

SUPPLEMENTARY DATA

**Supplementary Table 1.** Risk of all malignancies and breast cancer for insulin glargine versus other basal insulins, stratified by ever metformin use: adjusted HR estimated from the three multivariate Cox models with age as the time-scale (Source SNIIRAM-PMSI, January 2006 - December 2010)

	Model 1 <sup>a</sup>		Model 2 <sup>b</sup>		Model 3 <sup>c</sup>	
	HR	95% CI	HR	95% CI	HR	95% CI
<b>Never exposed to metformin</b>						
All malignancies	0.99	(0.85–1.15)	1.00	(0.86–1.17)	1.11	(0.93–1.32)
Breast cancer	1.08	(0.58–2.03)	1.06	(0.56–1.99)	1.49	(0.69–3.23)
<b>Exposed to metformin</b>						
All malignancies	0.95	(0.83–1.09)	0.95	(0.83–1.09)	0.99	(0.85–1.15)
Breast cancer	0.97	(0.62–1.50)	0.98	(0.63–1.52)	0.94	(0.58–1.52)

<sup>a</sup> Adjusted for gender (all malignancies)

<sup>b</sup> Adjusted for gender (all malignancies) and OHA class use

<sup>c</sup> Adjusted for gender (all malignancies), OHA class use and duration of diabetes

**Supplementary Table 2.** Risk of all malignancies, breast cancer, and seven other sites for insulin glargine versus other basal insulins: adjusted HR estimated from the three multivariate Cox models with length of follow-up as the time-scale (Source SNIIRAM-PMSI, January 2006 - December 2010)

	Model 1 <sup>a</sup>		Model 2 <sup>b</sup>		Model 3 <sup>c</sup>	
	HR	95% CI	HR	95% CI	HR	95% CI
All malignancies	0.97	(0.88–1.08)	0.98	(0.88–1.08)	1.04	(0.93–1.16)
Breast cancer	1.00	(0.70–1.44)	1.00	(0.69–1.43)	1.07	(0.71–1.61)
Prostate	0.92	(0.65–1.30)	0.90	(0.64–1.28)	1.01	(0.69–1.48)
Colorectal	0.94	(0.70–1.25)	0.94	(0.71–1.26)	0.98	(0.72–1.33)
Liver	0.98	(0.69–1.38)	0.98	(0.69–1.38)	1.07	(0.72–1.59)
Kidney	0.99	(0.51–1.92)	1.00	(0.52–1.94)	1.09	(0.54–2.23)
Bladder	1.13	(0.74–1.71)	1.14	(0.75–1.72)	1.05	(0.67–1.65)
Lung	1.04	(0.76–1.42)	1.04	(0.76–1.42)	1.11	(0.78–1.57)
Head and neck	0.83	(0.47–1.46)	0.84	(0.47–1.47)	0.92	(0.48–1.74)

<sup>a</sup> Adjusted for gender (all malignancies)

<sup>b</sup> Adjusted for gender (all malignancies) and OHA class use

<sup>c</sup> Adjusted for gender (all malignancies), OHA class use and duration of diabetes

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**Supplementary Table 3.** Risk of all malignancies, breast cancer, and seven other sites for glargine versus other basal insulins: adjusted HR estimated from the three multivariate Cox models with age as the time-scale and a 6-month period for the exclusion of cancers following inclusion and for the defined time lag for exposure to insulin glargine (Source SNIIRAM-PMSI, January 2006 - December 2010)

