

# **HbA1c, weight, body mass index (BMI) and systolic blood pressure changes in the Association of British Clinical Diabetologists (ABCD) nationwide dapagliflozin audit**

**6<sup>th</sup> Nov 2015 – ABCD Autumn Meeting**

**Mahender Yadagiri**

ABCD Research Fellow

ST5 Diab & Endo

**P Sen Gupta, M L Cull, R Peter, P De, A Robinson, KA Adamson, REJ Ryder**  
on behalf of the ABCD nationwide dapagliflozin  
audit contributors

# Background: ABCD Nationwide Dapagliflozin Audit

- Launched in October 2014
- Ongoing

Data on :

- Demographics
- Observations
- Metabolic profile
- Side effects
- Medication changes

# Audit Overview(n=943)

Data Input	Oct 2014 – Oct 2015
Centres	44
Contributors	129
Number of Patients	943
Age(years)	56.7±10.4
Sex[Males(%)]	55.9%
Duration of Diabetes (years)*	11.4(6-16)
Baseline HbA1c (mmol/mol)	80.2±16.1
Baseline HbA1c(%)	9.5±1.5
BMI(Kg/m <sup>2</sup> )	37.0±13.3
Baseline Weight(kg)	103.3±22.7
Duration of follow up(months)*	6.4(0-12.3)

Vs Combined Clinical Trials - Dapagliflozin

7.96

32.16

Reported as mean±SD or median(IQR)\*

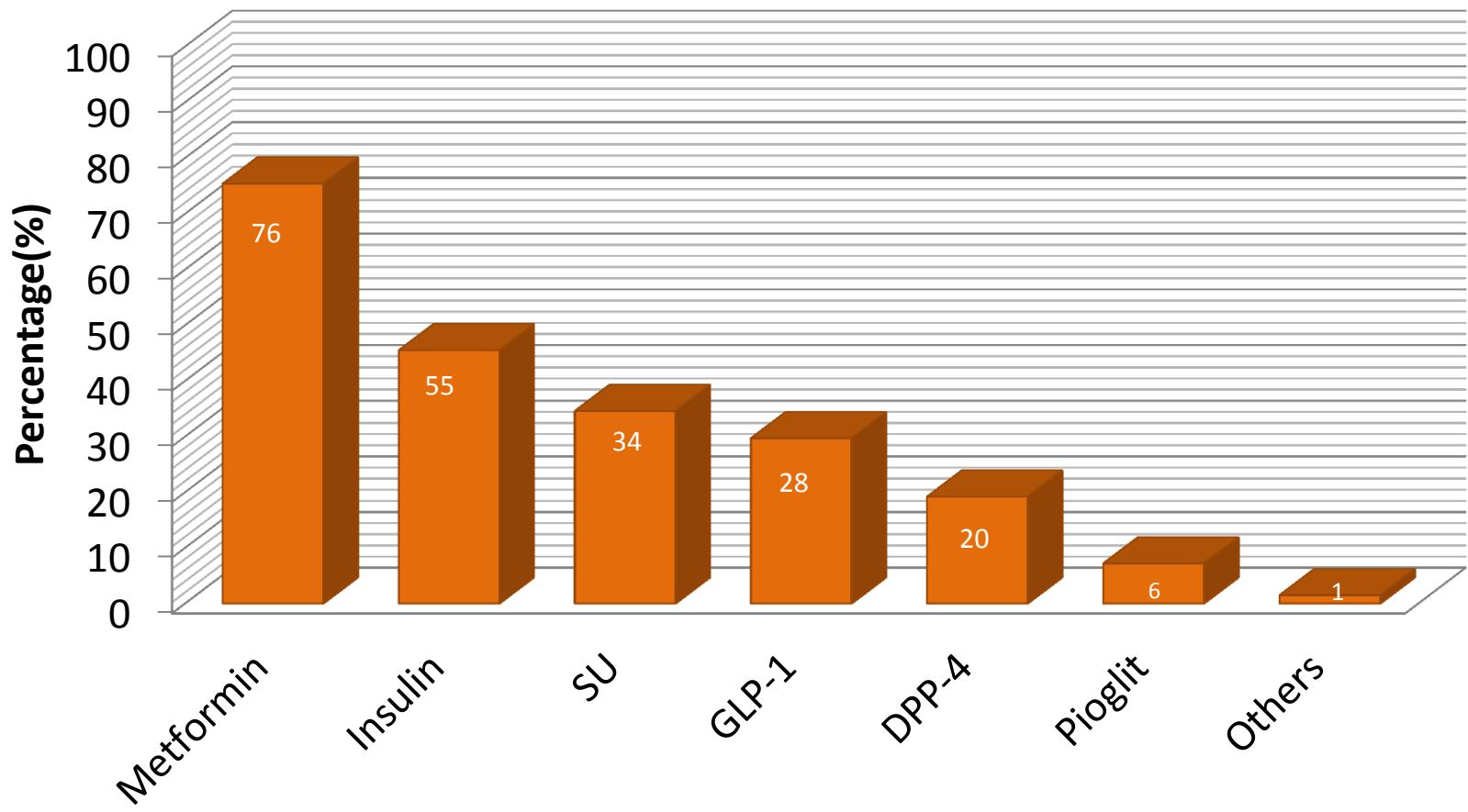
# Audit Overview(n=943)

Data Input	Oct 2014 – Oct 2015	
Centres	44	
Contributors	129	
Number of Patients	943	
Age(years)	56.7±10.4	
Sex[Males(%)]	55.9%	
Duration of Diabetes (years)*	11.4(6-16)	
Baseline HbA1c (mmol/mol)	80.2±16.1	
Baseline HbA1c(%)	9.5±1.5	7.96
BMI(Kg/m <sup>2</sup> )	37.0±13.3	32.16
Baseline Weight(kg)	103.3±22.7	
Duration of follow up(months)*	6.4(0-12.3)	

