Supplemental figure legends (online only)

Figure S1. Ratio of CGP metabolite to IM, and HCQ plasma levels. (A) Ratio of current to baseline CGP to IM levels over sequential cycle follow-up. No correlation was detected between ratio and treatment cohort. (B) HCQ concentration (ng/ml) did not correlate with 12 month 'success' or 'failure' rates. IM = Imatinib; HCQ = Hydroxychloroquine.

Figure S2. In vitro autophagy and functional response on HSPC population. (A) Percentage of LC3B-II puncta positive cells by IF in CD34+ BM cells versus unselected PB (p=0.002). (B) Western blotting of LC3B-II and GAPDH in 3 patient samples (pt 42.6 – BM; pt 47 – BM; pt 60 – PB and BM) untreated and treated *in vitro* with HCQ. (C) Change from baseline in percentage of colonies by CFC analysis from CD34+-selected BM populations at 6 and 12 months in IM and IM/HCQ cohort. (D) Change from baseline in the percentage of colonies by LTC-IC analysis from CD34+-selected BM populations at 6 and 12 months in IM and IM/HCQ cohort. HSPC = haemopoietic stem and progenitor cell; IM = Imatinib; HCQ = Hydroxychloroquine.

Table S1. Proportion of DMR split by 'high' and 'low' baseline *BCR-ABL1:ABL1* ratio according to median ratio at trial entry

Table S2. Sample number used in *in vitro* experiments
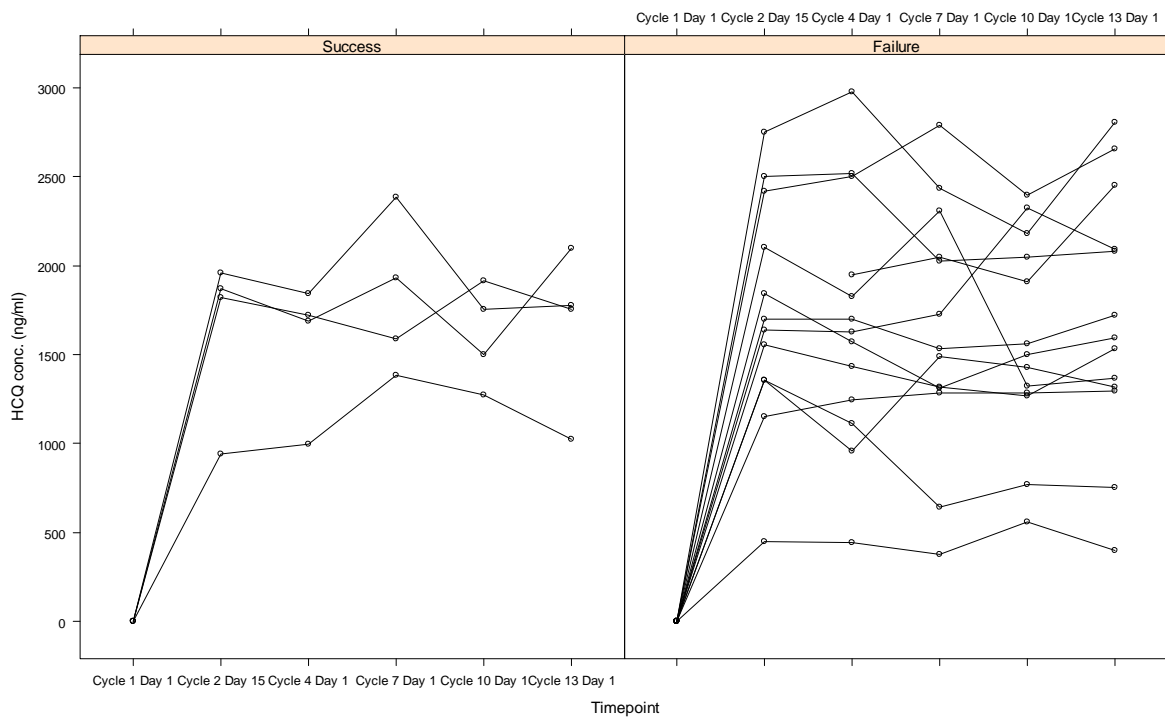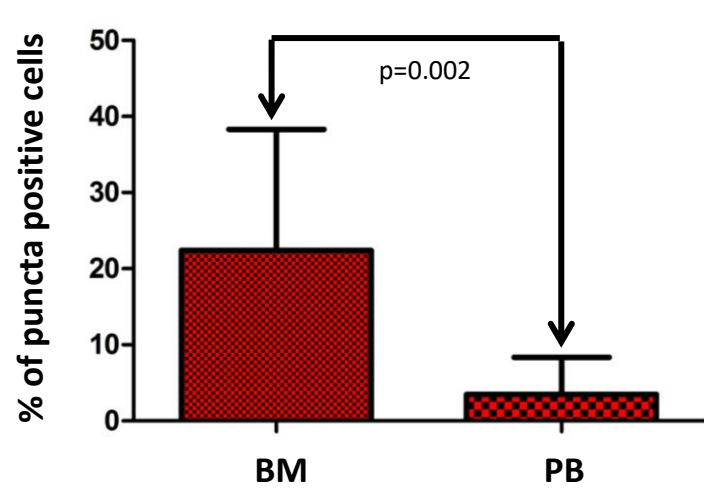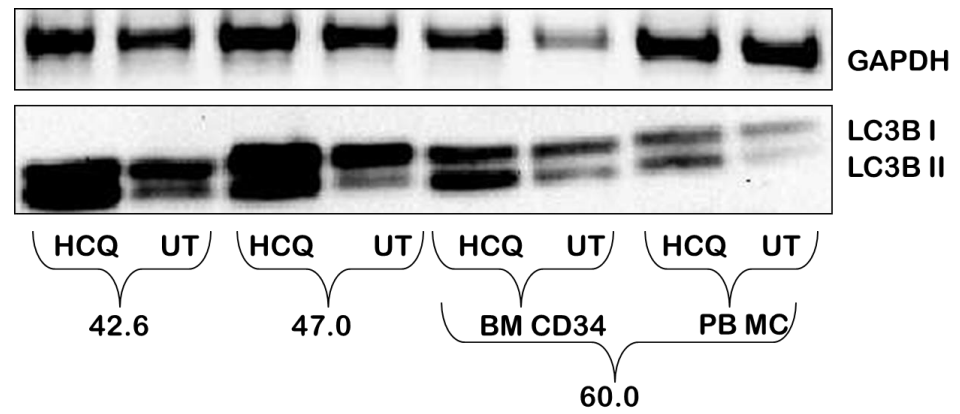
Figure S1.