	Model 1 <sup>a</sup>		Model 2 <sup>b</sup>		Model 3 <sup>c</sup>	
	HR	95% CI	HR	95% CI	HR	95% CI
All malignancies	0.95	(0.87–1.04)	0.96	(0.88–1.05)	0.99	(0.90–1.09)
Breast cancer	1.00	(0.72–1.37)	0.99	(0.72–1.37)	1.06	(0.74–1.51)
Prostate	0.90	(0.67–1.20)	0.89	(0.67–1.19)	1.03	(0.74–1.43)
Colorectal	1.14	(0.87–1.47)	1.14	(0.88–1.48)	1.18	(0.89–1.56)
Liver	0.92	(0.69–1.22)	0.94	(0.71–1.25)	0.99	(0.72–1.36)
Kidney	0.91	(0.54–1.52)	0.90	(0.54–1.50)	0.89	(0.51–1.56)
Bladder	0.96	(0.68–1.35)	0.97	(0.69–1.37)	0.90	(0.62–1.31)
Lung	0.98	(0.75–1.27)	0.98	(0.75–1.27)	0.95	(0.71–1.27)
Head and neck	0.95	(0.58–1.54)	0.97	(0.60–1.59)	1.00	(0.58–1.74)

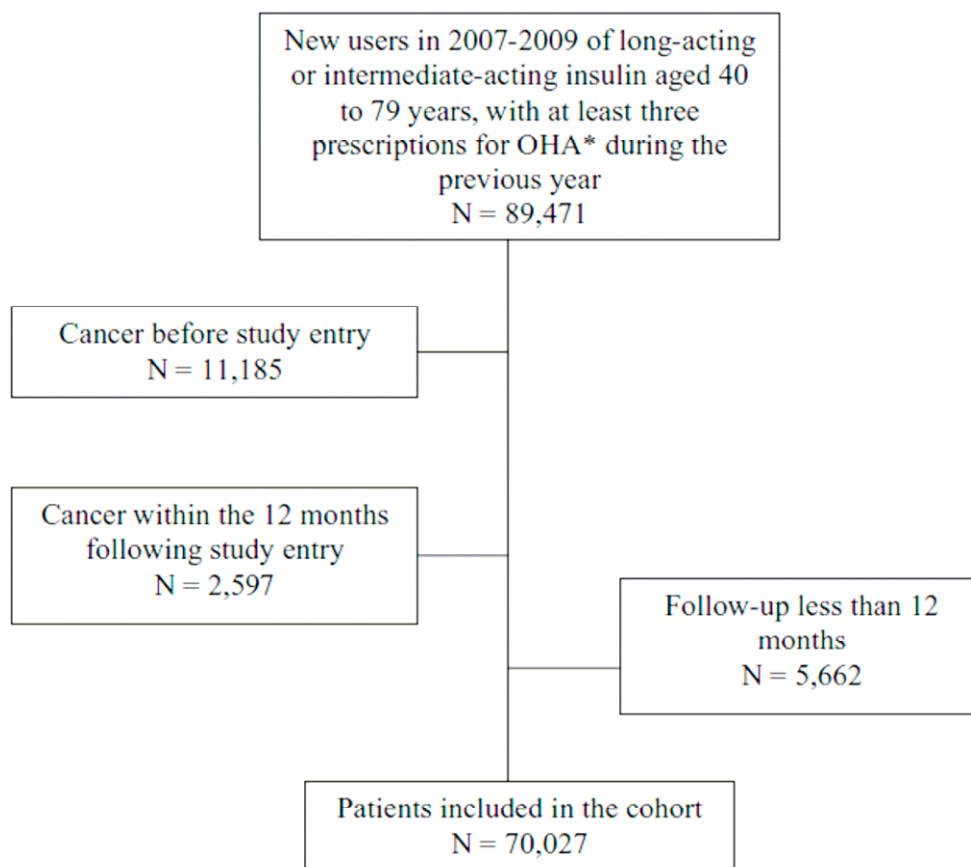
<sup>a</sup> Adjusted for gender (all malignancies)

<sup>b</sup> Adjusted for gender (all malignancies) and OHA class use

<sup>c</sup> Adjusted for gender (all malignancies), OHA class use and duration of diabetes

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**Supplementary Figure 1.** Flow diagram of the study population



\* OHA: other hypoglycaemic agent