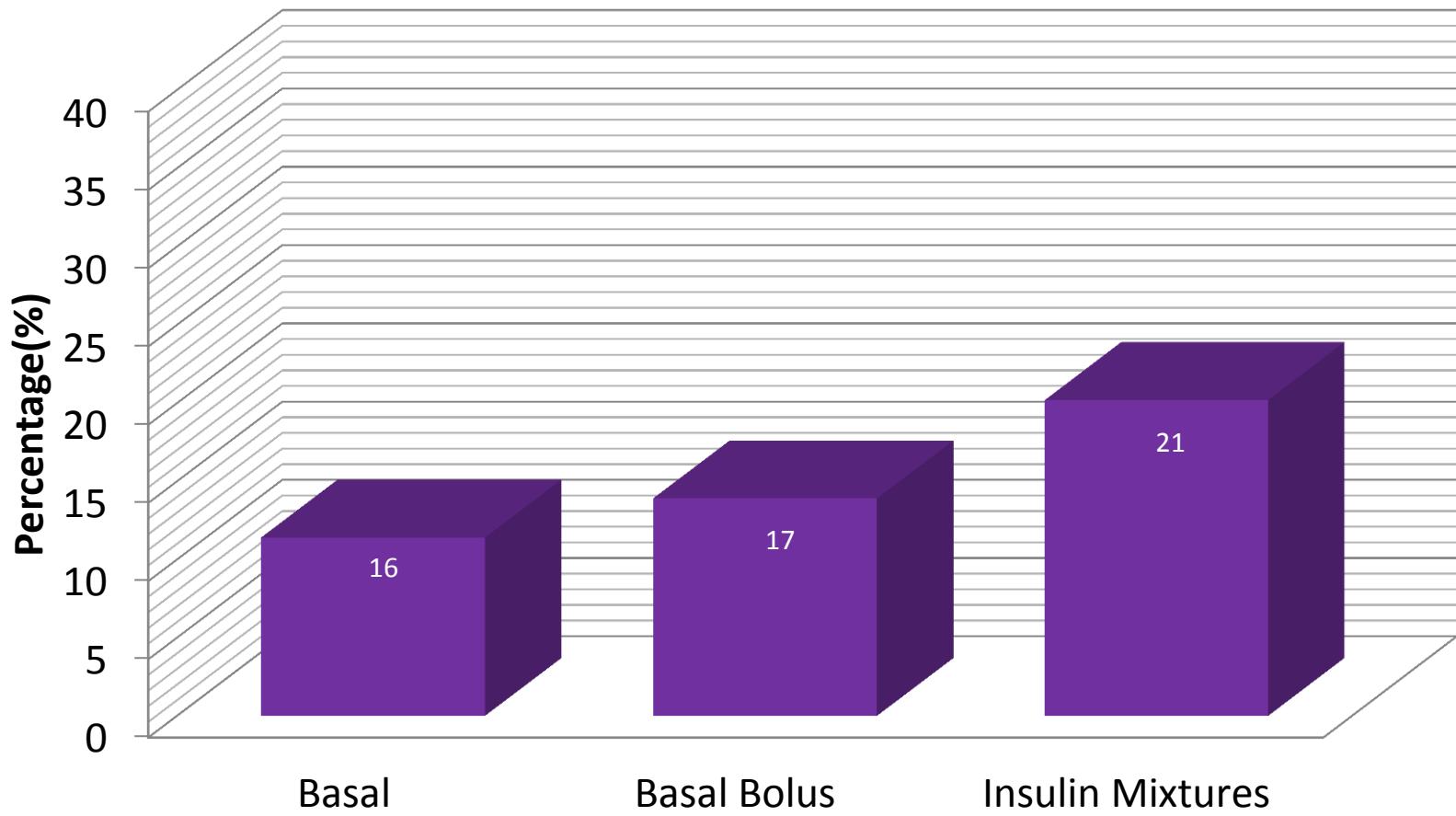
Reported as mean±SD or median(IQR)\*

Vs Combined Clinical Trials - Dapagliflozin

