

Supplementary Material

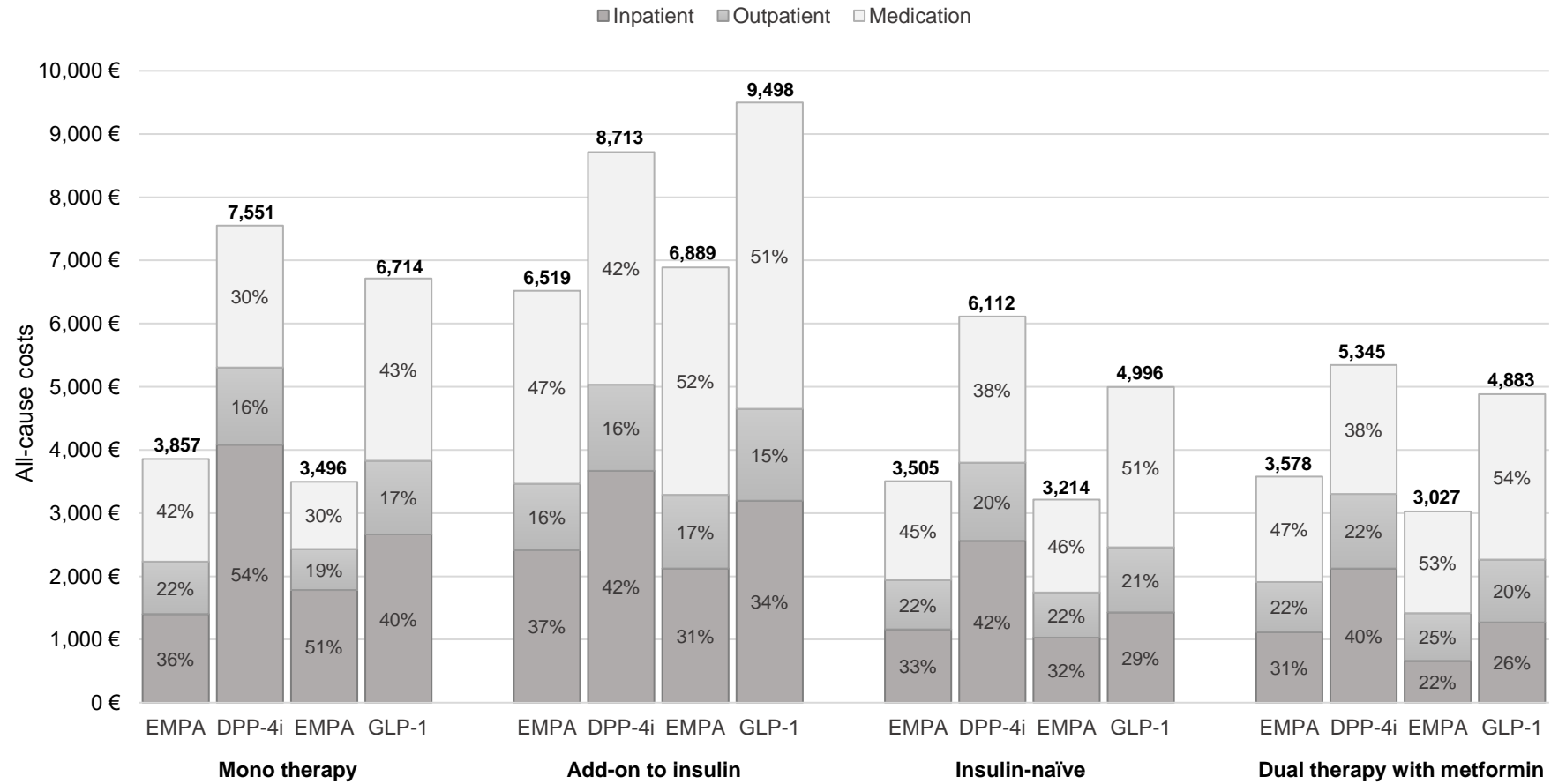
Supplementary Table 1: Charlson Comorbidity Score (CCI) and components

