One and a half million hematopoietic stem cell transplants: continuous and differential improvement in worldwide access with the use of non-identical family donors

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Supplementary data

Methods

Participating HCT Teams, Groups, Countries and Continents

Data were provided by the Australasian Bone Marrow Transplant Recipient Registry ABMTRR (www.abmtrr.org), the African Blood and Marrow Transplant Group (AFBMT), the Asian Pacific Blood and Marrow Transplant Group (APBMT: www.apbmt.org), the Cell Therapy Transplant Canada (CTTC: www.cttcanada.org), the Center for International Blood and Marrow Transplantation (CIBMTR: www.cibmtr.org), the Eastern Mediterranean Blood and Marrow Transplant Group (EMBMT: www.embmt.org), the European Society for Blood and Marrow Transplantation (EBMT: www.ebmt.org) and the Latin American Bone Marrow Transplantation Group (LABMT: LABMT@wbmt.org).

Definitions

Transplant rates (TRs) were computed as the number of HCT per 10 million inhabitants not corrected for population age. Population data for non-European countries were obtained from the World Bank (https://databank.worldbank.org/data/indicator/SP.POP.TOTL/1ff4a498/Popular-Indicators) and for the European Countries from Eurostats (http://appsso.eurostat.ec.europa.eu). We assessed patients by donor type (allogeneic or autologous HSCT), stem cell source (bone marrow, peripheral blood stem cells, or cord blood) and indication including stage of the disease (according to https://www.ebmt.org/ebmt/documents/dismclfd-list-disease-classifications). There was no adjustment for patients who crossed borders and received their HCT in a foreign country. We computed Team Density (TD) for each country as the number of teams per 10 million inhabitants in 2016.

Unrelated donor transplants include HCT from matched or mismatched unrelated donors with peripheral blood and bone marrow as a stem cell source, but not cord blood (CB) HCT. Haploidentical transplants are being described as derived from family donor member with ≥2

loci mismatches within the loci HLA-A,-B,-C,-DRB1 and -DQB1 in GvH and/or HvG direction. Other family donors are those related donors that are mismatched to a lesser degree. For the purpose of analysis we add the small number of “other family donor” to haploidentical donor HCT naming them related mismatch.

Legend to suppl. Figures

Suppl. Figure S1: Total, autologous and allogeneic HCT worldwide from 1957 to 2016 and projected until 2019 (dotted line)