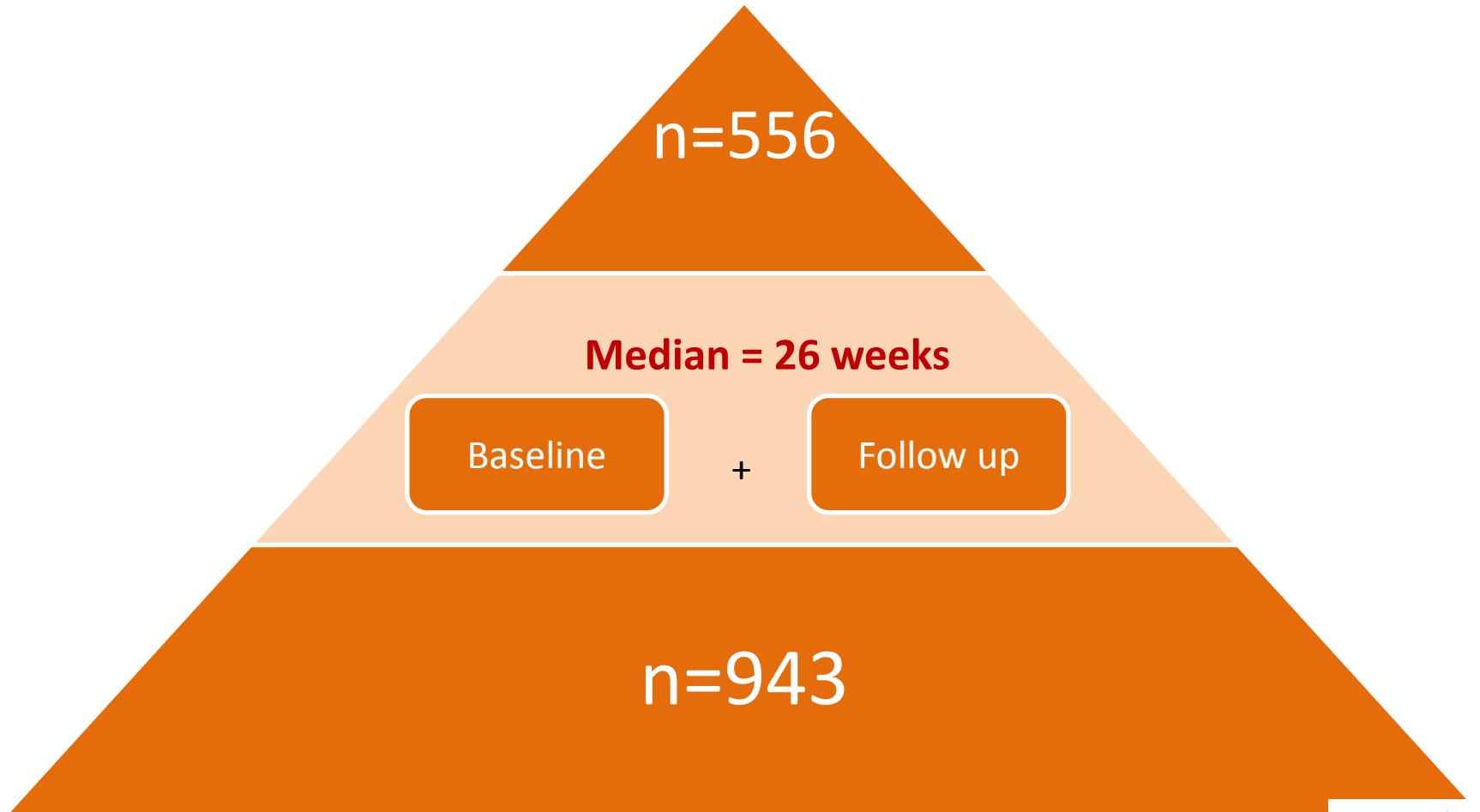
# Medications



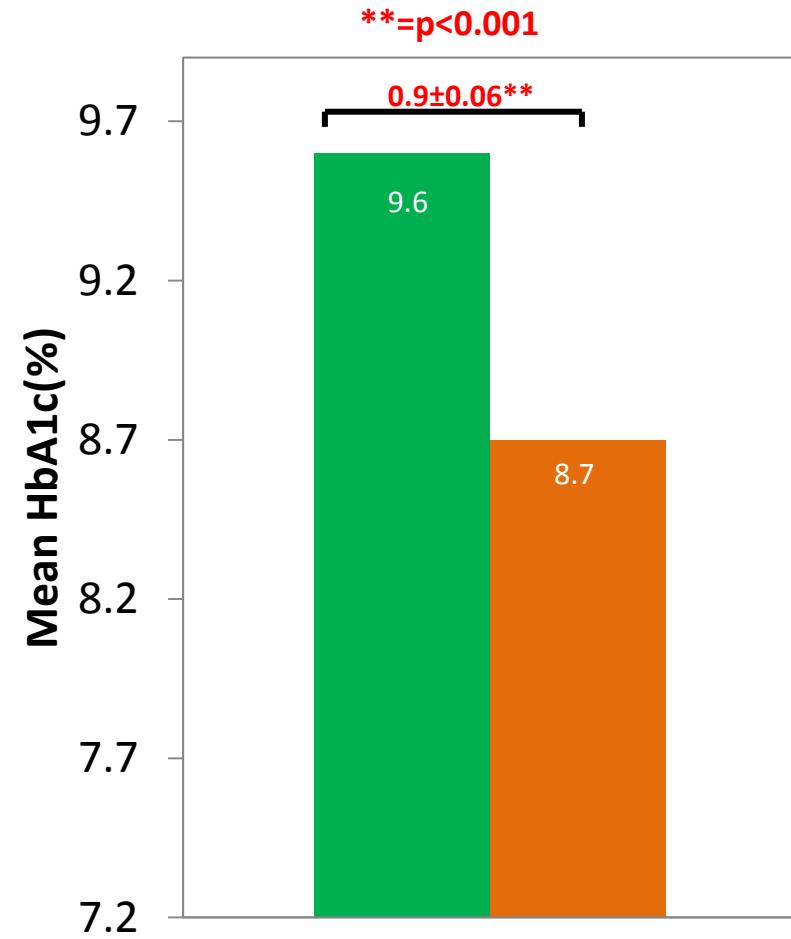
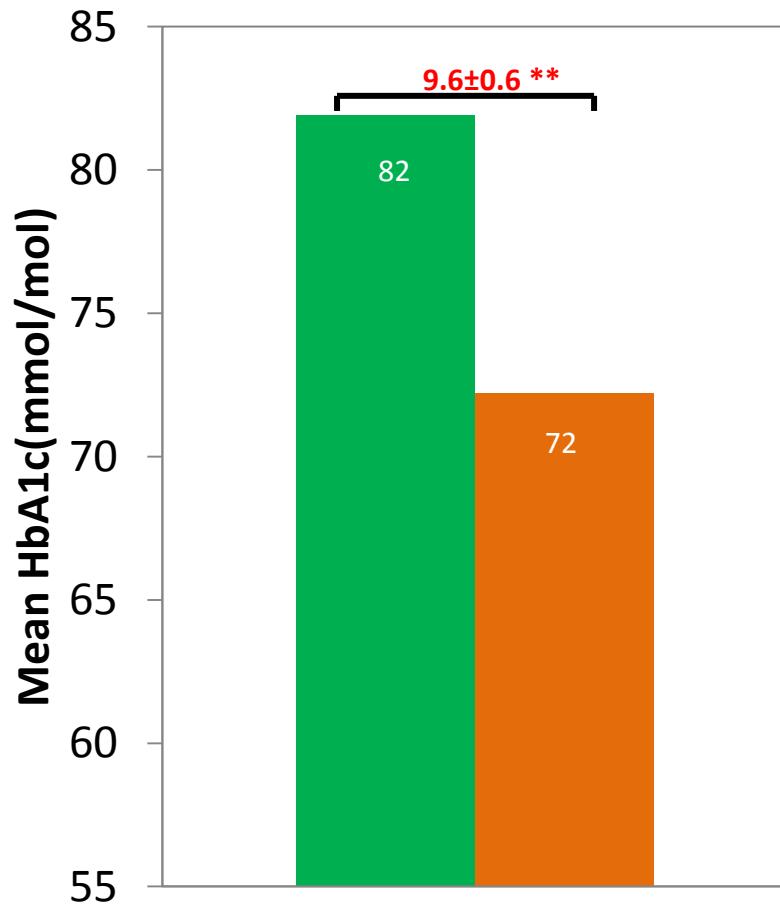
# Insulin



