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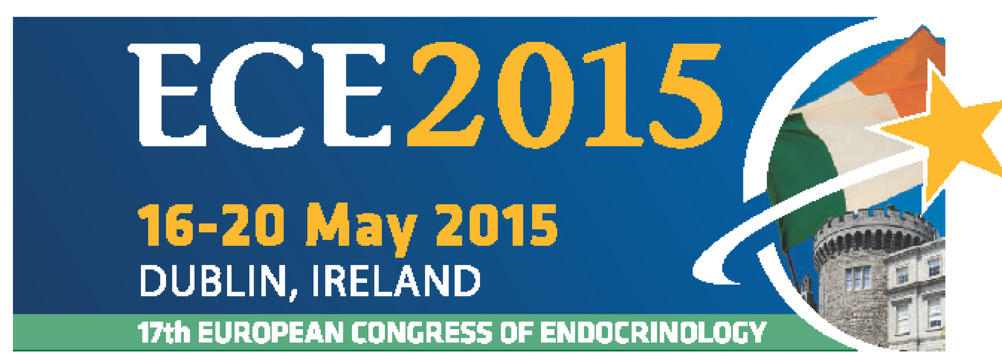

Degree of control of Type 2 Diabetes in Spain according to individualized glycemic targets Results from the **DIABCONTROL Study**

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Objective

Estimation of the distribution of Spanish diabetic patients according to individualized glycemic targets recommended by the ADA/EASD consensus with and without considering the risk of hypoglycemia.

Methods

- Cross-sectional study (2011-2012) in Primary Care centers throughout Spain.
- 5382 Type 2 diabetic patients under pharmacological antihyperglycemic treatment.
- Single visit:
  - Measurement of capillary HbA_{1c} (A1CNow⁺).
  - Clinical variables analyzed:
    - Age.
    - Diabetes duration.
    - Treatment.
    - Chronic complications (macroalbuminuria, chronic kidney disease, diabetic foot, diabetic retinopathy, polineuropathy, peripheral vascular disease, cerebrovascular disease, coronary vascular disease).
    - Hypoglycemia that required medical assistance during the 12 months prior to the inclusion.
- Classification of patients into targets of HbA_{1c} according to the ADA/EASD consensus:
  - Taking into account hypoglycemia risk (having a history of past hypoglycemia or being treated with ≥ 2 doses of insulin).
  - Not taking into account hypoglycemia risk.
- Statistics:
  - Descriptive: variables expressed as % or mean ± SD.
  - Assessment of concordance between both strategies of classification: Cohen's kappa coefficient of correlation.

Table 1. Patient classification into targets of HbA_{1c} according to ADA/EASD*

	HbA_{1c} (%)	Age (years)	Diabetes duration (years)	Chronic complications
ADA/EASD-1	≤ 6.5	Any	< 5	No
ADA/EASD-2	≤ 7	≤ 75	5-9	No
ADA/EASD-3	≤ 8	> 75	Any	Any
		Any	> 10	Any
		Any	Any	Yes

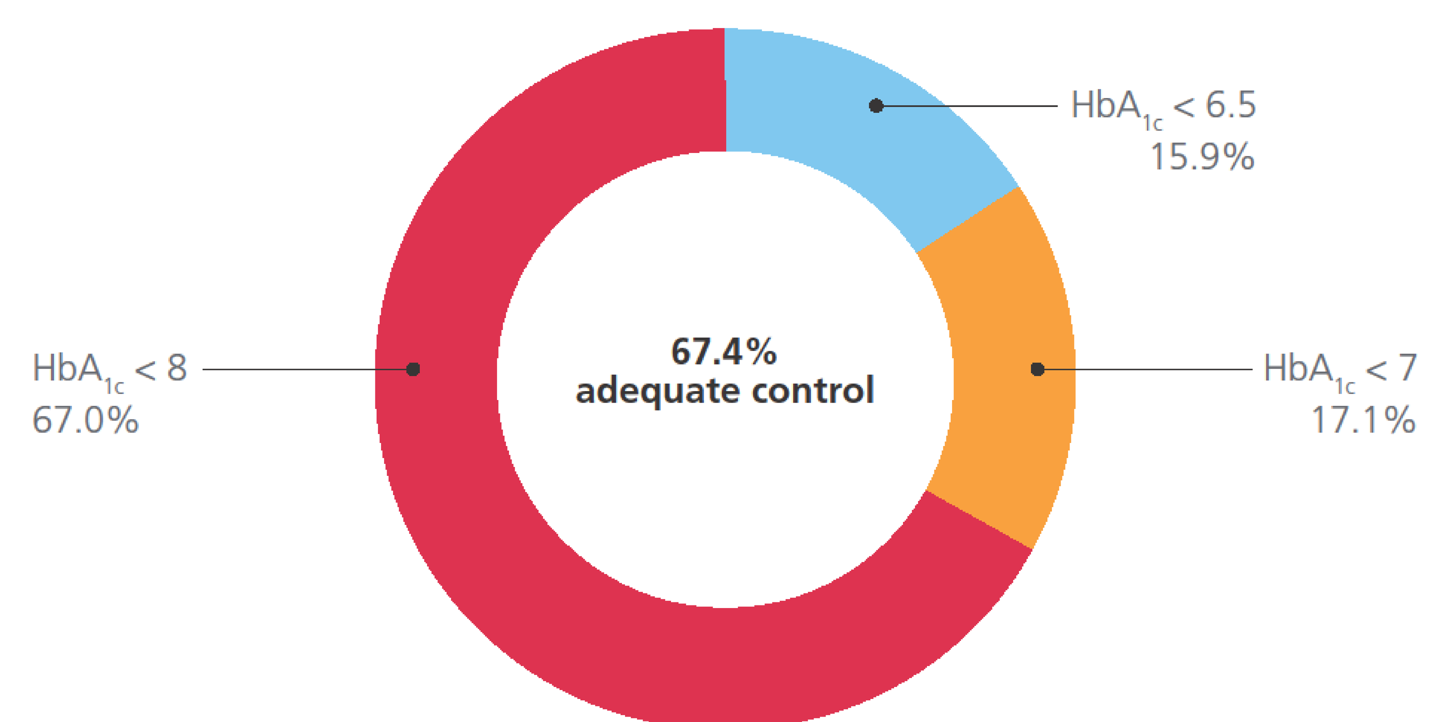
* If risk of hypoglycemia is taken into account, patients with past hypoglycemia or treated with insulin in ≥ 2 doses are directly classified into category 3, irrespective of other patient characteristics.