A
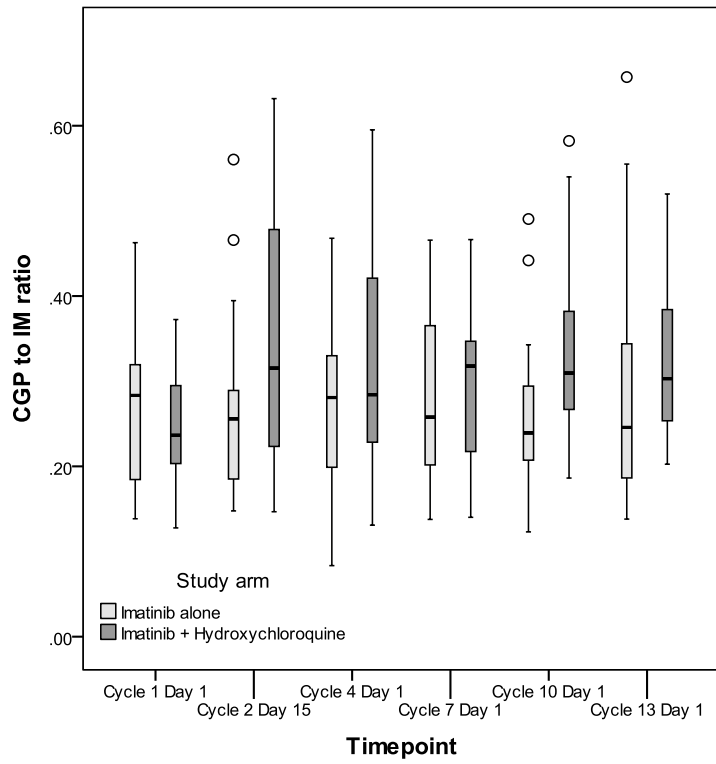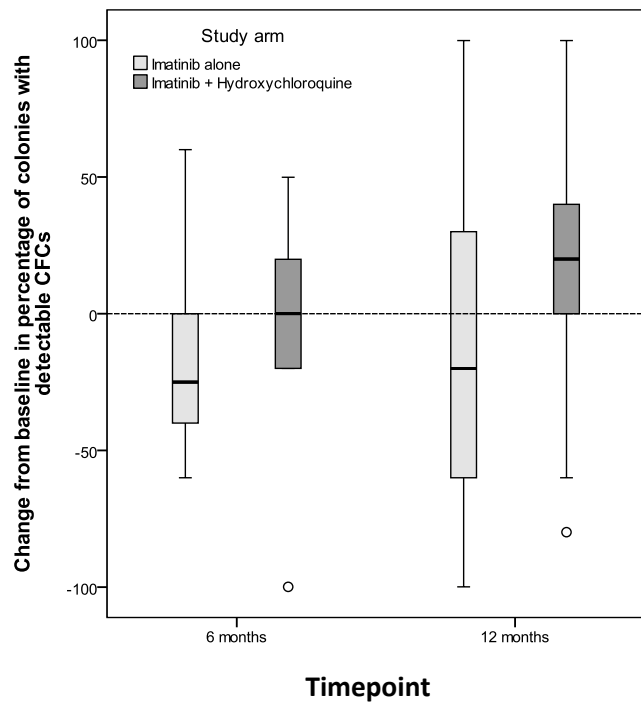