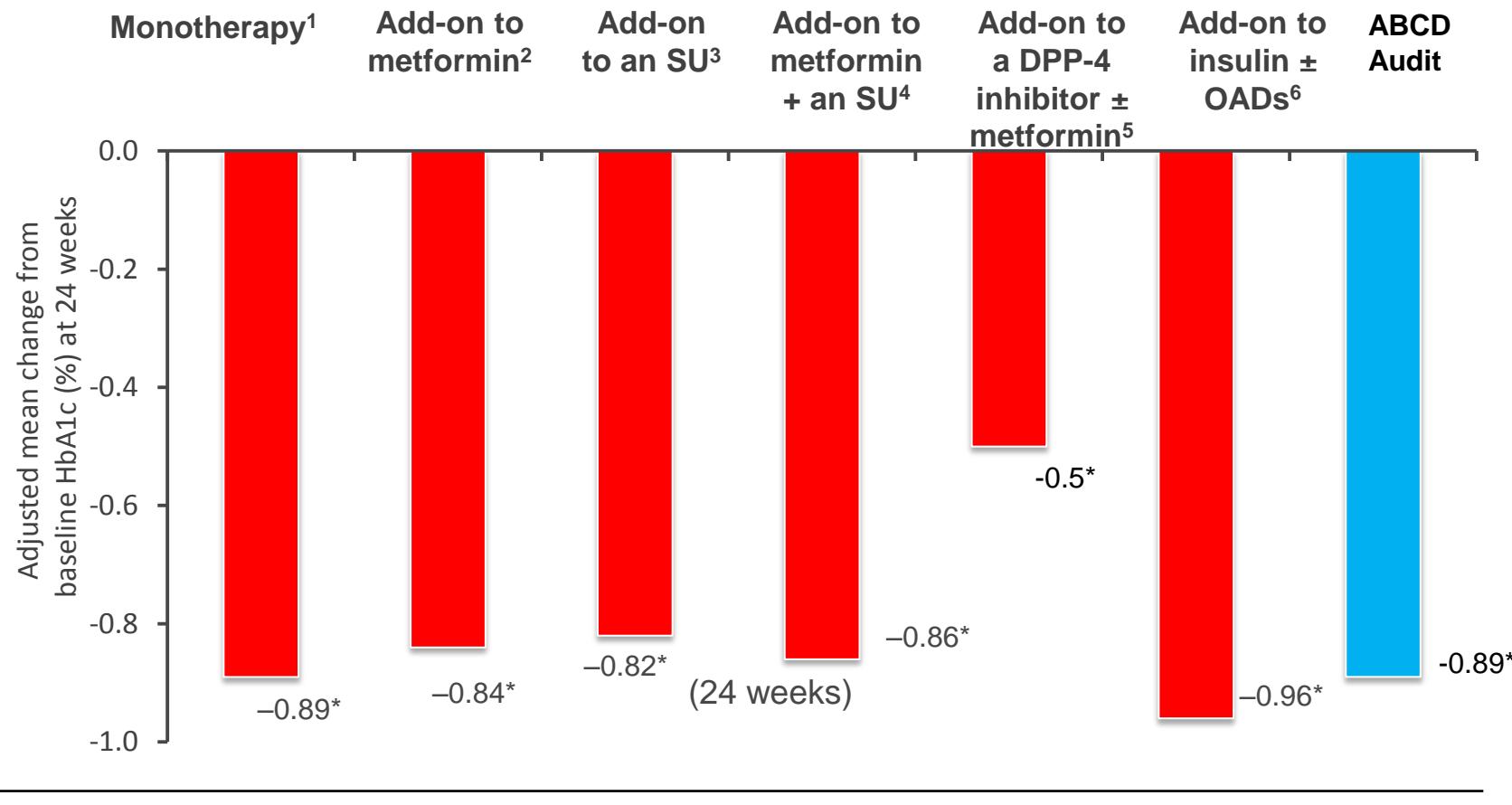
# Inclusion Criteria



# HbA1c Response to Dapagliflozin(n=556)



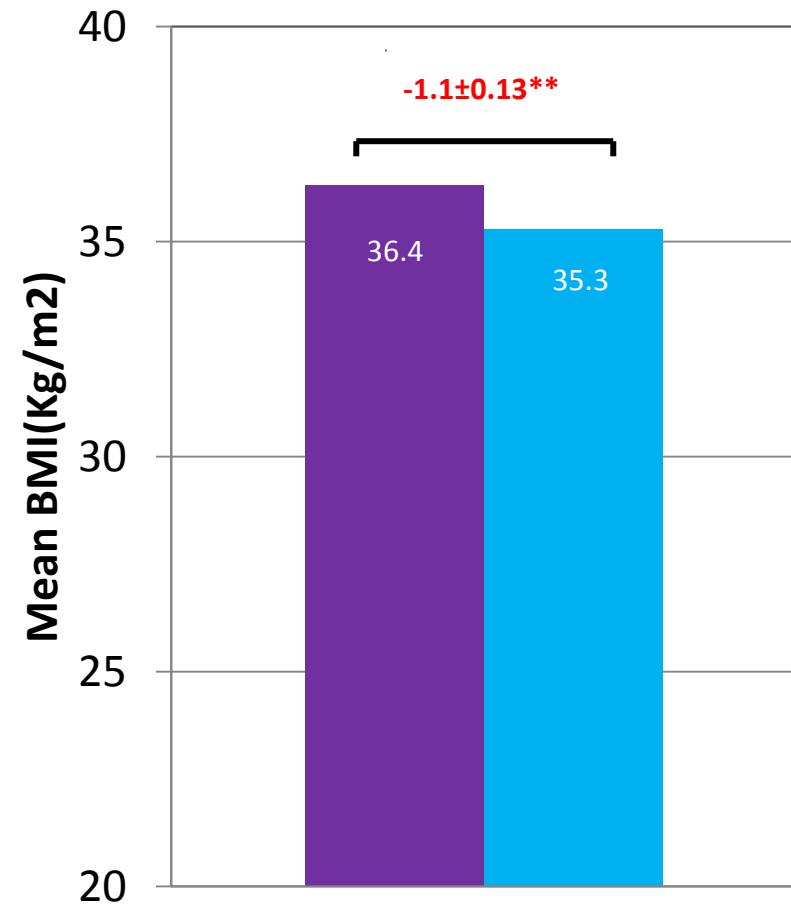
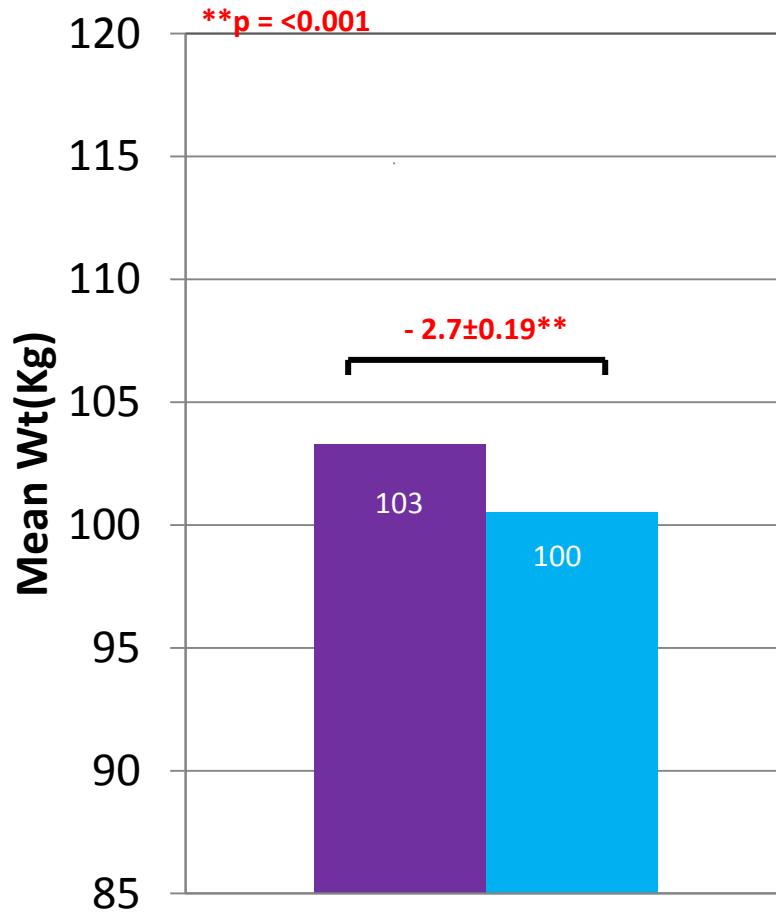
# Reductions in HbA<sub>1c</sub> as Monotherapy and as Add-on



