

# ABCD Nationwide Semaglutide Audit

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ABCD Spring Meeting, Loughborough  
May 17, 2019

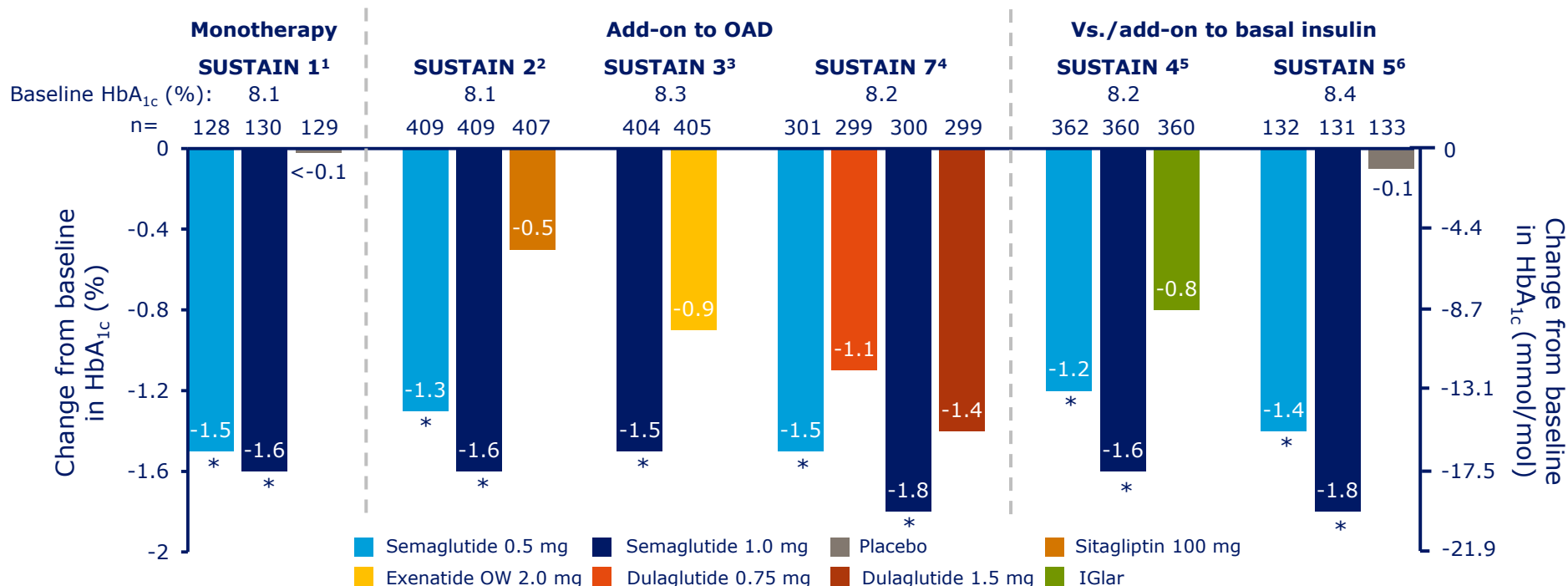
# Previous ABCD GLP1 RA Nationwide Audits

- Combined trials v real world

	Clinical trials combined	Real clinical use in UK (ABCD audit)
	Baseline HbA <sub>1c</sub> (%)	
Exenatide	8.37	9.47
Liraglutide	8.5	9.40
	Baseline BMI (kg/m <sup>2</sup> )	
Exenatide	32.72	39.8
Liraglutide	31	39.0

# HbA<sub>1c</sub> changes in SUSTAIN 1–5 and 7

## CHANGE FROM BASELINE IN HbA<sub>1c</sub>

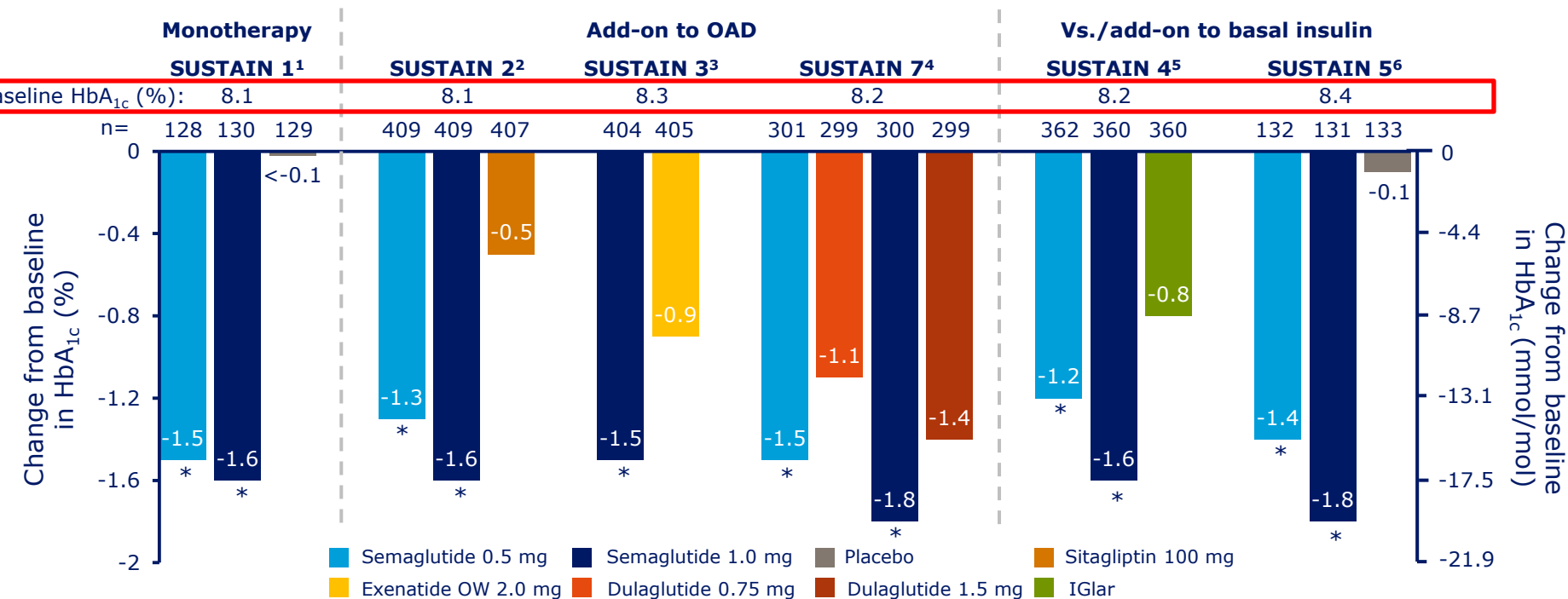


\* $p < 0.0001$  vs. comparator. IGLar, insulin glargine; OAD, oral antidiabetic drug; OW, once weekly

1. Sorli *et al. Lancet Diabetes Endocrinol* 2017;5:251–60; 2. Ahrén *et al. Lancet Diabetes Endocrinol* 2017;5:341–54; 3. Ahmann *et al. Diabetes Care* 2018;41:258–66; 4. Pratley *et al. Lancet Diabetes Endocrinol* 2018;6:275–86; 5. Aroda *et al. Lancet Diabetes Endocrinol* 2017;5:355–66; 6. Rodbard *et al. J Clin Endocrinol Metab* 2018;103:2291–301

# HbA<sub>1c</sub> changes in SUSTAIN 1–5 and 7

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# ABCD liraglutide audit – the higher the baseline HbA1c the bigger the fall

**Table 3** Median HbA<sub>1c</sub> change, proportion of patients achieving HbA<sub>1c</sub> reduction of  $\geq 1\%$  and proportion of patients achieving target HbA<sub>1c</sub> of 7% among patients treated with liraglutide in the ABCD audit; results stratified by baseline HbA<sub>1c</sub> and use of insulin.