Comorbidity	ICD-10 Code	Charlson Score
Coronary heart disease	I20-, I21-, I22-, I23-, I24-, I25-	1
Congestive heart failure	I11-, I50-	1
Peripheral vascular disease	I73-, I74-, I77-	1
Cerebrovascular disease	G45-, G46-, I6-	1
Dementia	F00-, F01-, F02-, F03-, G30-	1
Chronic pulmonary disease	J4-, J6- w/o J67-, J68-, J69-	1
Connective tissue disorder	M05-, M06-, M07-, M08-, M3-	1
Peptic ulcer disease	K25-, K26-, K27-, K28-	1
Mild liver disease	B18-, K70-, K73-, K75-	1
Diabetes mellitus without complications	E109-, E119-, E129-, E139-, E149-	1
Hemiplegia	G81-, G82-	2
Moderate or severe renal disease	N17-, N18-, N19-	2
Diabetes mellitus with end-organ damage	E10-, E11-, E12-, E13-, E14-	2
Tumor without metastases, leukemia, lymphoma, multiple myeloma	C- w/o [No 16]	2
Moderate or severe liver disease	K72-, K74-, I85-	3
Metastatic solid tumor	C77-, C78-, C79-, C80-	6
AIDS	B20-, B21-, B22-, B23-, B24-	6
Age factor (excluded)	For each decade ≥ 50 years of age, 1 point is added to the score	

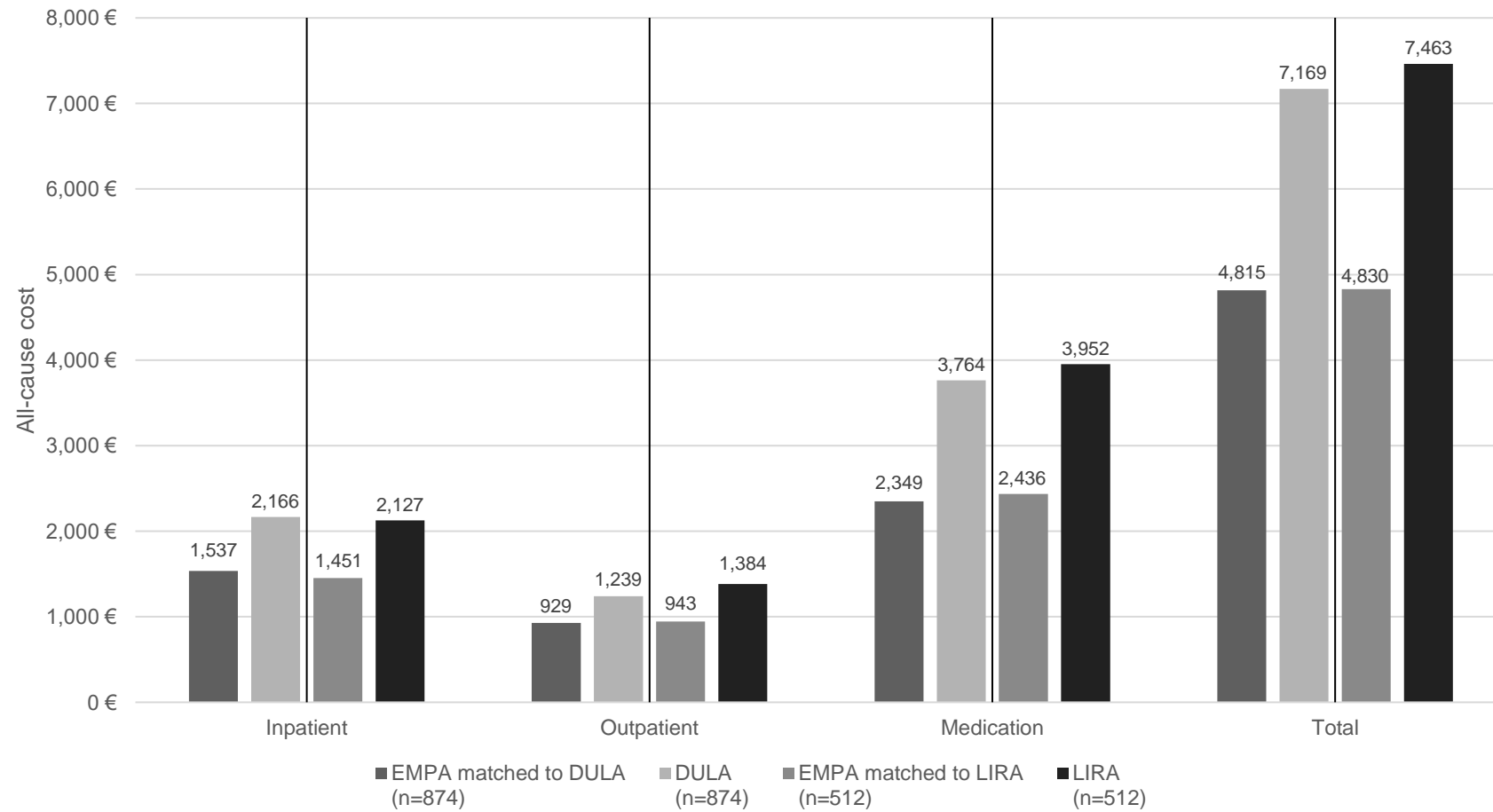
Supplementary Table 2: List of covariates included in the PSM logistic regression