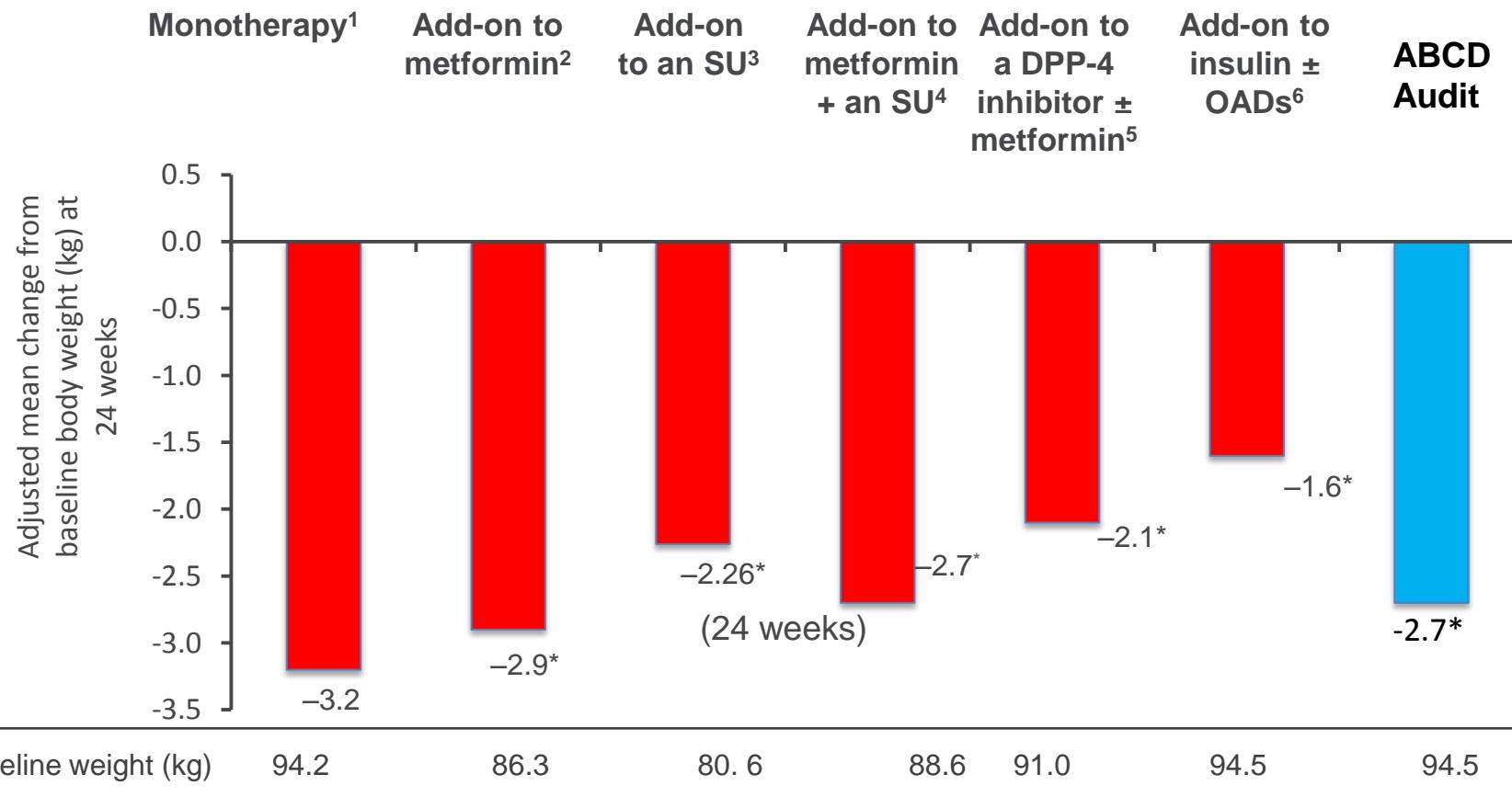
Baseline HbA<sub>1c</sub> 8.01% 7.92% 8.07% 8.08% 7.9% 8.57% 9.5%

1. Ferrannini E et al (2010) *Diabetes Care* **33**: 2217–24; 2. Bailey CJ et al (2010) *Lancet* **375**: 2223–33; 3. Strojek K et al (2011) *Diabetes Obes Metab* **13**: 928–38; 4. Matthaei S et al (2015) *Diabetes Care* **38**: 365–72; 5. Jabbour SA et al (2014) *Diabetes Care* **37**: 740–50; 6. Wilding JPH et al (2012) *Ann Rev Med* **156**: 405–15

