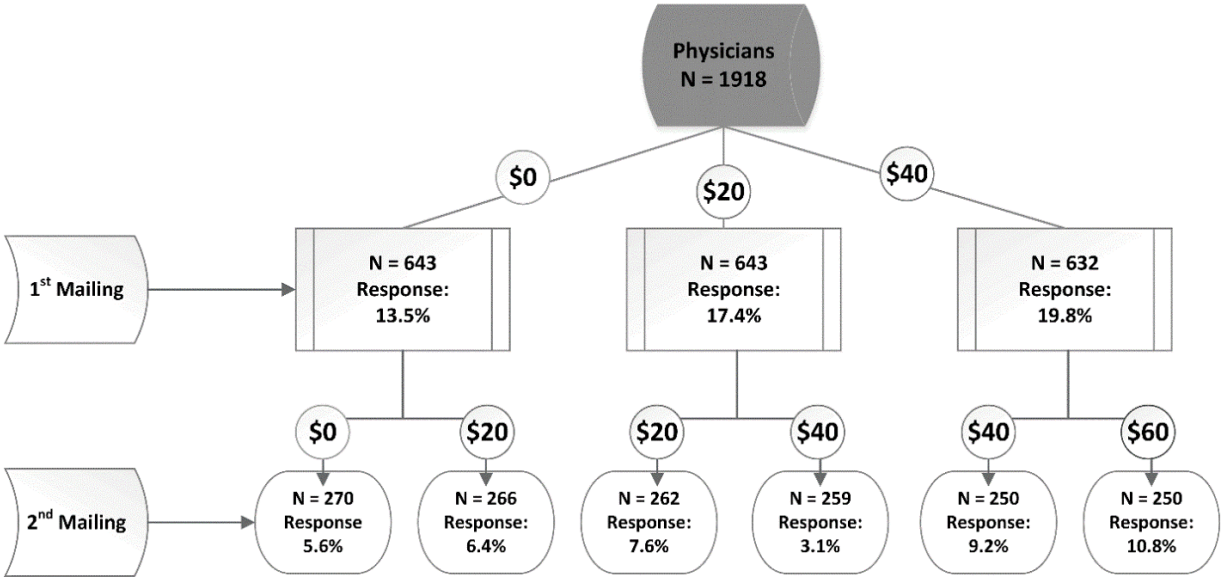
Online supplement to: Routine Use of Quantitative Disease Activity Measurements among US Rheumatologists: Implications for Treat-to-target Management Strategies in Rheumatoid Arthritis. *The Journal of Rheumatology*. doi:10.3899/jrheum.170548

ONLINE SUPPLEMENTARY DATA

Supplementary Figure 1. Rheumatologists' response to internet survey per financial incentive offered.



n's refer to the number of surveys sent in each randomized wave.

Explanation: 1,918 physicians had valid email addresses and were eligible to participate; 39 (2.0%) opted out of the current and future surveys. Among those randomized to receive no compensation (n = 643), the response rate was 13.5% after a single email contact, which was lower than those who were randomized to receive either $20 or $40, wherein the response rates were 17.4% (p = 0.05 compared to no compensation) and 19.8% (p = 0.003 compared to no compensation), respectively. The pooled response rate of 18.6% with either incentive ($20 or $40) was also significantly greater (p = 0.005) compared to no compensation, but the response rate to the $20 and $40 incentive amounts were not significantly different from each other (p = 0.28).

The incremental response to a second email solicitation was 7.1% (95% CI 5.8–8.3%), pooled across all arms. Response to the second email contact was not greater for the groups randomized to receive an additional $20. Rheumatologists offered $60 (randomized to $40 initially, then randomized to an additional $20) had the numerically highest incremental response rate, with an additional 10.8% responding to the second email contact, yielding an overall response rate for this group of 30.6%.

Supplementary Table 1. Case Scenario Results for Whether Data from Quantitative Assessment Impacted Likelihood to Change or Add a DMARD or Biologic

	Amount of Clinical and Metric Information Provided		
Degree of info/Metrics	**Limited**	**Expanded**	**Complete**
Case Detail*	Swollen knee & wrist	MTX, Pred, NSAID, AM stiffness 10",	MTX/ETN, AM stiffness <15"; Pain in MCPs, Wrist
Quantitative disease activity	none	Patient pain 2/10, TJC 5, SJC 1	TJC5, SJC 1
Laboratory data	none	ESR 32, CRP 1.1 mg/dl	CRP 1.5 mg/dl
Composite Metrics Provided	none	HAQ 0.5	DAS 4.10, CDA 12, SDAI 13 GAS 15
Treatment Changes*, ** **No DMARD or Biologic Change, %**	51	22	16
Non-biologic DMARD Change, %	31	49	47
Biologic Add/Switch, %	19	30	37
Odds Ratio (95% CI) for Any DMARD/Biologic Change	Referent	3.7 (2.8-5.0)	5.5 (4.1 – 7.5)
		Referent	1.5 (1.1 – 2.0)

** case and other treatment options (e.g. joint injection) were abbreviated or truncated for brevity*
***may not sum exactly to 100% due to rounding*

Explanation: The referent case scenario (left-most column) provided limited clinical information (a swollen wrist and knee) and no RA disease metrics was likely to be managed with joint injection (41%)[not shown]; 49% of rheumatologists said they would change DMARD or biologics. The second case (middle column) provided additional clinical, laboratory (ESR, CRP) and metrics (HAQ, pain VAS, patient global); rheumatologists were 3.7 (2.8–5.0) times more likely to change or add DMARDs or biologics (78%). With yet more quantitative information,

(right-most column), rheumatologists were 1.5 (1.1–2.0) fold more likely to change DMARDs/biologics (84%) compared to the expanded case (middle column), and 5.5 times likely to change therapy compared to case with the least information.