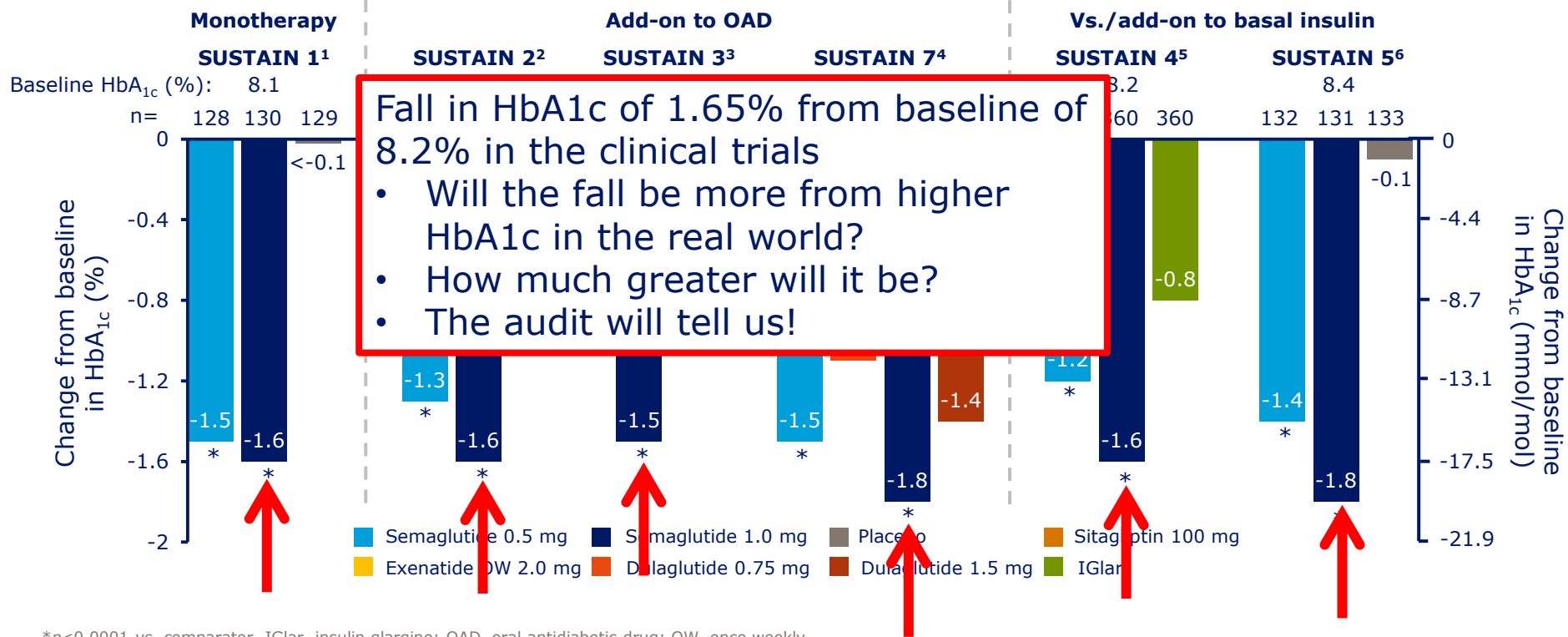
	Baseline HbA <sub>1c</sub> (%)							P value
	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-11.9	12.0-12.9	13.0-13.9	
<b>Non-insulin-treated</b>								
n	91	158	161	106	60	35	11	
Median HbA <sub>1c</sub> change, (%)	-0.7 [-1.1,-0.1]	-1.1 [-1.7,-0.5]	-1.4 [-2.2,-0.4]	-1.9 [-3.2,-0.9]	-2.6 [-3.9,-1.6]	-3.1 [-4.5,-1.3]	-2.0 [-3.4,-0.3]	< 0.001
Proportion achieving $\geq 1\%$ reduction, n(%)	30 (33.0)	95 (60.1)	103 (64.0)	77 (72.6)	51 (85.0)	28 (80.0)	8 (72.7)	< 0.001
Proportion achieving HbA <sub>1c</sub> of 7%, n(%)	50 (55.0)	58 (36.7)	35 (21.7)	25 (23.6)	11 (18.3)	4 (11.4)	1 (9.1)	< 0.001
<b>Insulin-treated</b>								
n	73	124	156	98	61	35	10	
Median HbA <sub>1c</sub> change, (%)	-0.2 [-0.7,0.4]	-0.5 [-1.2,0.3]	-1.1 [-2.0,-0.2]	-1.3 [-2.6,-0.5]	-1.3 [-2.5,-0.5]	-1.8 [-3.4,-0.6]	-3.6 [-4.7,-1.6]	< 0.001
Proportion achieving $\geq 1\%$ reduction, n(%)	11 (15.1)	41 (33.1)	82 (52.6)	61 (62.2)	36 (59.0)	24 (68.6)	9 (90.0)	< 0.001
Proportion achieving HbA <sub>1c</sub> of 7%, n(%)	28 (38.4)	18 (14.5)	21 (13.5)	8 (8.2)	3 (4.9)	1 (2.9)	2 (20.0)	< 0.001

Median HbA<sub>1c</sub> change results are shown as median [interquartile range]

Results show patients are more likely to achieve  $\geq 1\%$  HbA<sub>1c</sub> reduction when baseline HbA<sub>1c</sub> is higher and conversely more likely to achieve target HbA<sub>1c</sub> of 7% if baseline HbA<sub>1c</sub> is lower.

# HbA<sub>1c</sub> changes in SUSTAIN 1–5 and 7

## CHANGE FROM BASELINE IN HbA<sub>1c</sub>



\**p*<0.0001 vs. comparator. IGlar, insulin glargine; OAD, oral antidiabetic drug; OW, once weekly

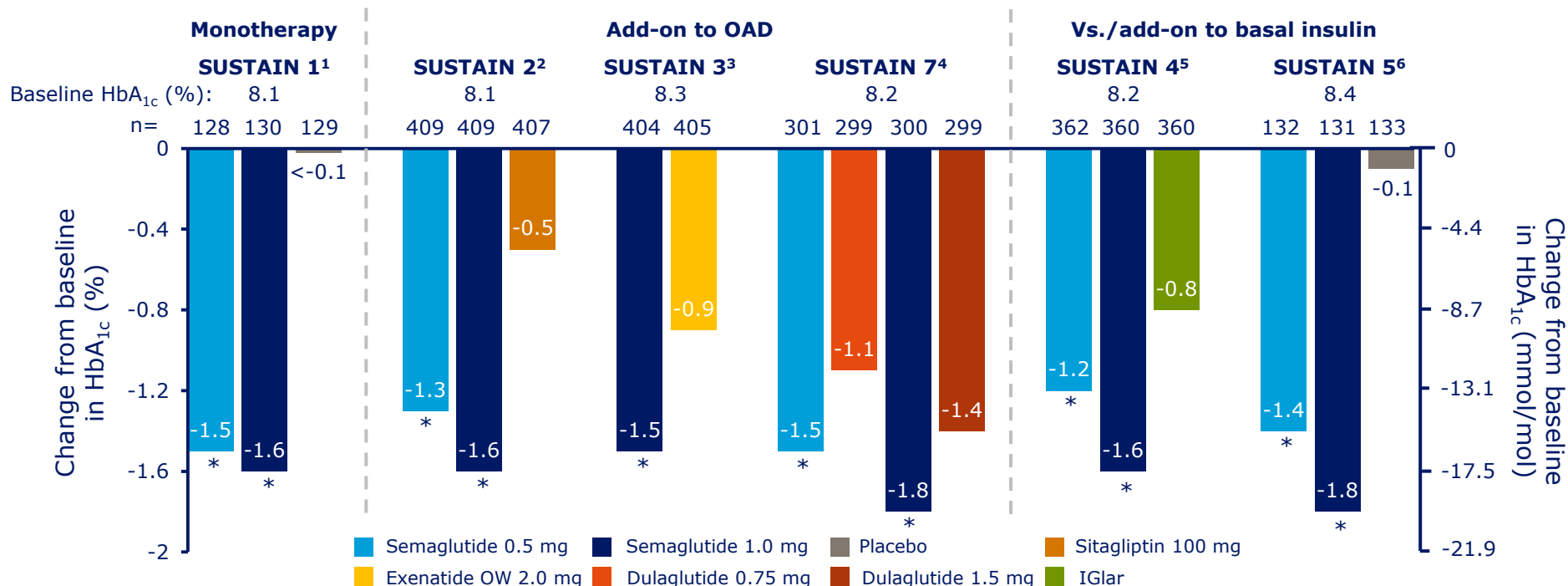
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# Switching to semaglutide from another GLP-1RA