# Weight & BMI Response to Dapagliflozin(n=565)

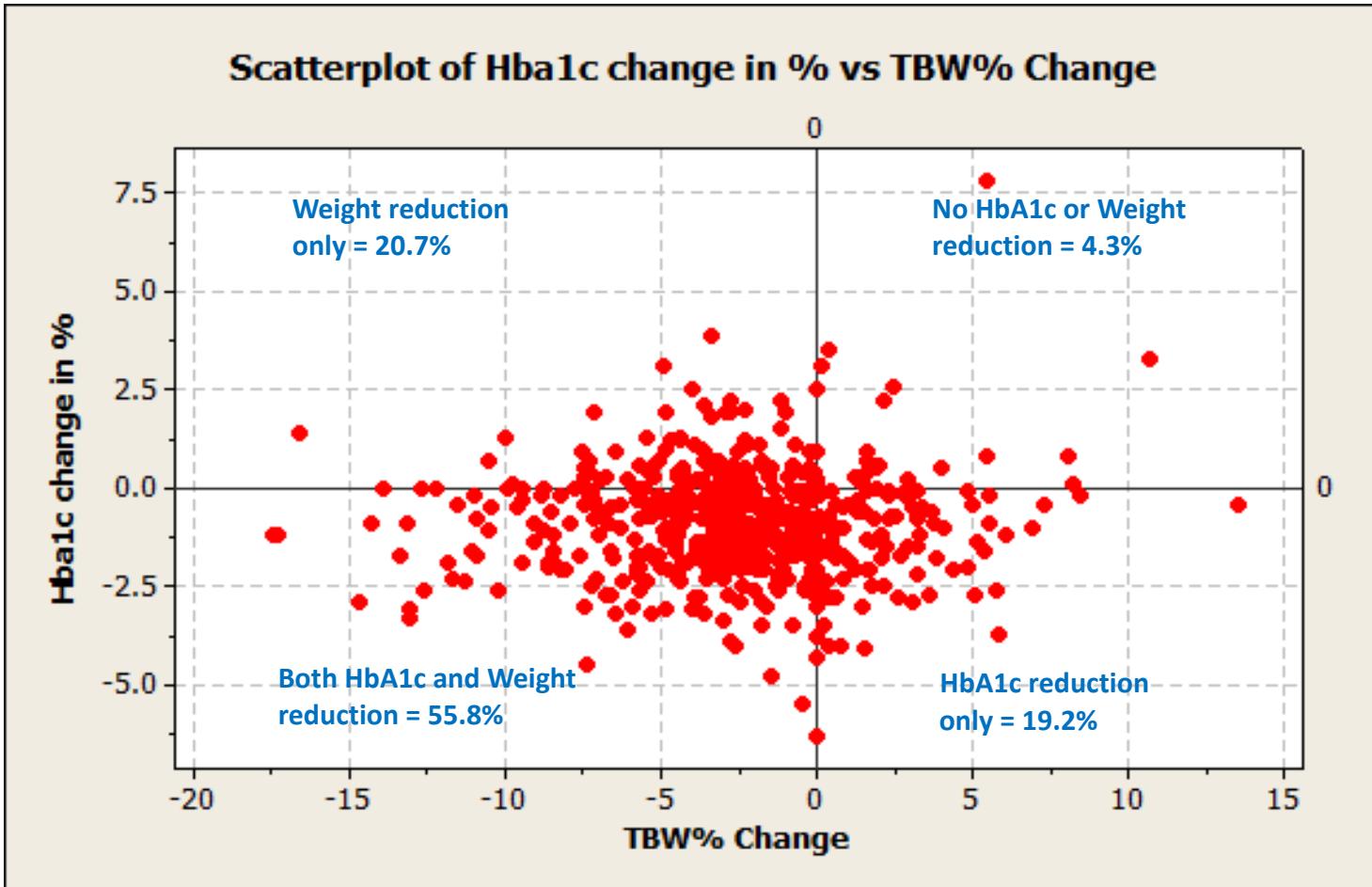


# Weight loss as Monotherapy and as Add-on



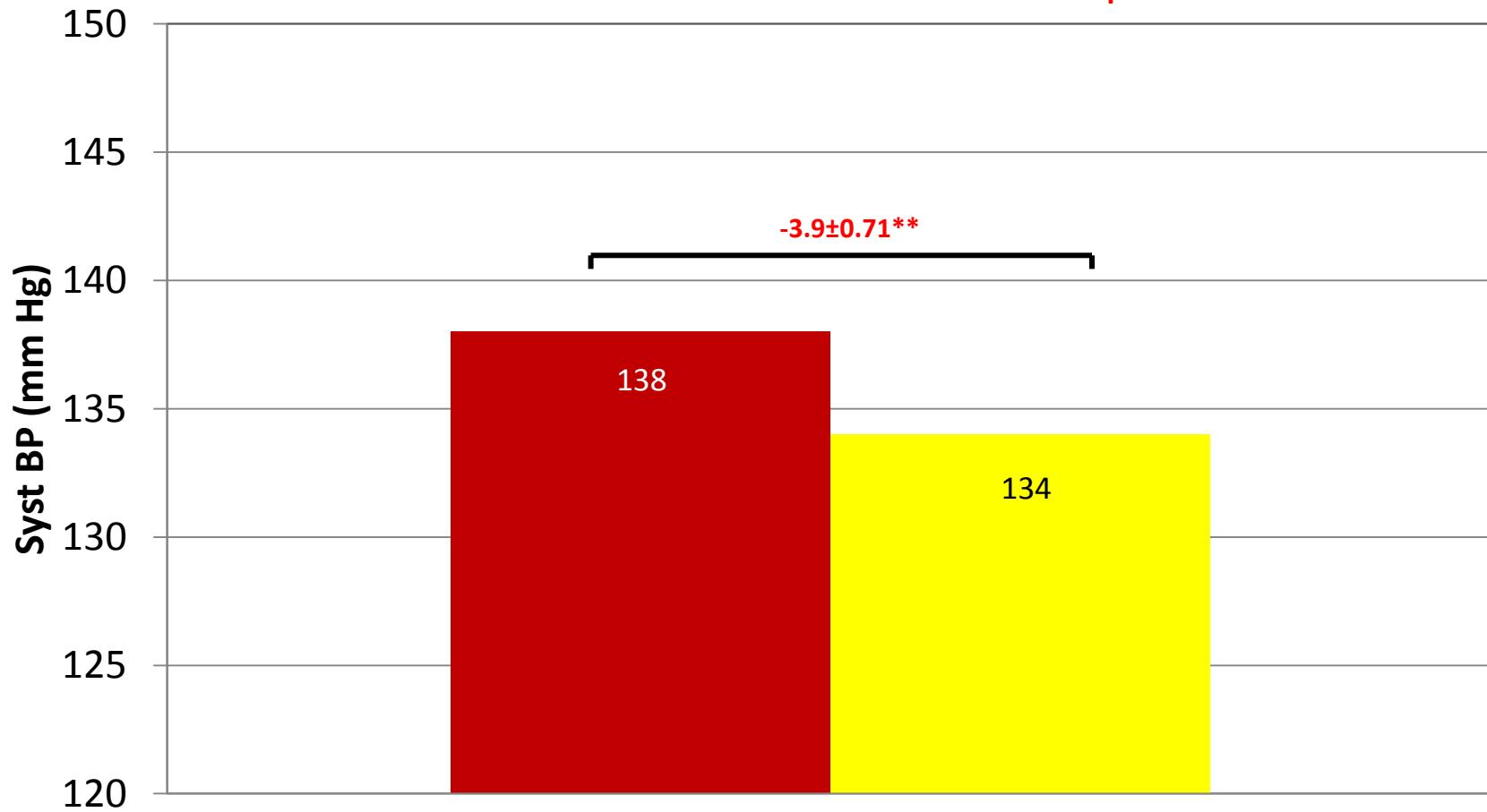
1. Ferrannini E et al (2010) *Diabetes Care* **33**: 2217–24; 2. Bailey CJ et al (2010) *Lancet* **375**: 2223–33; 3. Strojek K et al (2011) *Diabetes Obes Metab* **13**: 928–38; 4. Mattheei S et al (2015) *Diabetes Care* **38**: 365–72; 5. Jabbour SA et al (2014) *Diabetes Care* **37**: 740–50; 6. Wilding JPH et al (2012) *Ann Intern Med* **156**: 405–15;