B

Figure S2.
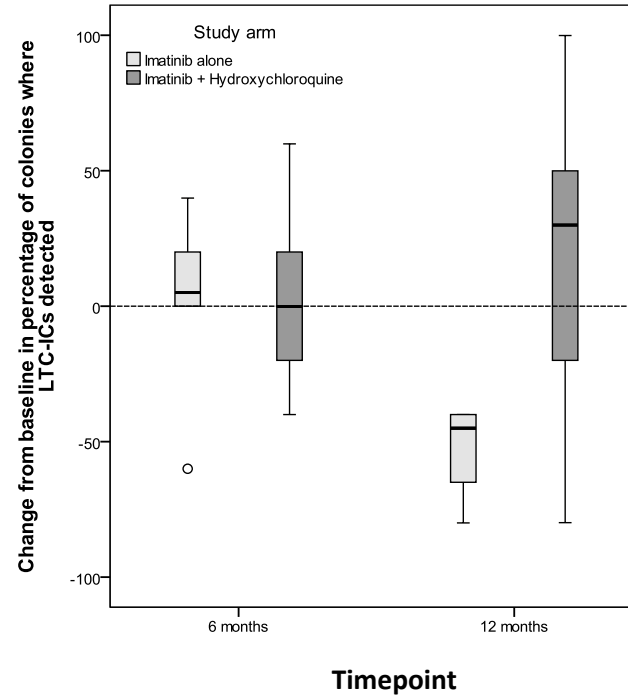
A

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C

D

Table S1: Proportion of DMR split by 'high' and 'low' baseline *BCR-ABL1:ABL1* ratio according to median ratio at trial entry