# HbA<sub>1c</sub> changes in SUSTAIN 1–5 and 7

## CHANGE FROM BASELINE IN HbA<sub>1c</sub>



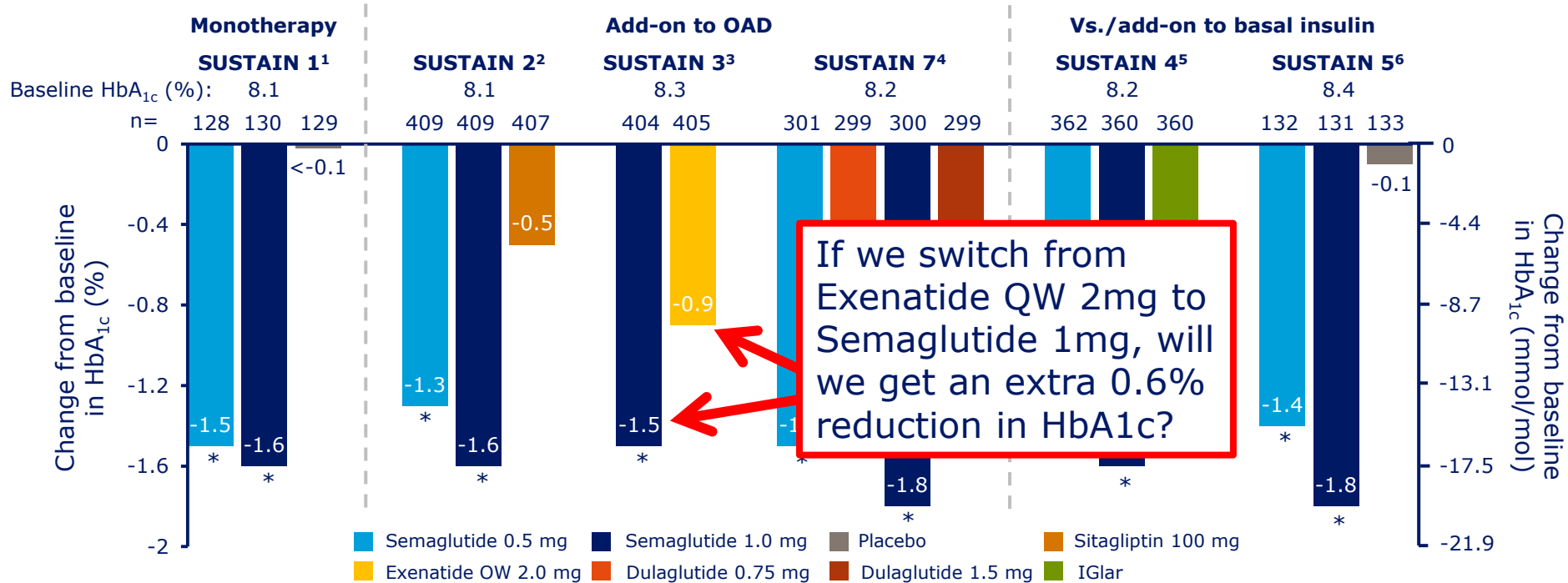
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# HbA<sub>1c</sub> changes in SUSTAIN 1–5 and 7

## CHANGE FROM BASELINE IN HbA<sub>1c</sub>

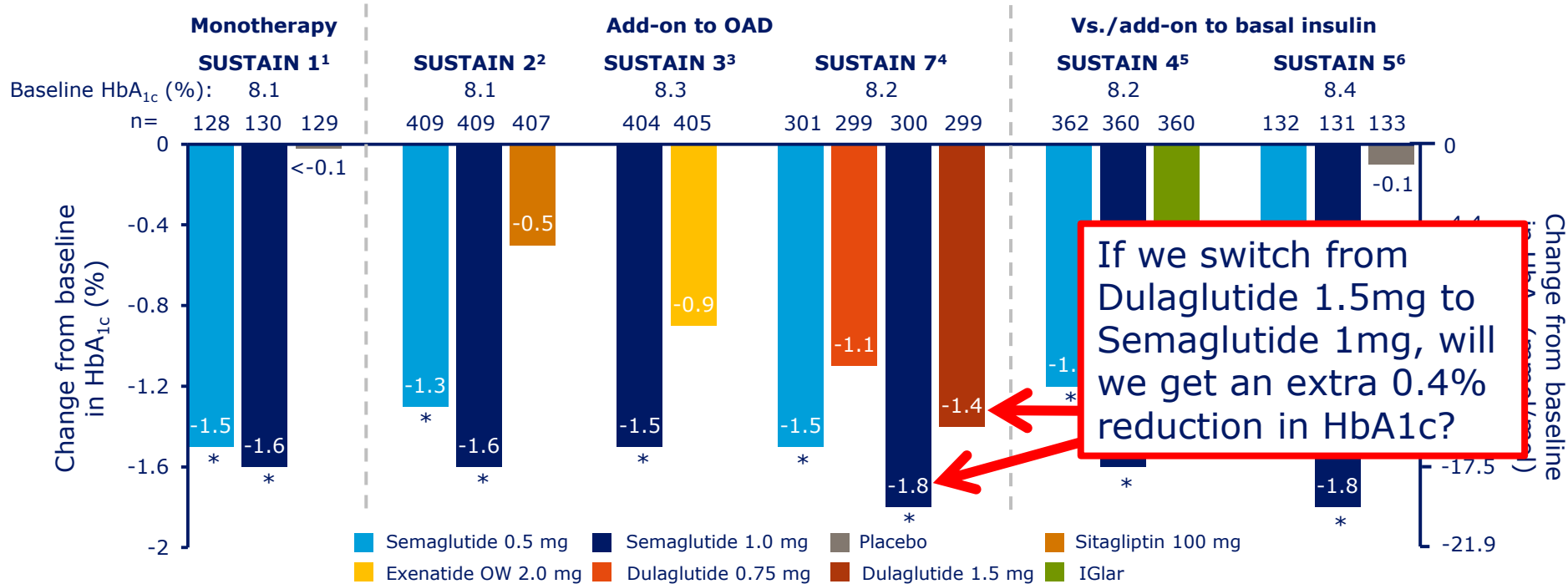


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CHANGE FROM BASELINE IN HbA<sub>1c</sub>



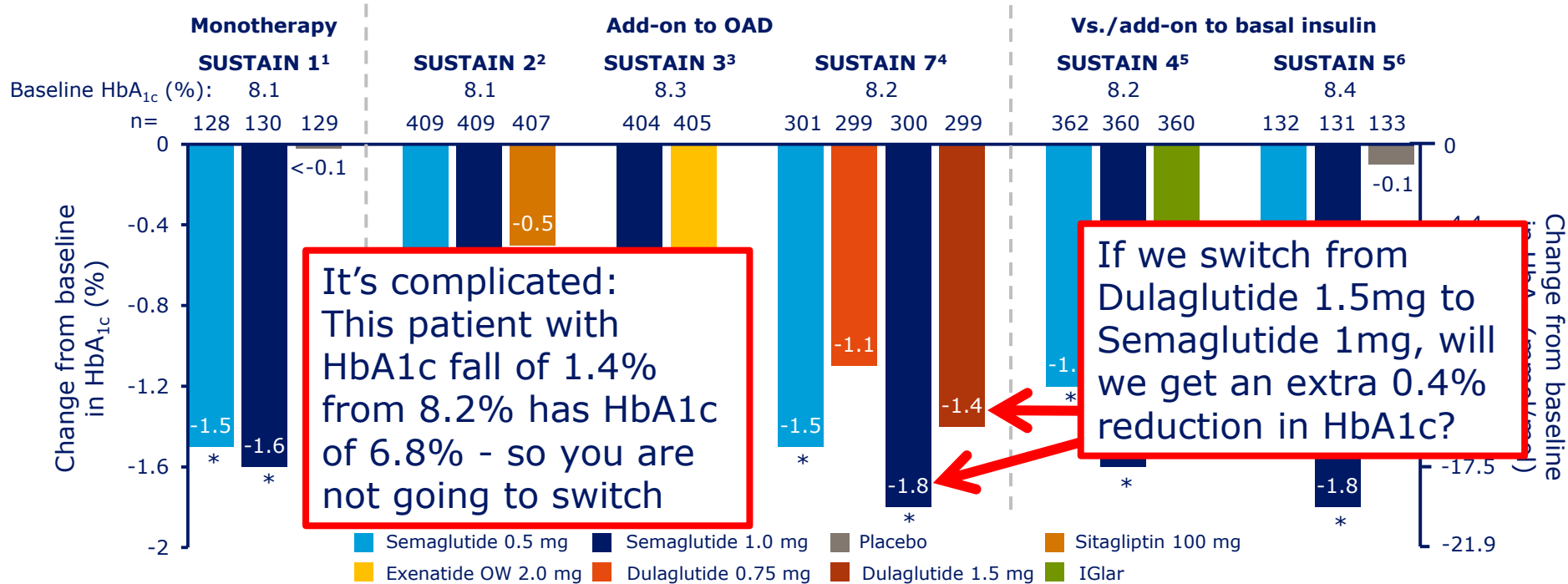
If we switch from Dulaglutide 1.5mg to Semaglutide 1mg, will we get an extra 0.4% reduction in HbA<sub>1c</sub>?