Table 3. Clinical characteristics and hypoglycemic treatment

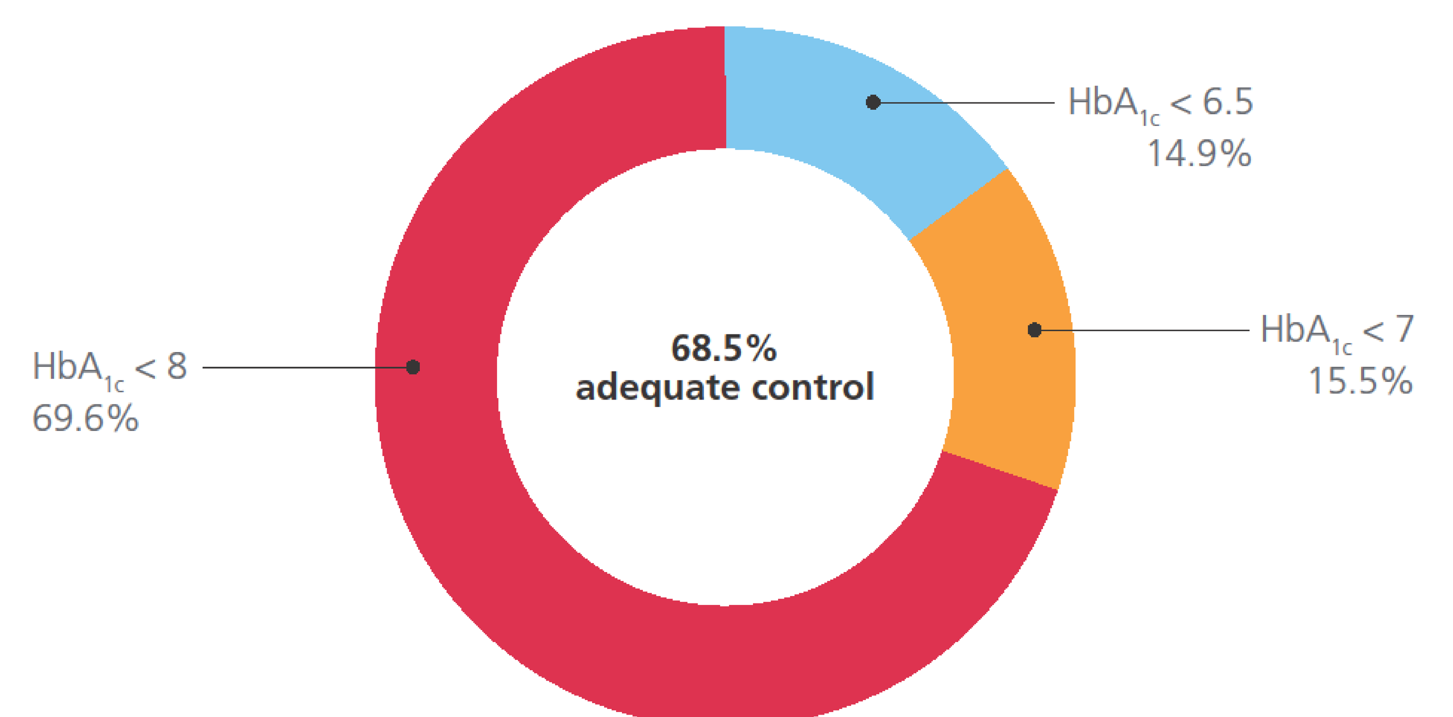
Sex (% men)	53
Age (years)	66.7 ± 10.8
BMI (kg/m²)	29.9 ± 5.0
Diabetes duration (years)	8.8 ± 6.3
Diabetes complications (%)	43.6
Macroangiopathy (%)	23.0
Microangiopathy (%)	23.5
Treatment for diabetes:	
Oral agents only (%)	77.8
Insulin (%)	22.2
Insulin in ≥ 2 doses (%)	9.3
Previous hypoglycemia that required medical assistance during the last year (%)	6.8

Figure 1. Classification of patients into targets of glycemic control according to the ADA/EASD strategy

ADA/EASD strategy (without hypoglycemia risk consideration)



ADA/EASD strategy (with hypoglycemia risk consideration)



Concordance between both strategies of patient classification: 97.4% (kappa coefficient = 0.9413)

Results

Table 2. Glycemic control

HbA_{1c} (%)	7.3 + 1.2
Patients with HbA_{1c} < 7 (%)	48

Conclusions

- Individualization of glycemic targets increases the proportion of patients that are considered adequately controlled.
- Inclusion of information regarding hypoglycemia risk into the ADA/EASD strategy does not affect patient classification.

With the collaboration of: