## A cohort study investingating the age- and sex-related association of anemia with survival and health-related quality of life Anemia

## Normal blood



## Definition of anemia according to the WHO criteria

Hemoglobin concentration:

- < 13.0 g/dL (8.0 mmol/L) in adult men
- < 12.0 g/dL (7.5 mmol/L) in adult, non-pregnant women

## **BUT**

No worldwide accepted classification into subtypes of anemia

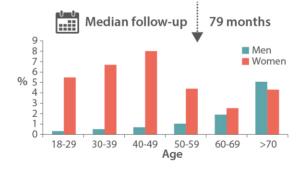


138.670 subjects participating in the Lifelines cohort study (aged 18-93 years)



Survival data, scores from a health-related quality of life questionnaire (RAND-36)

Prevalence of anemia as function of sex and age



5510 (4.0%) subjects with anemia Men 4959 Women

- 516 individuals > 60-year old
- Anemia is associated with worse overall survival and health-related quality of life in individuals >60 years
- The definition of anemia in women >60 years should be increased to a hemoglobin concentration <13.0 g/dL (8.0 mmol/L), which is comparable to men Wouters et al., Haematologica, 2019