\*p<0.0001 vs. comparator. IGLar, insulin glargine; OAD, oral antidiabetic drug; OW, once weekly

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# HbA<sub>1c</sub> changes in SUSTAIN 1-5 and 7

CHANGE FROM BASELINE IN HbA<sub>1c</sub>



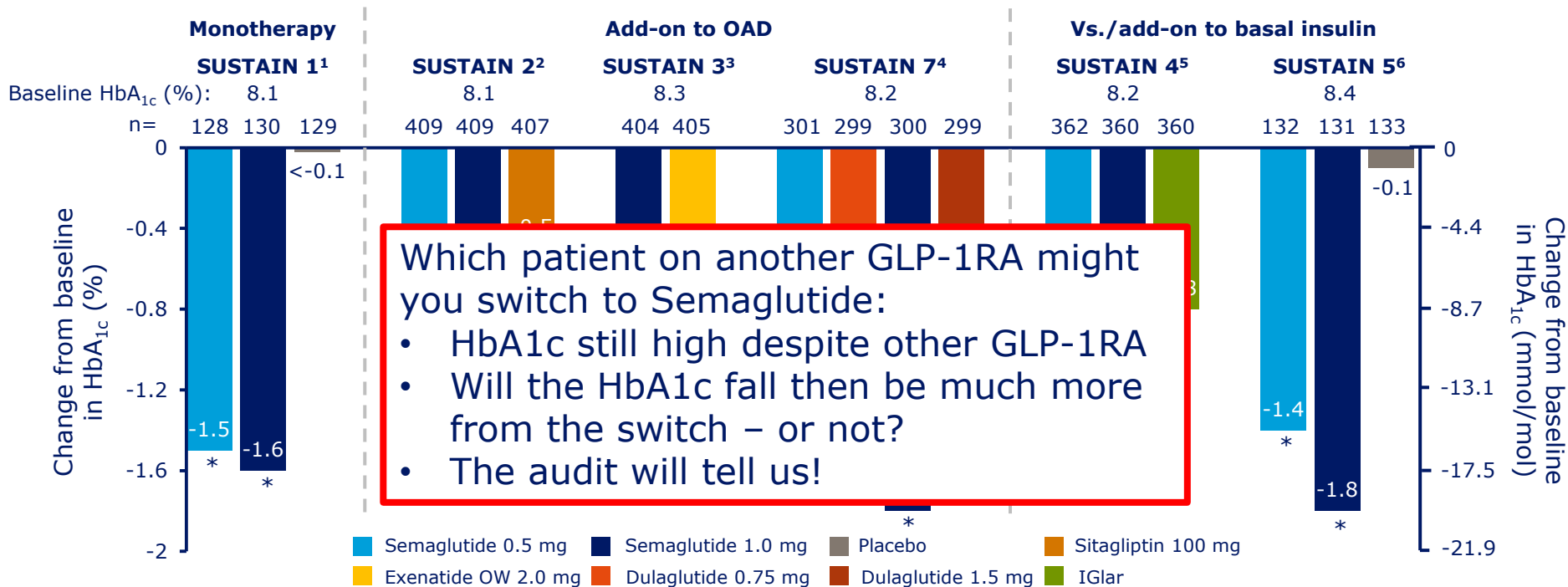
It's complicated: This patient with HbA<sub>1c</sub> fall of 1.4% from 8.2% has HbA<sub>1c</sub> of 6.8% - so you are not going to switch

If we switch from Dulaglutide 1.5mg to Semaglutide 1mg, will we get an extra 0.4% reduction in HbA<sub>1c</sub>?

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# HbA<sub>1c</sub> changes in SUSTAIN 1–5 and 7

## CHANGE FROM BASELINE IN HbA<sub>1c</sub>



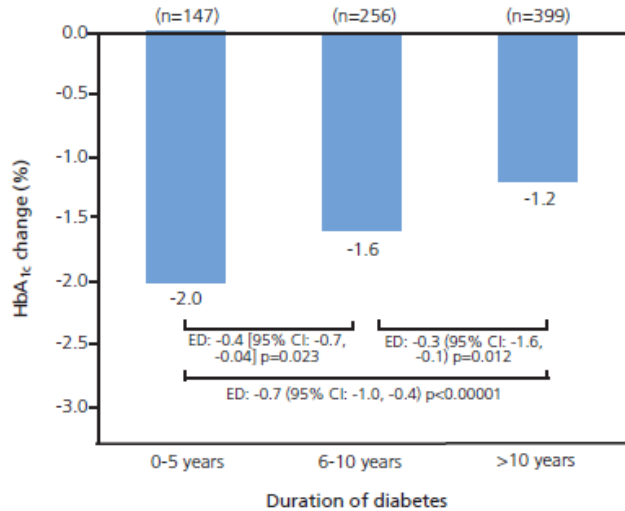
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# Duration of diabetes

# ABCD liraglutide audit - HbA<sub>1c</sub> changes according to duration of diabetes

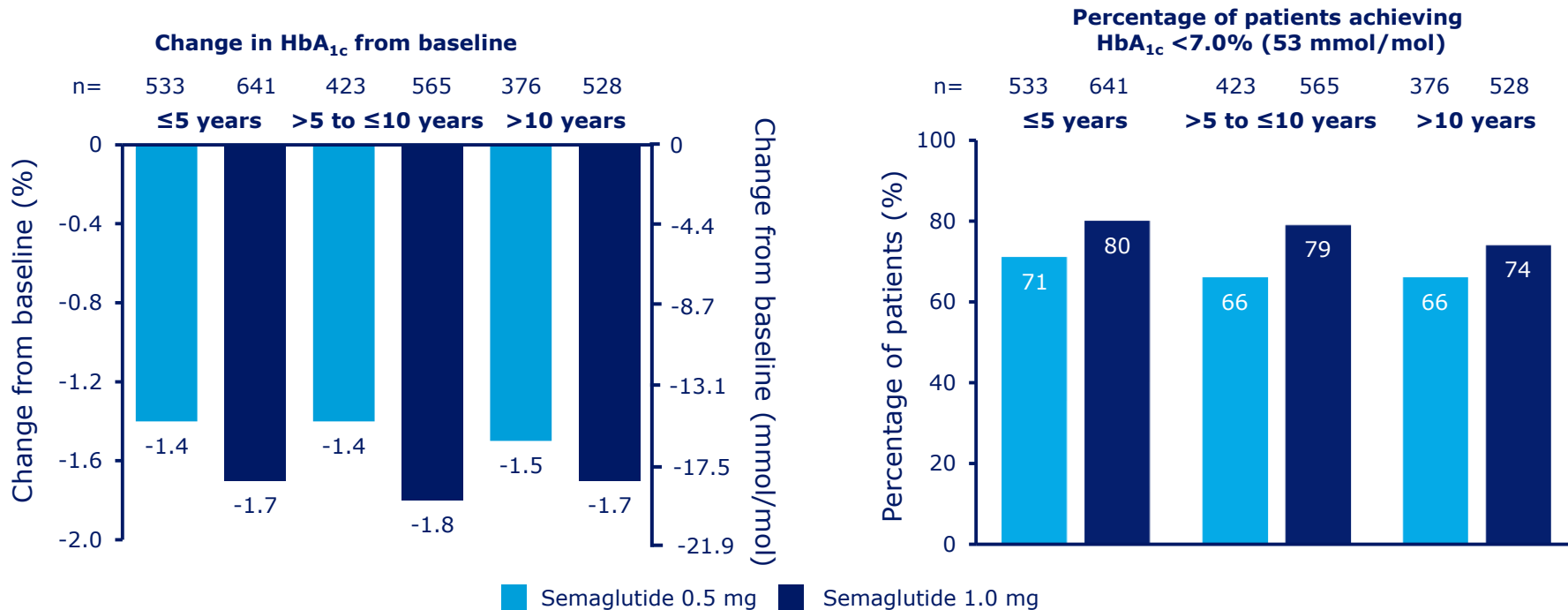
**Figure 2.** Mean HbA<sub>1c</sub> changes after 26 weeks of liraglutide treatment, stratified according to duration of diabetes



Columns show adjusted mean changes analysed by ANCOVA with baseline HbA<sub>1c</sub> as a covariate. ED: estimated difference; CI: confidence interval