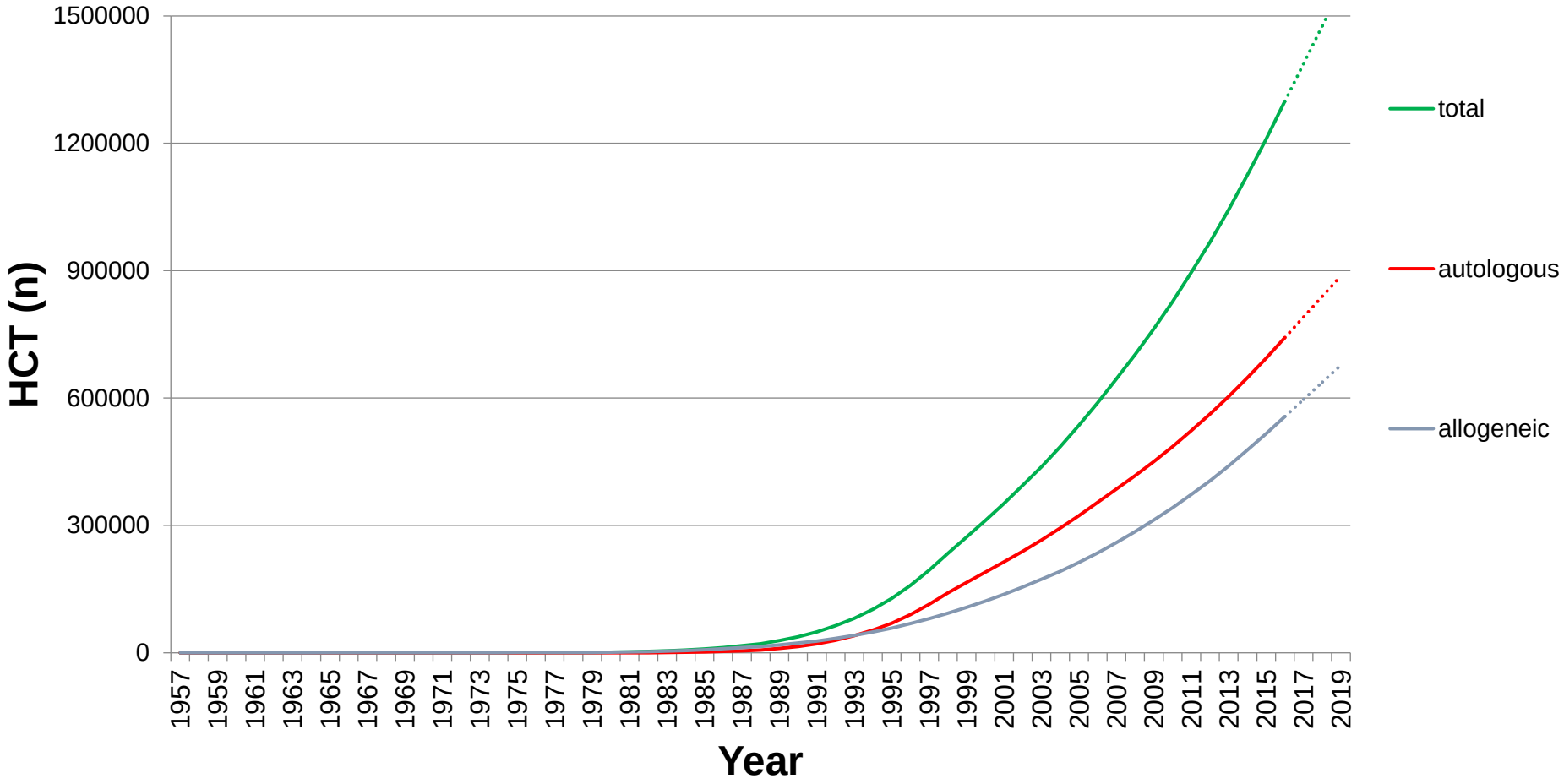
Suppl. Figure S2: Total HCT numbers collected from 2006 until 2016 (n= 697,934) divided by donor type (autologous and allogeneic) and indications

Suppl Figure S3: Total HCT per year, number of HCT teams and HCTs per teams from 2006 – 2016

