**What’s new in DF12 endpoints**

There were no systemic changes in Data Freeze (DF) 12's endpoints, only minor updates.

**DF12 legacy samples**

New DF12 biobanked research study cohort samples, genotyped with the FinnGen array, were delivered from the following cohorts and biobanks:

* ~7900 The Finland-United States Investigation of NIDDM Genetics (FUSION) study subjects ([FUSION](https://thl.fi/en/web/thl-biobank/for-researchers/sample-collections/fusion-study), THL BB)
* ~2200 Study subjects from asthma/COPD-cohort from Helsinki BB
* ~570 Finnish Health in Teens study subjects ([Fin-Hit](https://thl.fi/en/web/thl-biobank/for-researchers/sample-collections/fin-hit-study), THL BB)
* ~70 [Migrane](https://thl.fi/en/web/thl-biobank/for-researchers/sample-collections/migraine-study) study subjects (THL BB)

**New DF12 legacy genotypes**

New legacy samples **with previously generated genotypes from non-FinnGen arrays** were received for DF12

* ~ 300 Finnish Health in Teens study subjects ([Fin-Hit](https://thl.fi/en/web/thl-biobank/for-researchers/sample-collections/fin-hit-study), THL BB)

All changes in the endpoints are described in the changelog file here (https://www.finngen.fi/en/researchers/clinical-endpoints)

**Deleted endpoints**

**Redundant endpoints:**

SMOKING

C\_FOLLICULAR\_LYMPHOMA

C\_HODGKIN\_LYMPHOMA

C\_LYMPHOMA

C\_NONFOLLICULAR\_LYMPHOMA

C\_NONHODGKIN\_NAS

C\_OTHER\_SPECIAL\_TNK\_LYMPHOMA

C\_TNK\_LYMPHOMA

**DM1 and 2 complication endpoint deleted, only DM complication endpoints in DF12:**

DM2\_NEPHROPATHY

DM2\_RETINOPATHY

DM2\_NEUROPATHY

DM1\_NEPHROPATHY

DM1\_RETINOPATHY

DM1\_NEUROPATHY

**Deleted because of renaming:**

AB1\_GHLAMY\_OTHER - for renaming purpose

**New endpoints**

**New rare congenital disease endpoints:**

E4\_FABRY\_KIDNEY

Q17\_MARFAN

Q17\_NEUROFIBROMATOSIS\_2

Q17\_NEUROFIBROMATOSIS\_1

Q17\_PEUTZ\_JEGHERS

Q17\_TUBEROUS\_SCLEROSIS

Q17\_VON\_HIPPEL

C3\_WILMS\_TUMOR\_EXALLC

Q17\_HIRSPRUNG

Q17\_ALPORT

E4\_APECED

Q17\_DIASTROFIC\_DYSP

D3\_ANGIOEDEMA\_1

D3\_ANGIOEDEMA\_2

D3\_ANGIOEDEMA\_3

Q17\_BICUSP\_AORTIC\_VALVE

Q17\_MASTOCYTOSIS

Q17\_NOONAN

Q17\_OSTEOGEN\_IMPERFECTA

**Cancer endpoints:**

**New hematological endpoints:**

C3\_MYELOMA\_MONOCLONAL

C3\_CIRCULATING\_LYMPHOID

C3\_AML\_MDS

**Other:**

DM\_RETINOPATHY\_STRICT

G6\_NEURODEGENERATIVE

M13\_EARLY\_LUMBAR\_PROLAPSE\_OPER

M13\_LUMBAR\_PROLAPSE

**Modified endpoints**

**Cancer endpoints**

We have now split cancer definitions into two sets. Hilmo ICD codes were added to \_EXALLC cancer endpoints. Case definitions without EXALLC version have the original definition without Hilmo codes. Previously EXALLC cancer endpoints were defined by control file, but now EXALLC endpoints are listed also in the case definition file.

**Diabetic complication endpoints:**

DM\_NEPHROPATHY

DM\_RETINOPATHY

DM\_NEUROPATHY

Control definitions changed so that patients with diabetic complication are compared to diabetics without the complication

**See changelog for more details**