# Differences in glycaemic control by baseline diabetes duration

SUSTAIN 1–5 and 7

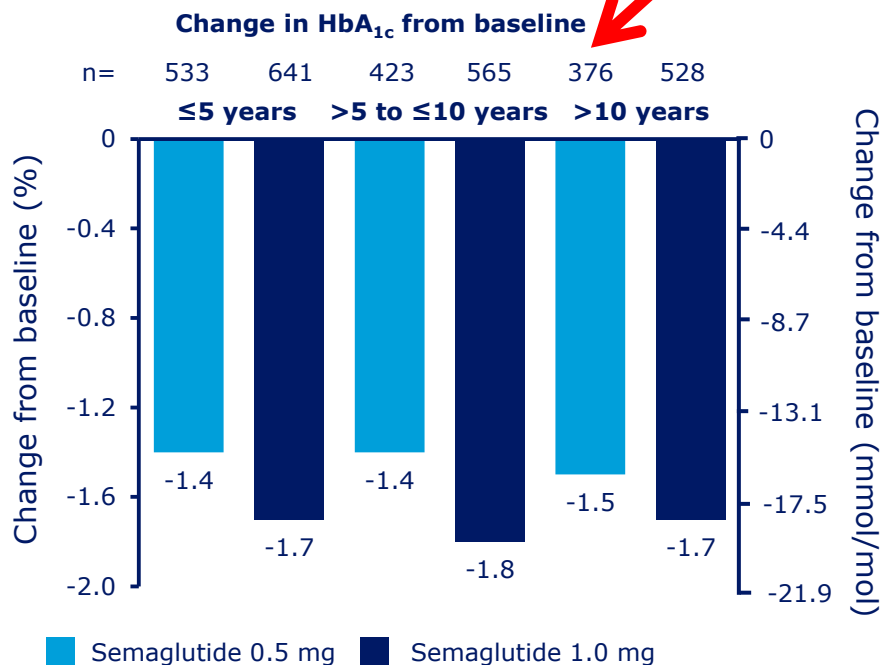


# Differences in glycaemic control by baseline diabetes duration

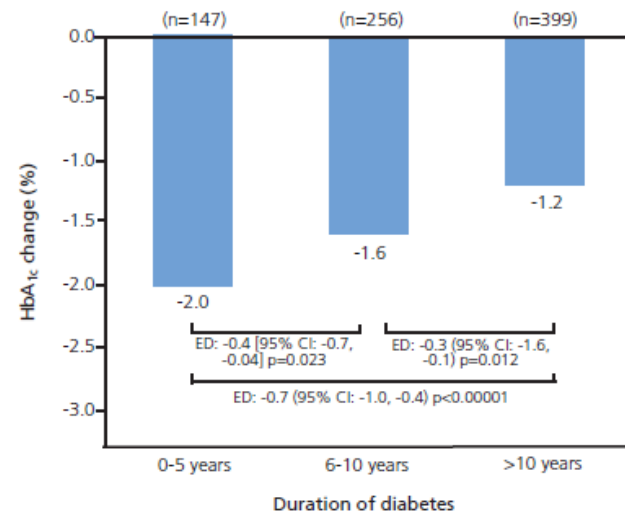
SUSTAIN 1-5 and

Semaglutide in clinical trials

Liraglutide in ABCD audit



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Liraglutide in ABCD audit

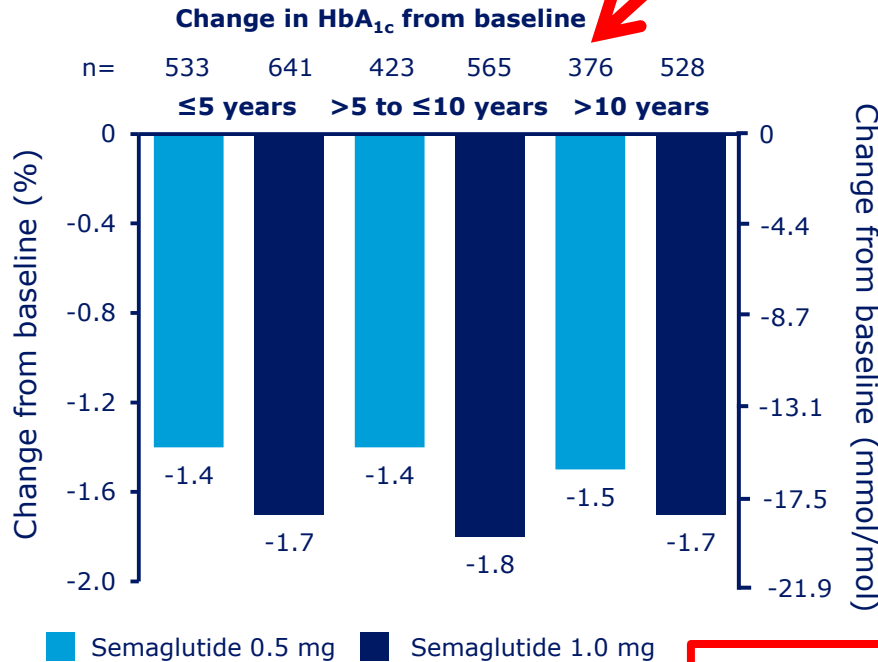
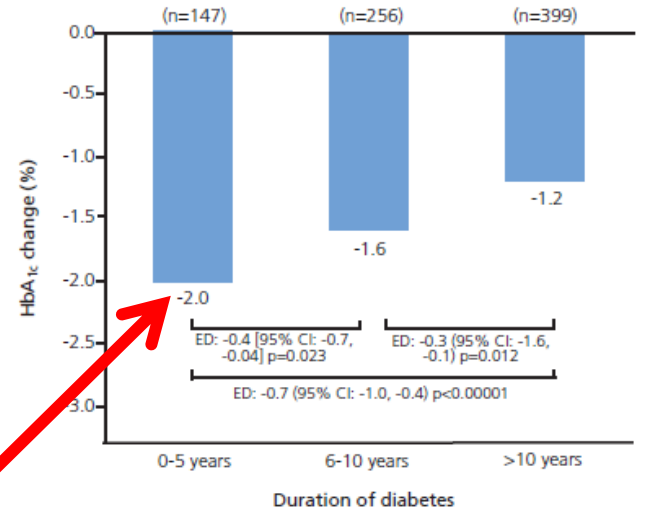


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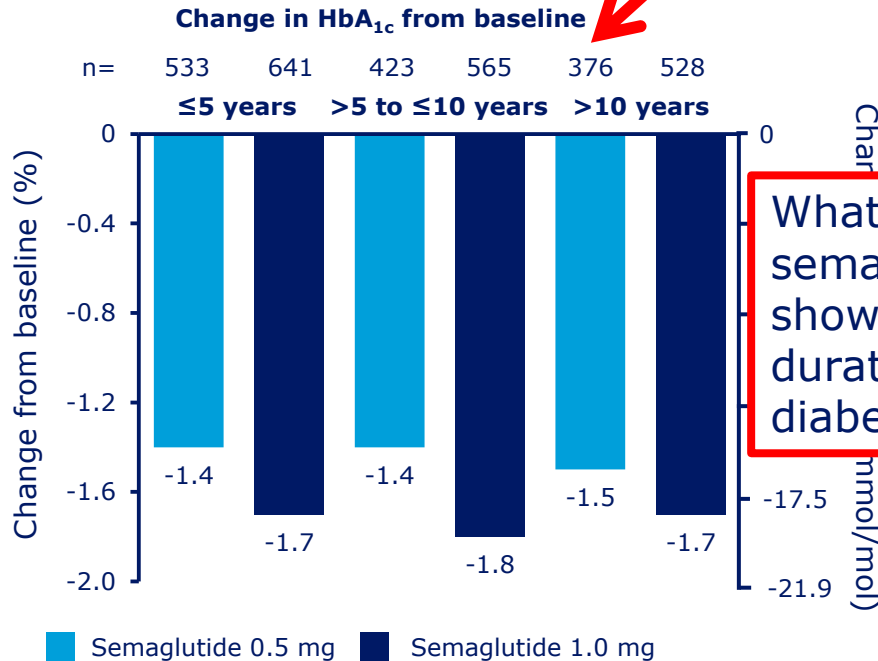
Fall from much higher baseline in audit compared to trial

# Differences in glycaemic control by baseline diabetes duration

SUSTAIN 1-5 and ABCD

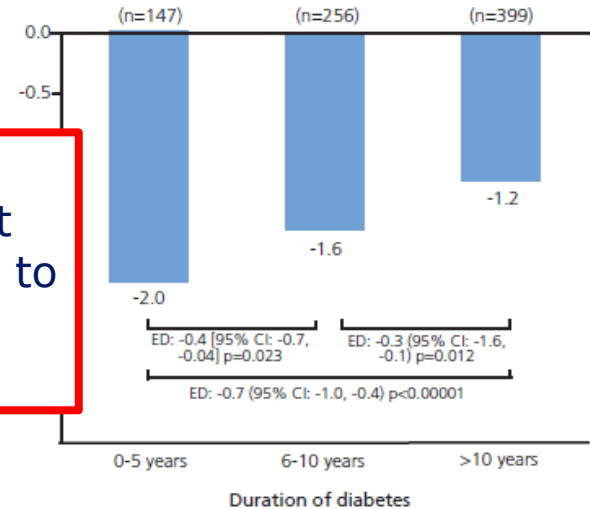
Semaglutide in clinical trials

Liraglutide in ABCD audit



What will ABCD semaglutide audit show with regard to duration of diabetes?

