



### **MORE INFORMATION**

# Did you know that?

- Every 3 minutes someone in the world is diagnosed with blood cancer and the last chance of survival may be a hematopoietic stem cell transplant from an unrelated donor.
- Less than 30% of patients have a compatible donor in the family.
- Globally, for 49% of patients diagnosed with blood cancer who need a hematopoietic stem cell transplant, the unrelated compatible donor is found in the International Registers of Hematopoietic Stem Cell Donors.
- Only for 67% of patients in Romania who need a hematopoietic stem cell transplant from an unrelated donor, there is a paired donor with whom to be genetically compatible.
- For 96% of the donors compatible with the Romanian patients who benefited from the transplant, the compatible donors were from the International Registers and only 4% from the National Register.
- The increase in the number of donors registered in the Romanian Register, from all areas of the country, increases the chance to save more patients suffering from blood cancer or other severe haematological diseases.
- For patients from an ethnic minority, only 20% of cases identify a compatible donor.
- The chance to find a compatible donor, for the 33% of patients for whom there are no compatible donors anywhere in the International Registers, is for over 5% of the Romanian population to register in RNDVCSH.
- Currently, only 0.33% of the Romanian population is registered in the Register of hematopoietic stem cell donors and this percentage is very small, compared to other countries: Germany - 9%, Israel - 12%, Cyprus - 13%.
- 5% of the world's population is registered in the registers of hematopoietic stem cell donors.
- RNDVCSH is interconnected with hematopoietic stem cell donor registries from 54 other countries, on all continents, which together count for over 38 million voluntary hematopoietic stem cell donors.
- For 8% of patients worldwide who need a transplant, no donor was found.
- More than 320,000 potential donors in the international registries have donated hematopoietic stem cells to unrelated patients.





## What it means to be registered in the Register:

- Once registered as a potential hematopoietic stem cell donor, a person is waiting to save a life.
- 1 in 800 people registered will be contacted to check the match with a patient.
- A potential donor, after registering in the Register, may never be called, but if they are called, there is a chance that they may be the only one who can save the patient's life.
- The more people are registered, the better the chances for patients waiting for their lives to be saved.

  That is why every registration matters so much!

# What about blood samples or tissue samples collected from the cheek mucosa?

- The lab analyses the type of tissue: skin cells are tested for HLA tissue markers.
- HLA = Human Leukocyte Antigens or the characteristics of white blood cells in human blood. These protein markers are found on most cells in the body.
- There is a great diversity of HLA, and the samples are tested for up to 12 characteristics.
- The immune system uses HLA markers to determine which cells belong to the body and which do not.
- The best results of the transplant are when the patient and the HLA donor are very similar (over 90%).
- Once HLA markers have been identified, the tissue type is entered in the Register 'the saving list' after being assigned a unique and anonymous identification number. The database is linked to international registries and compatible donors can be searched for any patient worldwide.

### **Treatment of blood cancer**

- All blood cells originate in the bone marrow from the same type of cells, called hematopoietic stem cells.
- A hematopoietic stem cell transplant (harvested from blood or bone marrow) can replace a damaged immune system in a person with blood cancer - but only if the tissue type of the donor matches.
- For many people with blood cancer, a transplant is their last chance at life.
- A transplant works by taking blood stem cells from a healthy donor and giving them to someone with blood cancer or another serious blood disease.
- The donor and the patient must have the same type of tissue. Because there are millions of different combinations, finding a match is very complicated.