			Study arm					
			IM			IM/HCQ		
			Count	ITT %	Complete Case %	Count	ITT %	Complete Case %
High baseline BCR-ABL	MR3 (BCR-ABL <= 0.1%) achieved?	*Yes*	6	*46.2%*	*50.0%*	13	*72.2%*	*92.9%*
		No	6	46.2%	50.0%	1	5.6%	7.1%
		Missing	1	7.7%	0.0%	4	22.2%	0.0%
		Total	13	100.0%	100.0%	18	100.0%	100.0%
95% CI: 7.7% lower to 53.6% higher; unadjusted 2-sided p-value = 0.26; FDR adjusted 2-sided p-value = 0.85								
Low baseline BCR-ABL	MR3 (BCR-ABL <= 0.1%) achieved?	*Yes*	15	*88.2%*	*100.0%*	11	*78.6%*	*100.0%*
		No	0	0.0%	0.0%	0	0.0%	0.0%
		Missing	2	11.8%	0.0%	3	21.4%	0.0%
		Total	17	100.0%	100.0%	14	100.0%	100.0%
95% CI: 37.2% lower to 16.8% higher; unadjusted 2-sided p-value = 0.64; FDR adjusted 2-sided p-value = 0.87								
High baseline BCR-ABL	MR4 (BCR-ABL <= 0.01%) achieved?	*Yes*	2	*15.4%*	*16.7%*	6	*33.3%*	*42.9%*
		No	10	76.9%	83.3%	8	44.4%	57.1%
		Missing	1	7.7%	0.0%	4	22.2%	0.0%
		Total	13	100.0%	100.0%	18	100.0%	100.0%
95% CI: 13.9% lower to 43.4% higher; unadjusted 2-sided p-value = 0.41; FDR adjusted 2-sided p-value = 0.85								
Low baseline BCR-ABL	MR4 (BCR-ABL <= 0.01%) achieved?	*Yes*	9	*52.9%*	*60.0%*	6	*42.9%*	*54.5%*
		No	6	35.3%	40.0%	5	35.7%	45.5%
		Missing	2	11.8%	0.0%	3	21.4%	0.0%
		Total	17	100.0%	100.0%	14	100.0%	100.0%
95% CI: 40.0% lower to 22.9% higher; unadjusted 2-sided p-value = 0.72; FDR adjusted 2-sided p-value = 0.87								
High baseline BCR-ABL	MR4.5 (BCR-ABL <= 0.032%) achieved?	*Yes*	0	*0.0%*	*0.0%*	3	*16.7%*	*21.4%*
		No	12	92.3%	100.0%	11	61.1%	78.6%
		Missing	1	7.7%	0.0%	4	22.2%	0.0%
		Total	13	100.0%	100.0%	18	100.0%	100.0%
95% CI cannot be computed; unadjusted 2-sided p-value = 0.25; FDR adjusted 2-sided p-value = 0.85								
Low baseline BCR-ABL	MR4.5 (BCR-ABL <= 0.032%) achieved?	*Yes*	5	*29.4%*	*33.3%*	2	*14.3%*	*18.2%*
		No	10	58.8%	66.7%	9	64.3%	81.8%
		Missing	2	11.8%	0.0%	3	21.4%	0.0%
		Total	17	100.0%	100.0%	14	100.0%	100.0%
95% CI: 41.0% lower to 15.2% higher; unadjusted 2-sided p-value = 0.41; FDR adjusted 2-sided p-value = 0.85								
High baseline BCR-ABL	MR5 (BCR-ABL <= 0.001%) achieved?	*Yes*	0	*0.0%*	*0.0%*	2	*11.1%*	*14.3%*
		No	12	92.3%	100.0%	12	66.7%	85.7%
		Missing	1	7.7%	0.0%	4	22.2%	0.0%
		Total	13	100.0%	100.0%	18	100.0%	100.0%
95% CI cannot be computed; unadjusted 2-sided p-value = 0.50; FDR adjusted 2-sided p-value = 0.85								
Low baseline BCR-ABL	MR5 (BCR-ABL <= 0.001%) achieved?	*Yes*	2	*11.8%*	*13.3%*	0	*0.0%*	*0.0%*
		No	13	76.5%	86.7%	11	78.6%	100.0%
		Missing	2	11.8%	0.0%	3	21.4%	0.0%
		Total	17	100.0%	100.0%	14	100.0%	100.0%
95% CI cannot be computed; unadjusted 2-sided p-value = 0.49; FDR adjusted 2-sided p-value = 0.85								

Table S2: Sample number used in *in vitro* experiments

	Number of samples	
	IM	IM/HCQ
Peripheral blood		
Baseline	5	6
6 months	0	3
12 months	1	3
Bone marrow		
Baseline	2	5
6 months	0	3
12 months	1	4