Figure 2. Mean HbA<sub>1c</sub> changes after 26 weeks of liraglutide treatment, stratified according to duration of diabetes

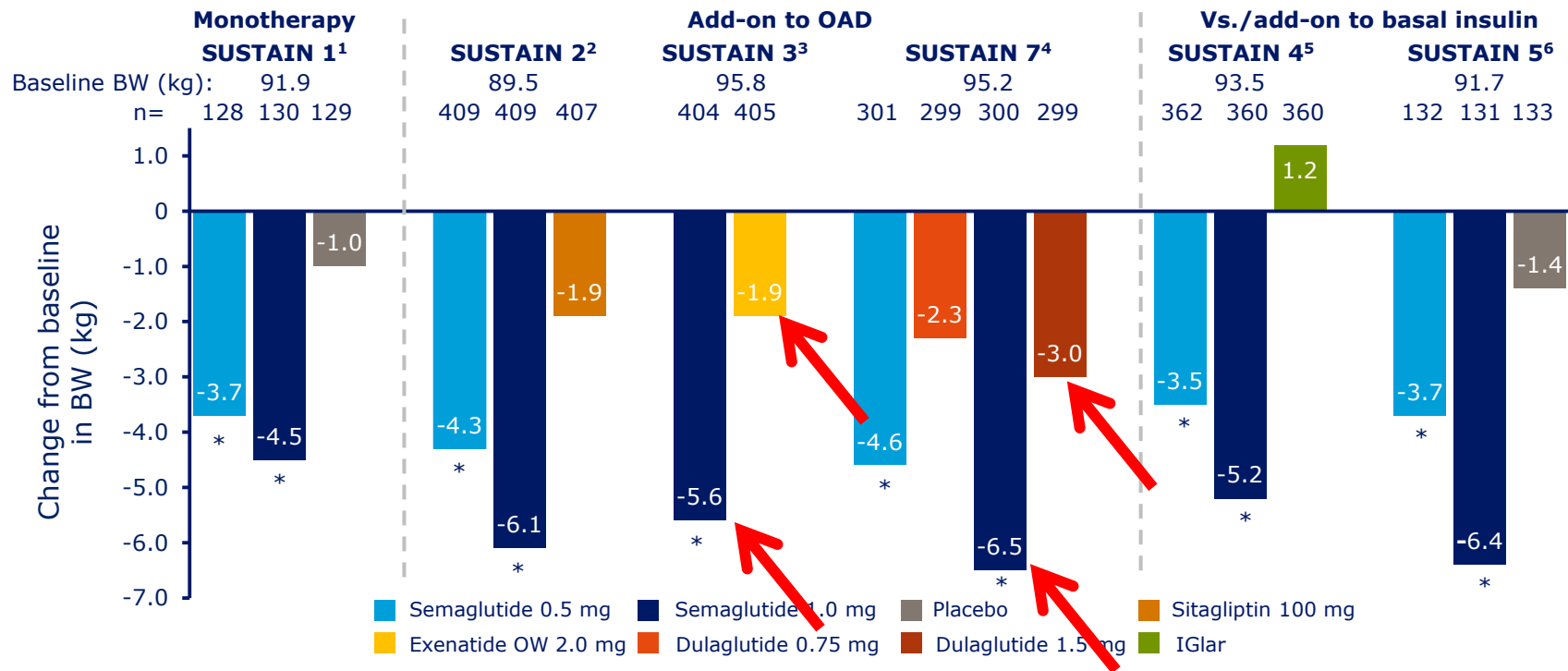


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# What about weight?

# Body weight in SUSTAIN 1–5 and 7

## CHANGE FROM BASELINE IN BODY WEIGHT

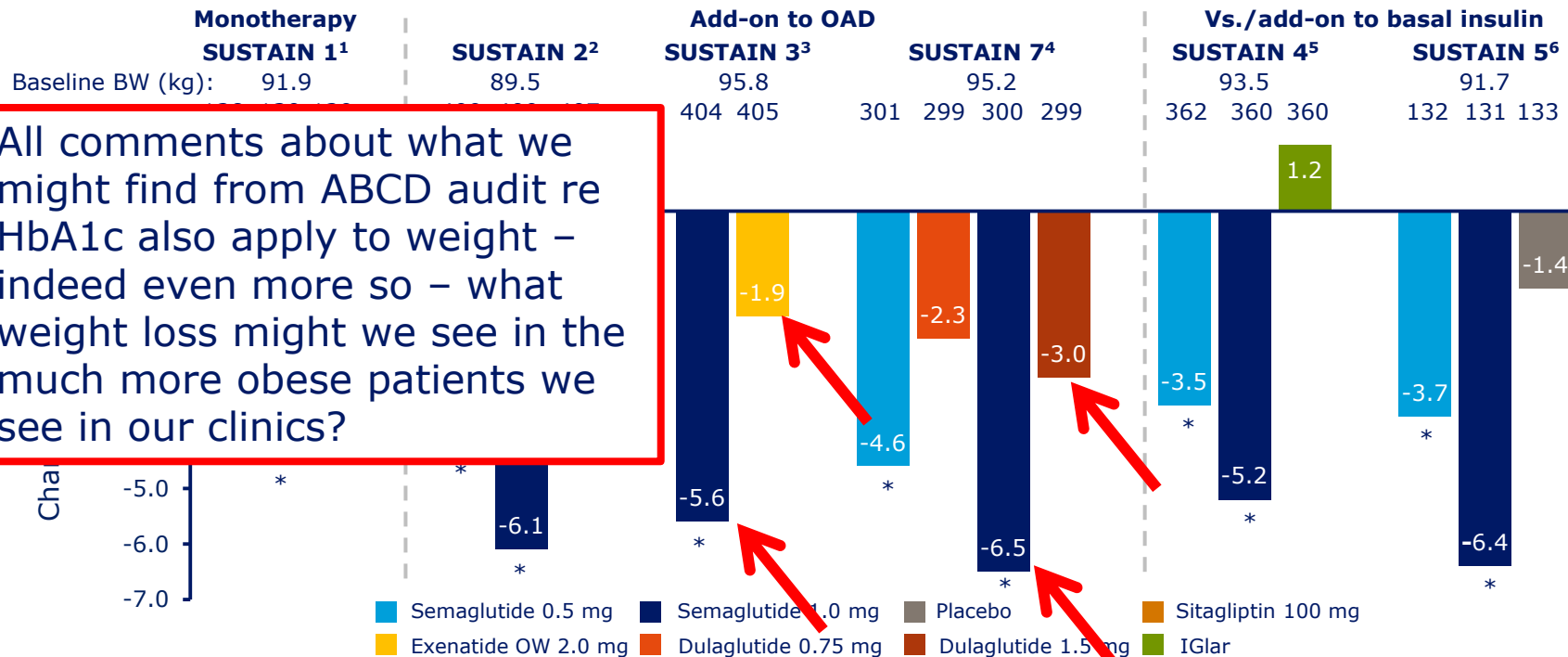


\* $p < 0.0001$  vs. comparator. Change from baseline in BW was a secondary endpoint. BW, body weight; IGLar, insulin glargine; OAD, oral antidiabetic drug; OW, once weekly

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# Body weight in SUSTAIN 1–5 and 7