# HbA1c and Weight Data

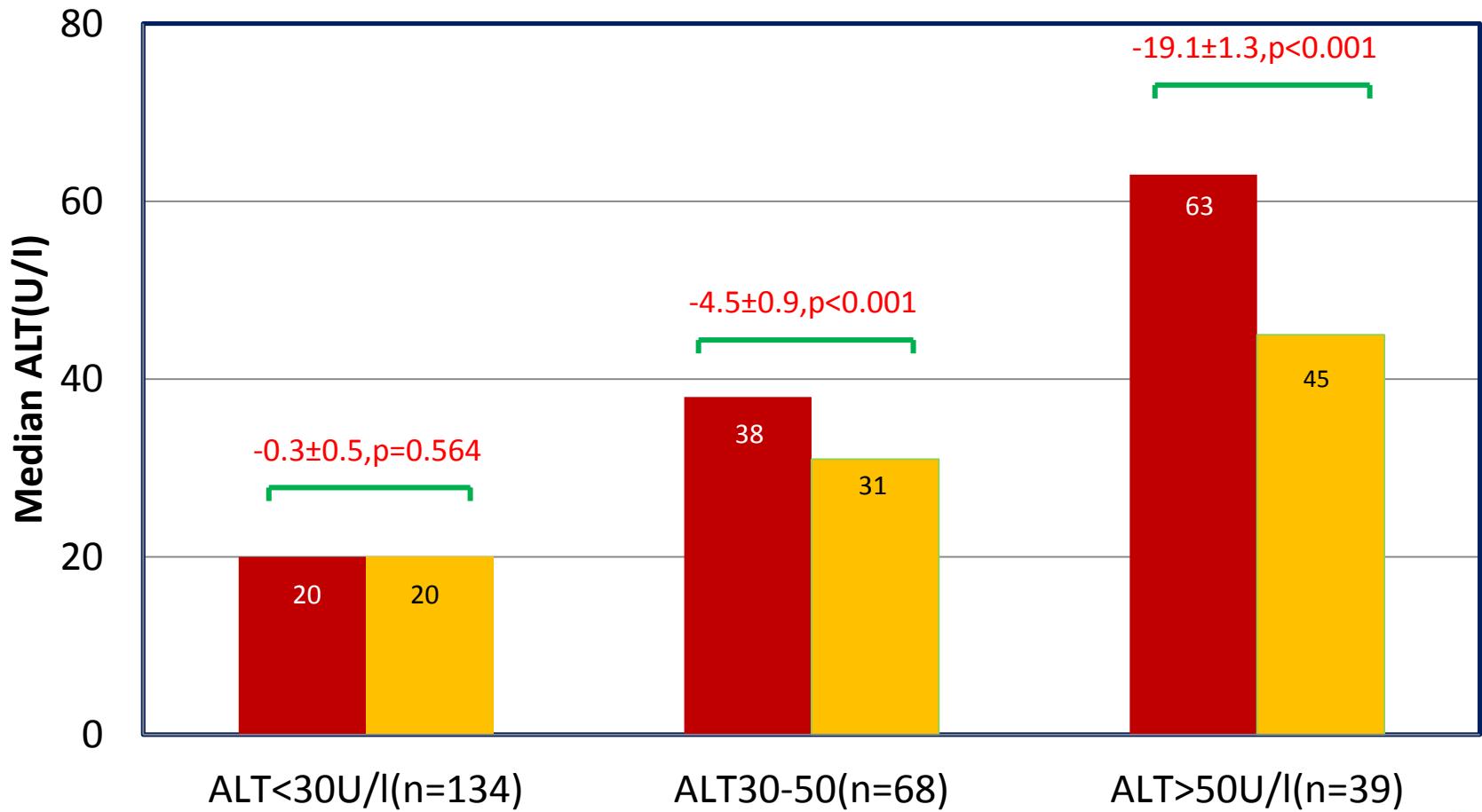


# Systolic Blood Pressure Response to Dapagliflozin(n=519)

\*\* = p<0.001



# ALT response to Dapagliflozin



# Conclusion

- Patients in the ABCD audit much heavier and with much more poorer glycaemic control than in the clinical trials
- Clinically significant reductions in HbA1c, weight, BMI and systolic blood pressure following dapagliflozin in real clinical use
- Early days of audit – there may be further reductions as data is gathered from longer use
- Clinically significant reductions in ALT following dapagliflozin in patients with high baseline ALT>30U/l - may have implications regarding non-alcoholic fatty liver disease

## ABCD nationwide dapagliflozin audit contributors

The following are those whom we know about.