Covariate	Description	Metric
Sex	Proportion of female patients at index date	0, male; 1, female
Age	Mean age at index date	Years
CCI	Mean score; points per diagnosed complication within BL period (Supplementary Table 1), excluding age factor	0-33 points
Level of care	Proportion of patients with documented level of care (1-5)	0 if none, binary variable per level
Major cardiovascular disease	Any diagnosis with ICD-10 codes for myocardial infarction, heart failure, CHD, or ischemic stroke (I11.0, I13.0/2, I21, I25, I50, or I63)	0 if none; 1 if at least once diagnosed within BL period
Kidney disease	Any diagnosis with ICD-10 codes for acute or chronic kidney disease (N17-19)	0 if none; 1 if at least once diagnosed within BL period
Documented alcohol abuse	Any diagnosis with ICD-10 codes for alcohol related disorders or documented abuse counseling (F10, G62.1, K70, I42.6, or Z71.4)	0 if none; 1 if at least once diagnosed within BL period
Documented nicotine dependence	Any diagnosis with ICD-10 codes for nicotine dependence, toxic effects, or documented abuse counseling (F17, T65.2, or Z72.0)	0 if none; 1 if at least once diagnosed within BL period
Insulin	Proportion of patients with >1 prescription of insulin (ATC A10A-)	0 if none; 1 if at least once prescribed within BL period
Metformin	Proportion of patients with >1 prescription of metformin (ATC A10BA-)	0 if none; 1 if at least once prescribed within BL period
Sulfonylureas	Proportion of patients with >1 prescription of sulfonylureas (ATC A10BB-)	0 if none; 1 if at least once prescribed within BL period
Other antidiabetic drugs	Proportion of patients with >1 prescription of glinides, thiazolidinediones or other blood glucose lowering drugs (ATC A10B-; excl. agents listed above)	0 if none; 1 if at least once prescribed within BL period
Antithrombotic agents	Proportion of patients with >1 prescription of heparin, VKA, non-VKA anticoagulants, and other platelet aggregation inhibitors (ATC B01-)	0 if none; 1 if at least once prescribed within BL period
RAAS inhibitors	Proportion of patients with >1 prescription of ACE inhibitors and/or angiotensin II receptor blockers (ATC C09-)	0 if none; 1 if at least once prescribed within BL period
Beta blockers	Proportion of patients with >1 prescription of Beta blocking agents (ATC C07-)	0 if none; 1 if at least once prescribed within BL period
Calcium channel blockers	Proportion of patients with >1 prescription of Calcium channel blocking agents (ATC C08-)	0 if none; 1 if at least once prescribed within BL period
Lipid lowering drugs	Proportion of patients with >1 prescription of statins, ezetimibe, PCSK9 inhibitors, fibrates, bile acid sequestrants, and/or other lipid modifying agents (ATC C10-)	0 if none; 1 if at least once prescribed within BL period

Supplementary Figure 1: Total direct cost by pre-specified initiated therapy combinations



Supplementary Figure 2: Total direct cost by initiated agent (EMPA vs. DULA; EMPA vs. LIRA)



Supplementary Figure 3: Total direct cost of any cause within first year of treatment (matched cohorts)