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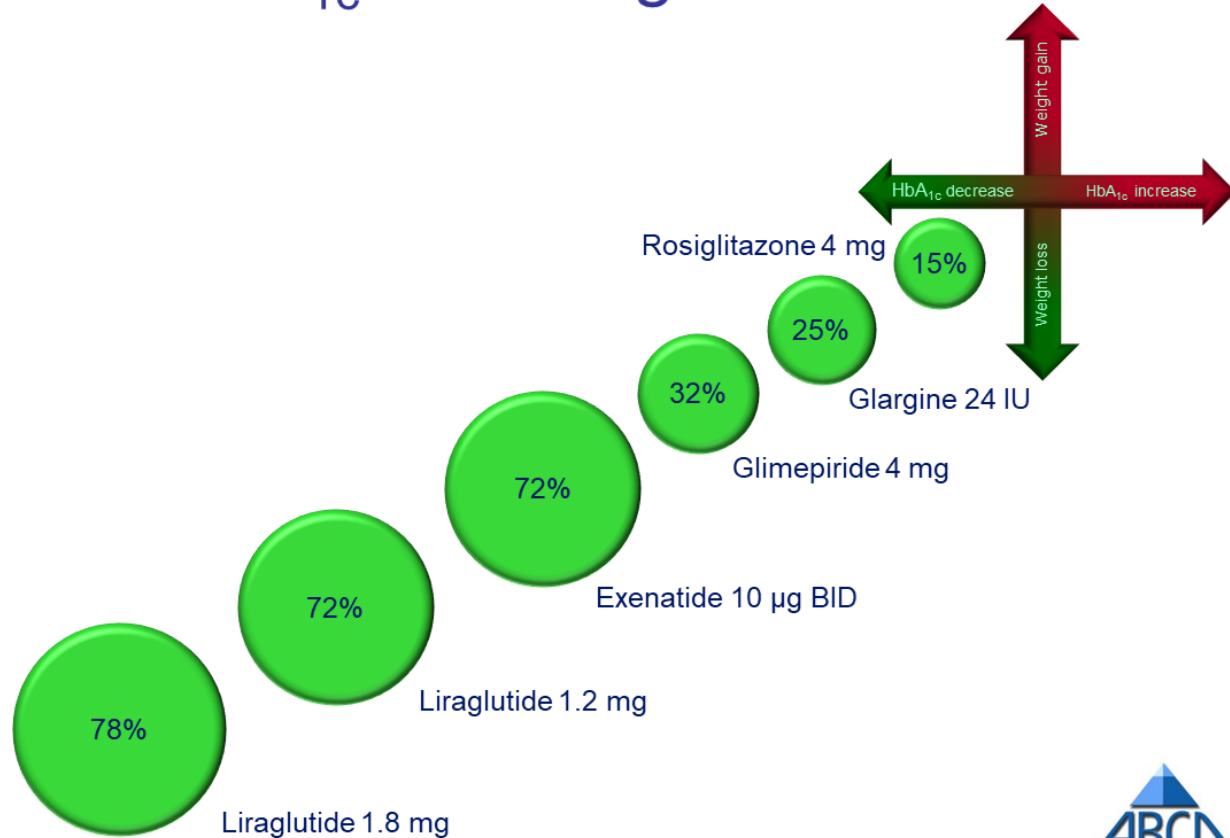


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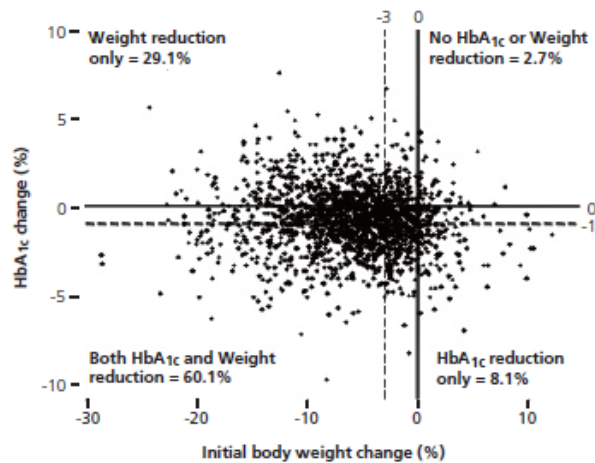
# Losing weight AND HbA1c

# Percentage of subjects achieving fall in HbA<sub>1c</sub> and weight loss



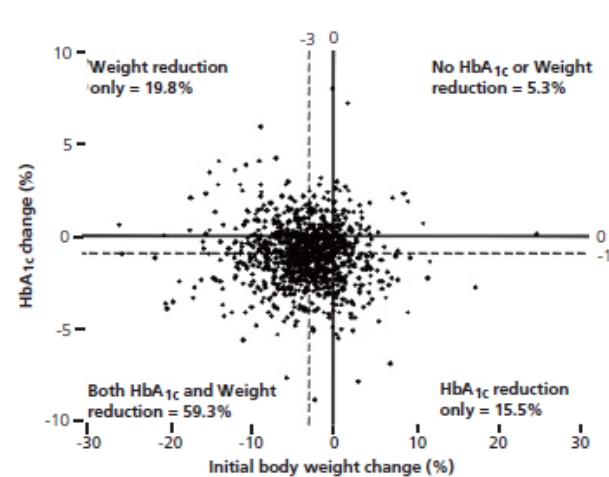
# Patients improving weight AND HbA1c in previous audits

**Figure 5.** Scatterplot of HbA<sub>1c</sub> change and initial body weight change at 20-32 weeks of 1882 patients treated with **exenatide**



Dotted line indicates criteria of  $\geq 1\%$  HbA<sub>1c</sub> reduction and  $\geq 3\%$  IBW reduction require by NICE for continuation of therapy – while 60.1% of patients achieved both HbA<sub>1c</sub> and weight reduction, only 28.6% achieved this to the criteria level set by NICE.

**Figure 6.** Scatterplot of HbA<sub>1c</sub> change and initial body weight change at 20-32 weeks of 1023 patients treated with **liraglutide**



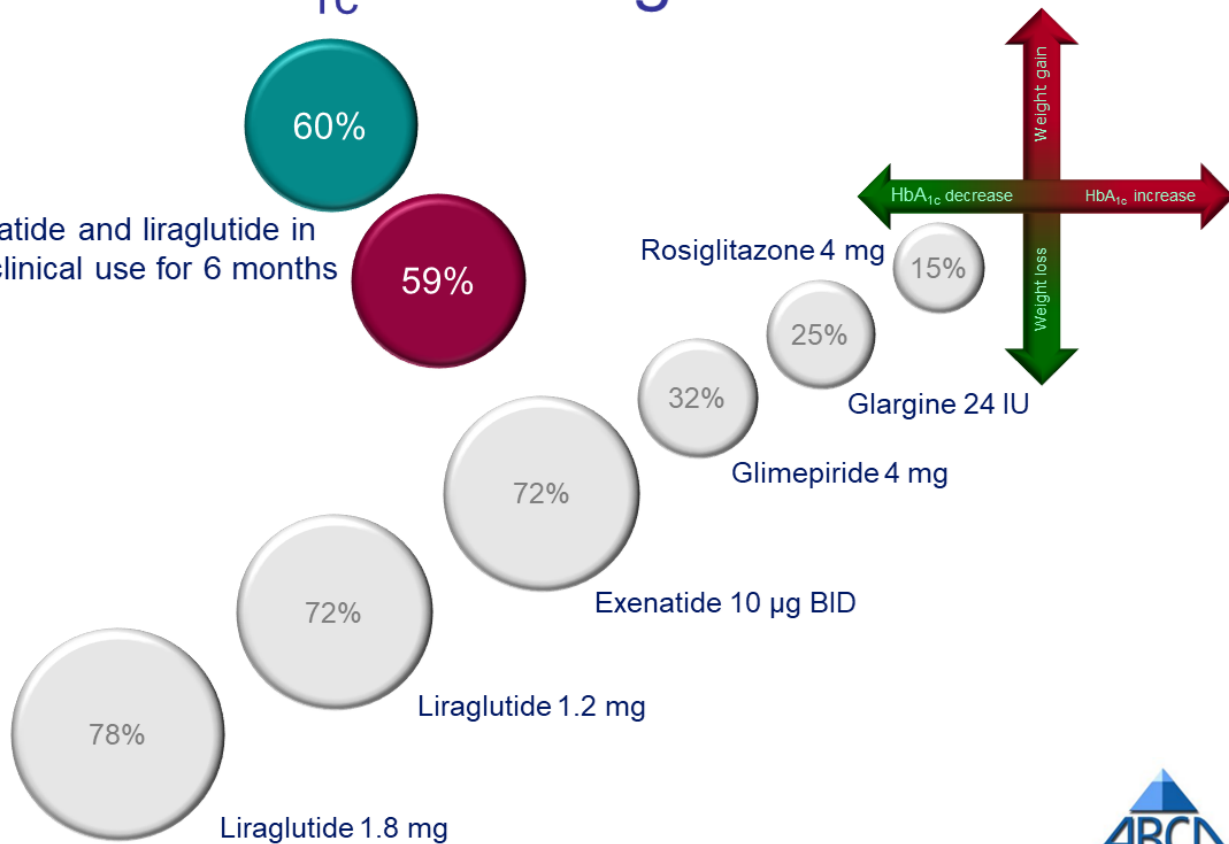
Dotted line indicates criteria of  $\geq 1\%$  HbA<sub>1c</sub> reduction and  $\geq 3\%$  IBW reduction require by NICE for continuation of therapy – while 59.3% of patients achieved both HbA<sub>1c</sub> and weight reduction, only 25.0% achieved this to the criteria level set by NICE.