**ABCD nationwide dapagliflozin audit – initial setup, maintenance and nationwide analysis:** Ryder REJ, Adamson K, Bailey CJ, Walton C, Thong KY, Sen Gupta P, Cull ML, Yadagiri M. Statistician: Blann A

### England

**Aintree University Hospital NHS Foundation Trust (University Hospital Aintree):** Wilding J, Yunus A. **Bromley CCG (Selsdon Park Medical Practice):** Cheah Y, Lovie K. **County Durham And Darlington NHS Foundation Trust (Darlington Memorial Hospital):** Kamaruddin S, Khan U, Partha P, Peter P, Tarigopula G, Tee SA. **Doncaster And Bassetlaw Hospitals NHS Foundation Trust (Bassetlaw Hospital):** Chaturvedi P, Payne G. **Dorset County Hospital NHS Foundation Trust (Dorset County Hospital):** Graja A, Macklin A, Wotherspoon F. **Dorset County Hospital NHS Foundation Trust (Cerne Abbas Surgery):** Murphy H, Wakeman C. **Dudley Group Hospitals NHS Foundation Trust (Russells Hall Hospital):** Pang T. **East and North Hertfordshire NHS Trust (Queen Elizabeth II Hospital):** Phylactou M, Darzy K, Winocour P. **East Sussex Healthcare NHS Trust (Conquest Hospital):** Batson D, Castro E, Combes A, Dashora U, Govindan R, Kumar S, Moor C, Ravelo M. **Great Western Hospitals NHS Foundation Trust (The Great Western Hospital):** Bhattacharya B, Broughton C, Ghaffar I. **Hull and East Yorkshire Hospitals NHS Trust (Hull Royal Infirmary):** Varghese J, Walton C. **King's College Hospital NHS Foundation Trust (Orpington Hospital):** Allinson R, Allitt C, Amo-Konado S, Barratt M, Cheah YS, Cunningham S, Fisher N, Hopkins D, Hussey S, Lewis D, Lovegrove-Saville L, Mukova P, Mustafa O. **Lancashire Teaching Hospitals NHS Foundation Trust (Chorley And South Ribble Hospital):** Balmuri LMR, Imtiaz K. **London Medical, London (Private):** Abraham R, Palik E. **London North West Healthcare NHS Trust (Brent Community Services):** Anthony J, Carroll M, Godambe S, McCabe-Hughes F, Murali KS, Ogida L, Patel N, St-John J. **Maidstone And Tunbridge Wells NHS Trust (The Tunbridge Wells Hospital):** Agarwal G, Barnes D, Billings D, Butler C, Cairns S, Crosby Z, Danby T, Haq M, Ryan A. **Pennine Acute Hospitals NHS Trust (North Manchester General Hospital):** Tarpey S. **Pennine Acute Hospitals NHS Trust (Royal Oldham Hospital):** Tarpey S. **Royal United Hospital Bath NHS Trust:** Robinson T. **Sandwell And West Birmingham Hospitals NHS Trust (Cape Hill Medical Centre, GP):** Gardner G. **Sandwell And West Birmingham Hospitals NHS Trust (City Hospital Birmingham):** Bajwa R, Basu A, Cull M L, De P, Lee B, Kaur A, Pickles O, Ryder R E J, Sen Gupta P, Taylor N, Wyres, M, Yadagiri M. **Sandwell And West Birmingham Hospitals NHS Trust (Tower Hill Medical Centre, Dr DK Nandis Practice, GP):** Bath S, Chiam W. **Sandwell And West Birmingham Hospitals NHS Trust (Norvic Family Practice, GP):** Pathan A, Charm E. **Sandwell And West Birmingham Hospitals NHS Trust (Sherwood House Medical Practice, GP):** Hoffman H. **Sandwell And West Birmingham Hospitals NHS Trust (Sundial Lane Surgery, Dr K Akhtar, GP):** Akhtar R, Baker O, Durk D, Woakes E. **Sandwell And West Birmingham Hospitals NHS Trust (Park House Surgery, GP):** Baker O, Hallan P. **Surrey and Sussex Healthcare NHS Trust (East Surrey Hospital):** Brockett K, Clark J. **The Royal Bournemouth And Christchurch Hospitals NHS Foundation Trust (Royal Bournemouth General Hospital):** Hampton K, Partridge H, Walker J, Williams E. **The Royal Wolverhampton NHS Trust (New Cross Hospital):** Aziz U, Lekkakou L, Oguntolu V. **Whitstable Medical Practice (Dr Jm Ribchester & Partners, GP):** Brice R, Rollings R, Sansom H.

### Scotland

**Greater Glasgow & Clyde:** Huang F, Jones G. **NHS Fife (Victoria Hospital, Kirkcaldy):** Baird J, Burns D, Chalmers J, Creagh M. **Royal Infirmary of Edinburgh NHS Trust:** Reid H. **West Lothian NHS Trust:** Adamson K, Reid H, Vanlook L. **Western General Hospitals NHS Trust:** Reid H.

### Wales

**Abertawe Bro Morgannwg University NHS Trust (Morriston Hospital):** Bain S C, Eyles J, Kumar P, Min T, Price D, Stephens JW. **Abertawe Bro Morgannwg University NHS Trust (Neath Port Talbot Hospital):** Chokor M, Peter R. **Abertawe Bro Morgannwg University NHS Trust (Singleton Hospital):** Bain S C, Eyles J. **Abertawe Bro Morgannwg University NHS Trust (Swansea University):** Bain S C, Eyles J. **Betsi Cadwalader University Healthboard (Wrexham Maelor Hospital):** Ahmad S, Khalily N, Stanaway S. **Cardiff And Vale NHS Trust:** Roberts A.

### Northern Ireland

**Belfast Trust (Belfast):** Johnston PC, Nugent A. **Northern Trust (Antrim Area Hospital):** Kennedy A, Strzelecka A.

### Acknowledgment

The ABCD nationwide dapagliflozin audit is an independent audit supported by an unrestricted grant from Astra Zeneca