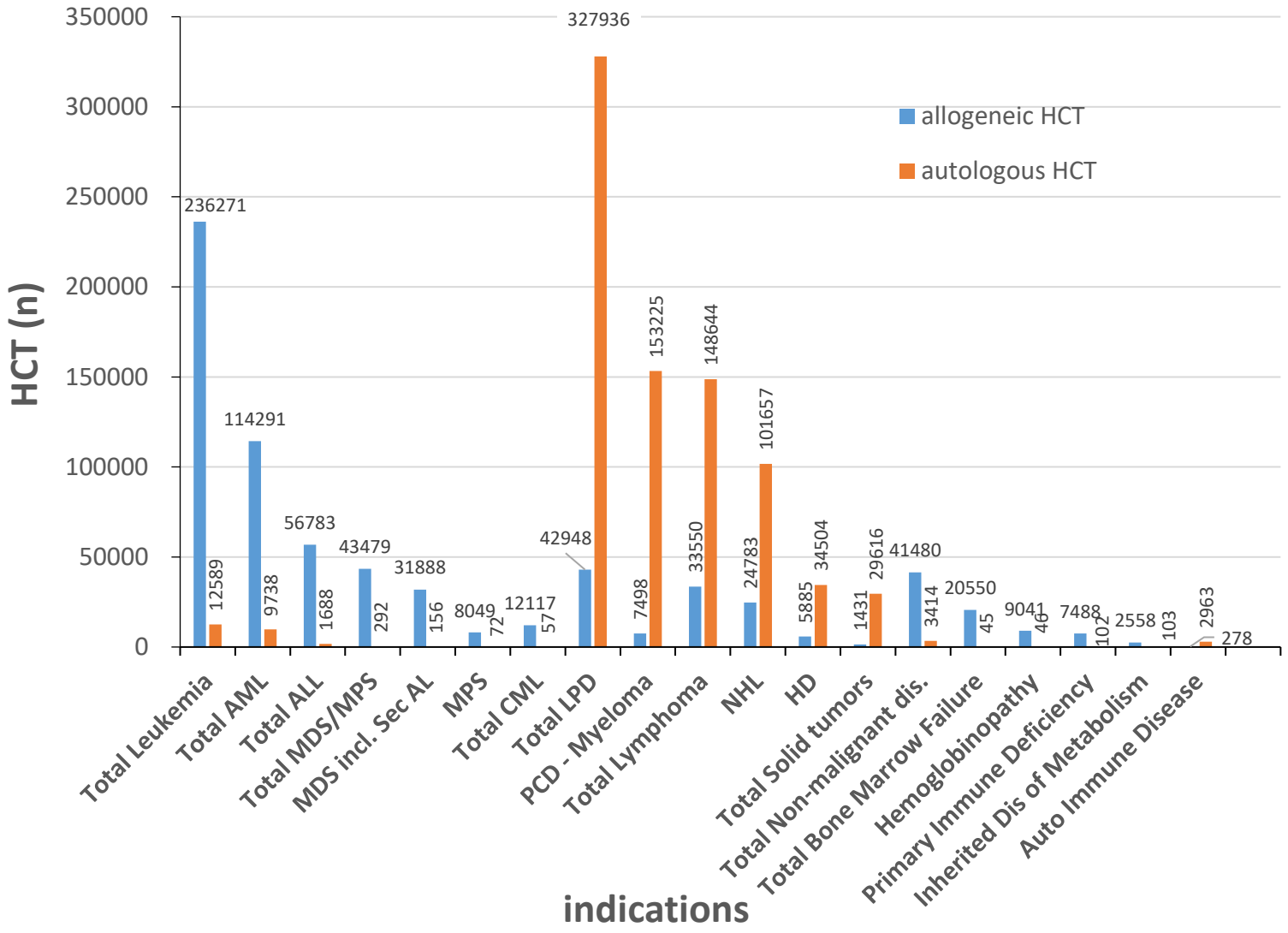
Suppl. Figure S4: Trends of allogeneic (A) and autologous (B) HCT according to disease indication and disease remission status from 2006 to 2016 (EUR, Europe; EMR, East Mediterranean Region; AFR, Africa; SEAR/WPR, South East Asia Region/ Western Pacific Region)

Suppl. Figure S5: Increase in allogeneic HCT according to donor type (related, unrelated, related identical, related mismatched/haploidentical and unrelated cord blood).