# Percentage of subjects achieving fall in HbA<sub>1c</sub> and weight loss

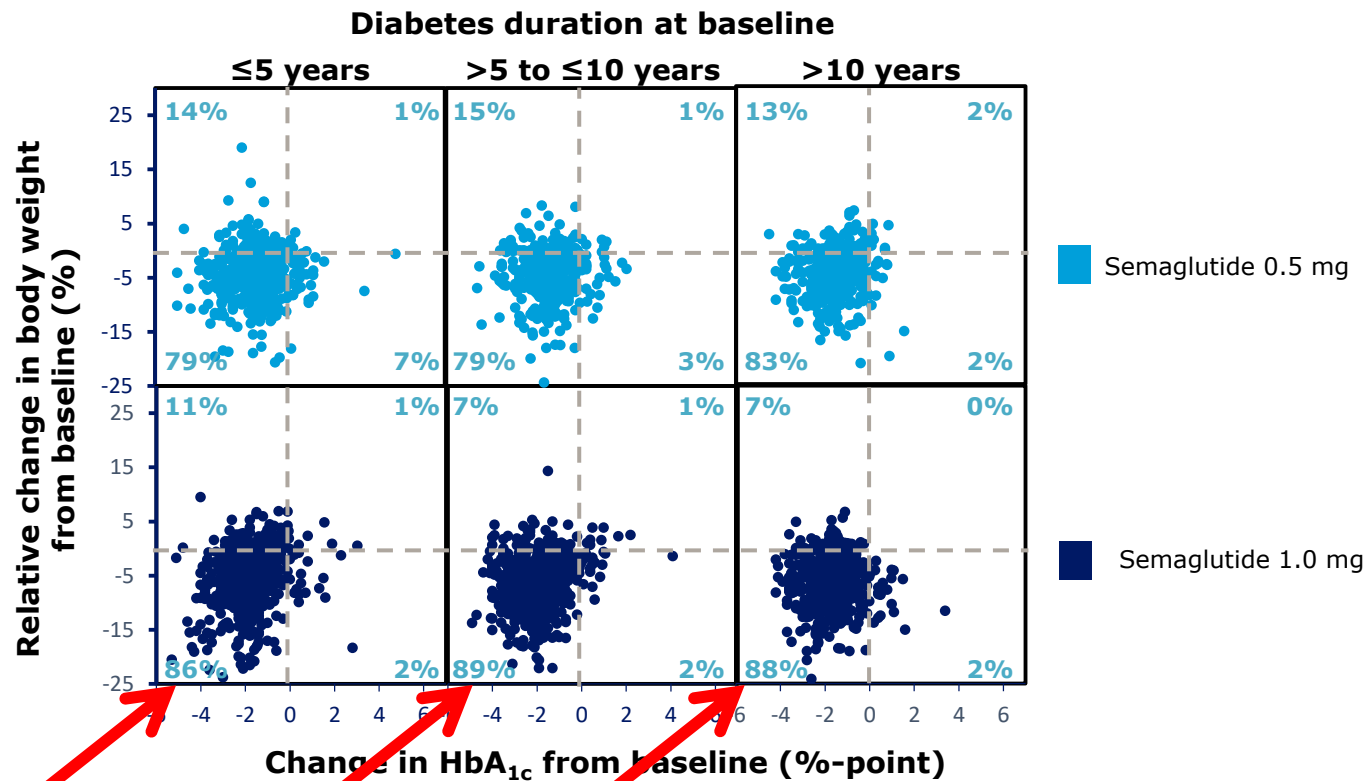


Exenatide and liraglutide in real clinical use for 6 months



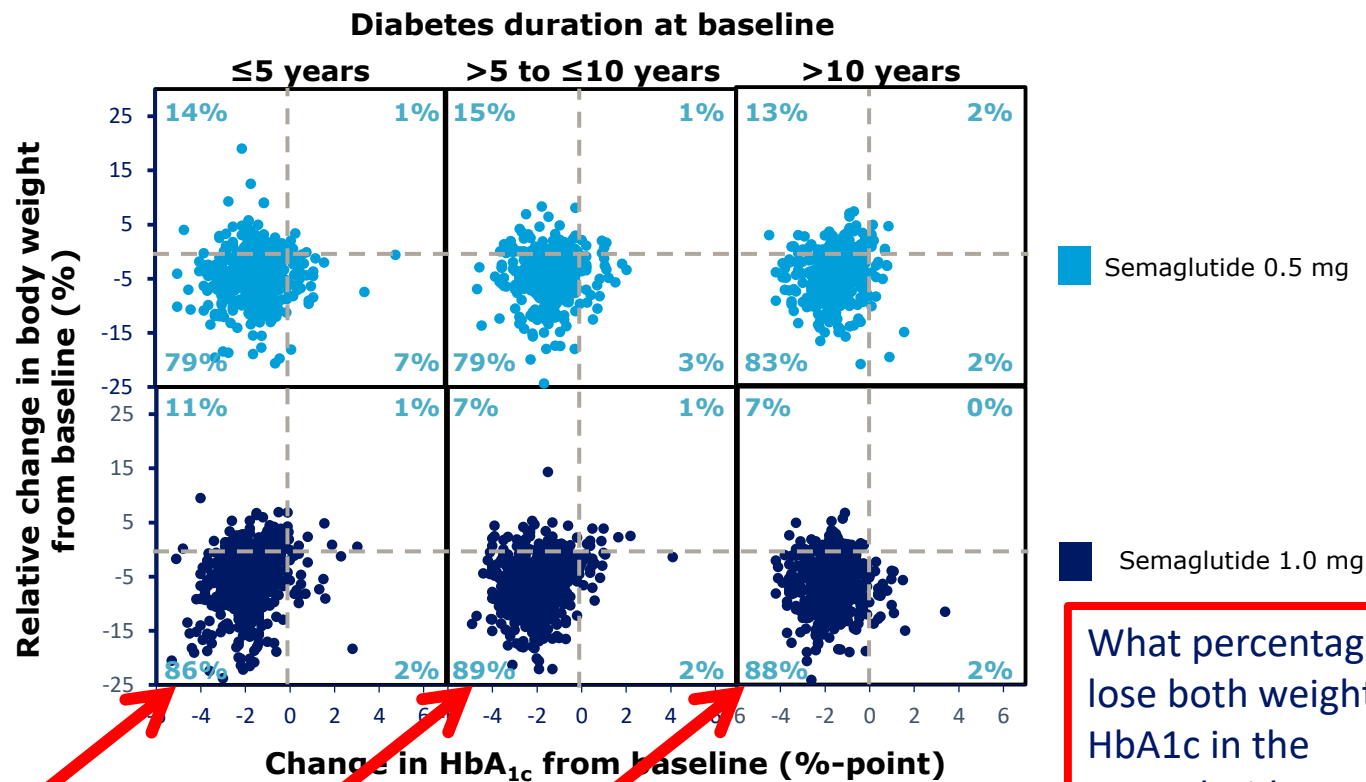
Changes in HbA<sub>1c</sub> vs body weight by baseline

## diabetes duration



Changes in HbA<sub>1c</sub> vs body weight by baseline

## diabetes duration



What percentage will lose both weight and HbA1c in the semaglutide audit?

# ABCD Nationwide Semaglutide Audit



- As you start to use semaglutide please enter **ALL** your patients into the nationwide audit
- The audit tool allows you easily to analyse your own data – good audit exercise for SpR, CMT or medical student
- All contributors listed in publications – top contributors co-authors

[http://www.diabetologists-abcd.org.uk/GLP1\\_Audits/Semaglutide\\_Audit.htm](http://www.diabetologists-abcd.org.uk/GLP1_Audits/Semaglutide_Audit.htm)