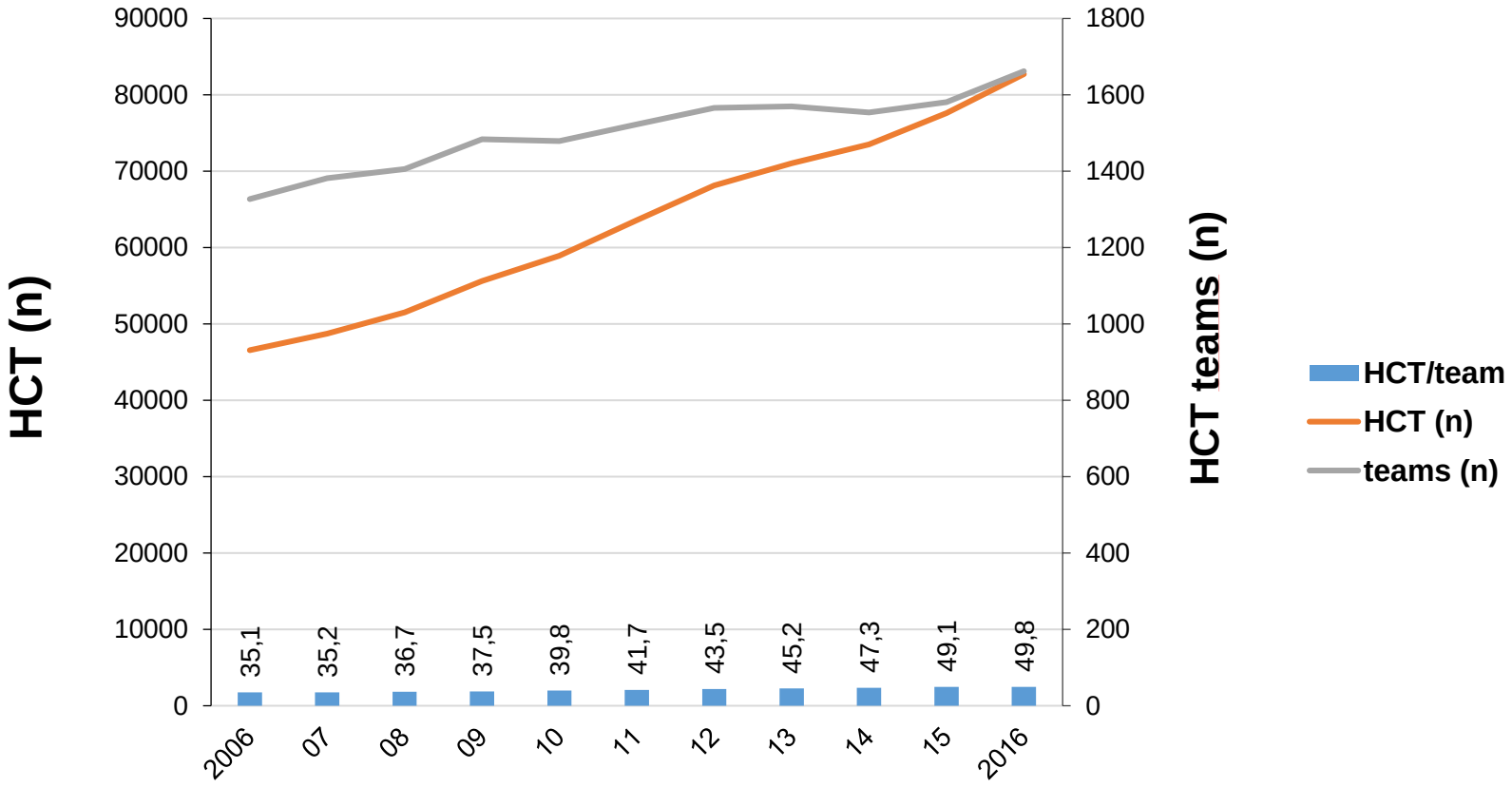
suppl. Figure S1



suppl. Figure S2

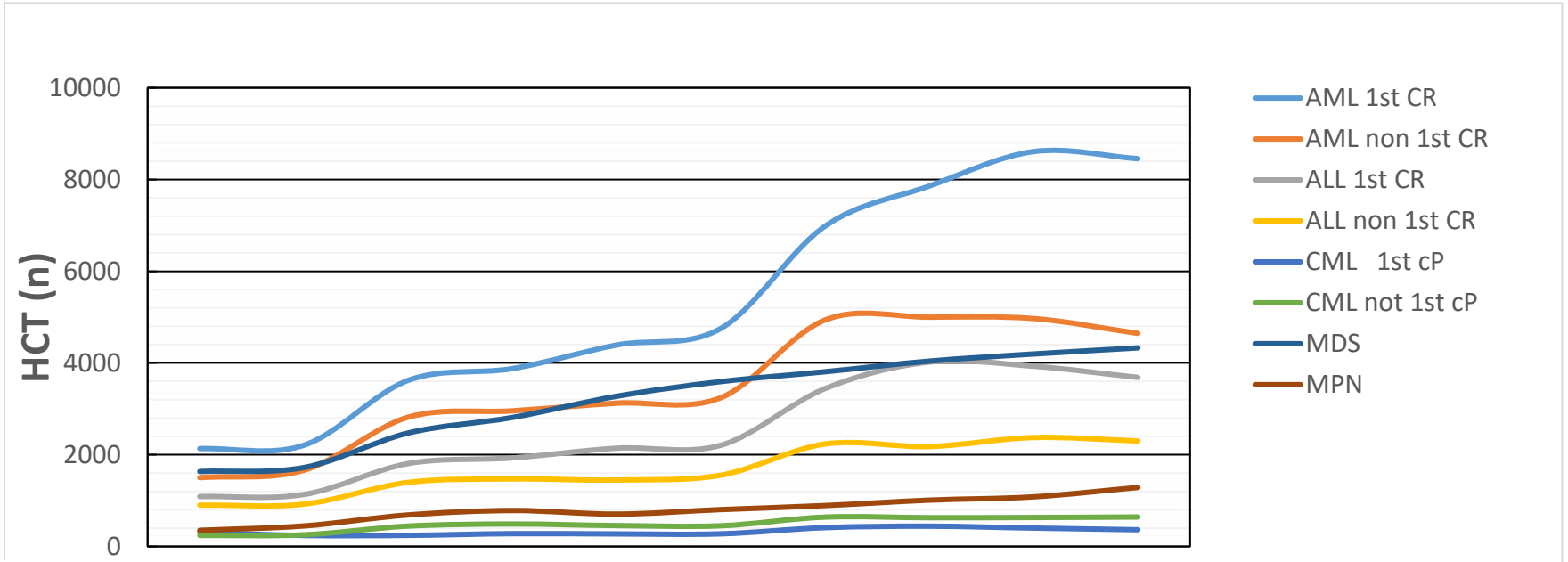


suppl. Figure S3

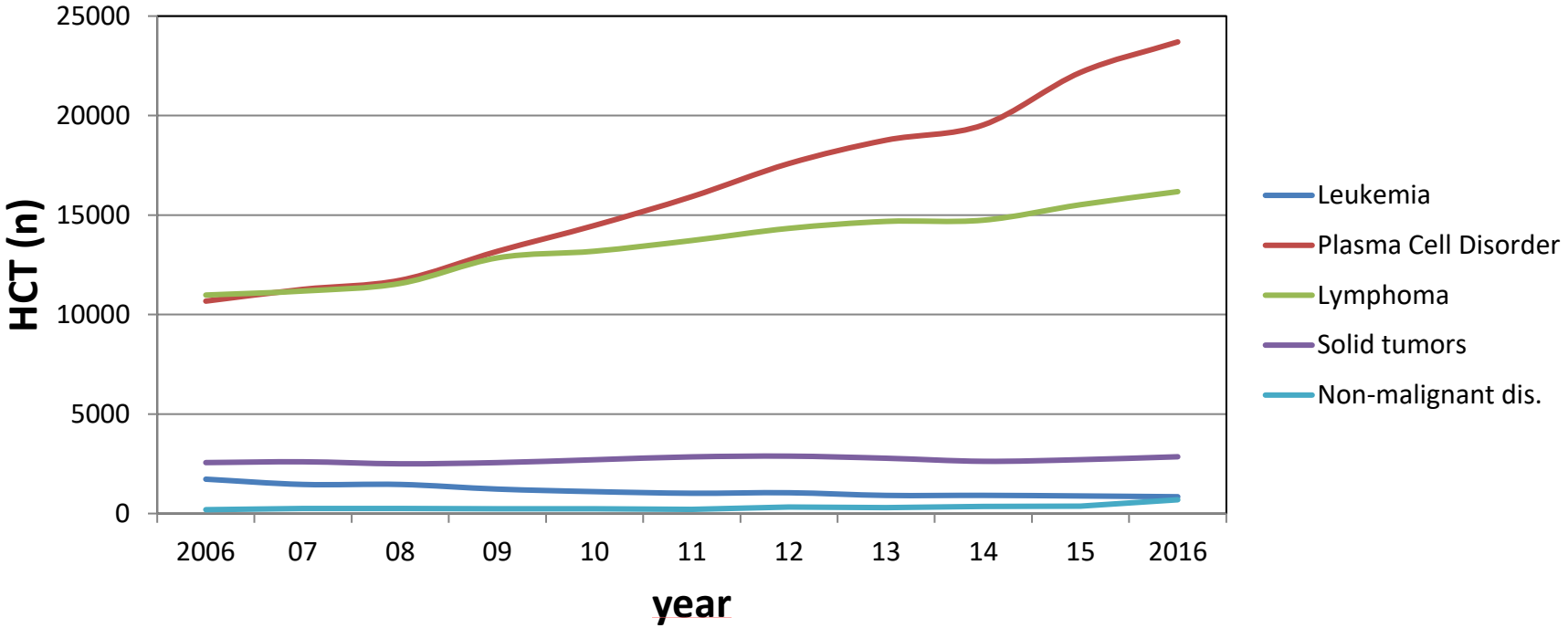


Suppl. Figure S4

A



B



suppl. Figure S5