

Survival Outcomes of Elderly Patients Diagnosed with ANCA Associated Vasculitis

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Introduction

ANCA associated (AAV) vasculitis is a multisystem disorder that usually presents in mid to late life. The average age at diagnosis is quoted as being between 60 and 70 years of age, however AAV can affect any age group.

Most literature analyses survival rates around the average age of diagnosis. There is a limited amount of survival data on patients older than 75 years of age¹.

Objectives

In this study, we compared outcomes of patients diagnosed before and after 75 years of age. Renal and patient survival rates were calculated and compared using survival graphs. Patient demographics, presenting creatinine and cumulative cyclophosphamide doses were also compared.

Methods

All patients with renal biopsy confirmed pauci-immune glomerulonephritis, between the years 1988 to 2010, within a tertiary centre, were included in this study. Patient demographics, clinical investigations and the cumulative dose of cyclophosphamide (CYP) were calculated and compared between both groups.

Results

In total 284 patients were identified. The median age at diagnosis was 58 years (range 16 to 87 years). The regional incidence was 12.5 cases per million population. Forty-four patients were diagnosed at the age of, or after, 75 years.

The median patient survival was 107 months for the younger group and 45 months for the older group (P=0.0047). Data regarding renal and patient survival is presented in table-1. Survival rates are illustrated in figures 1 and 2. Figure-3 illustrates the incidence of AAV at different age groups.

Figure-2. A comparison of renal survival rates

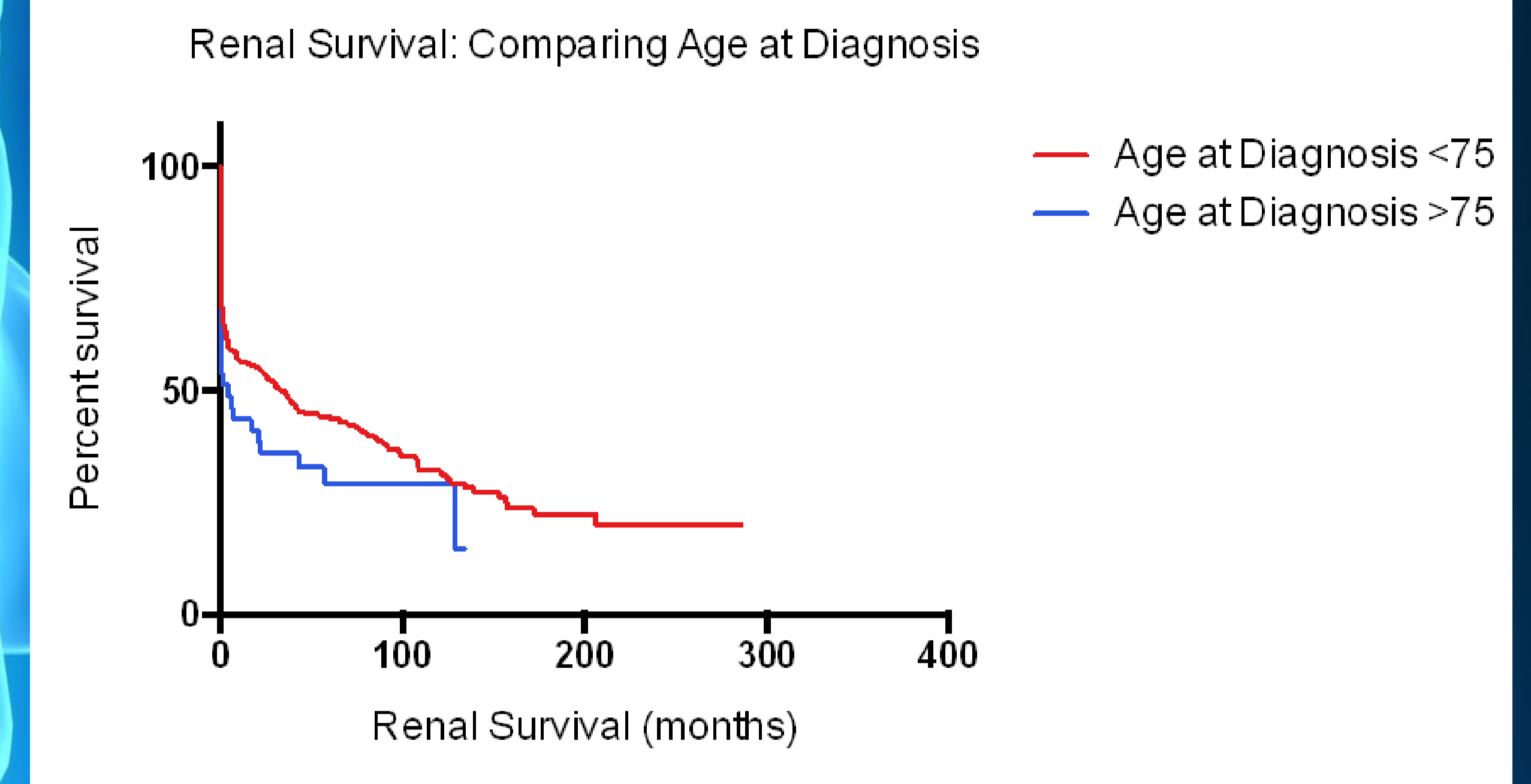


Figure-3. Incidence of AAV divided into age-groups

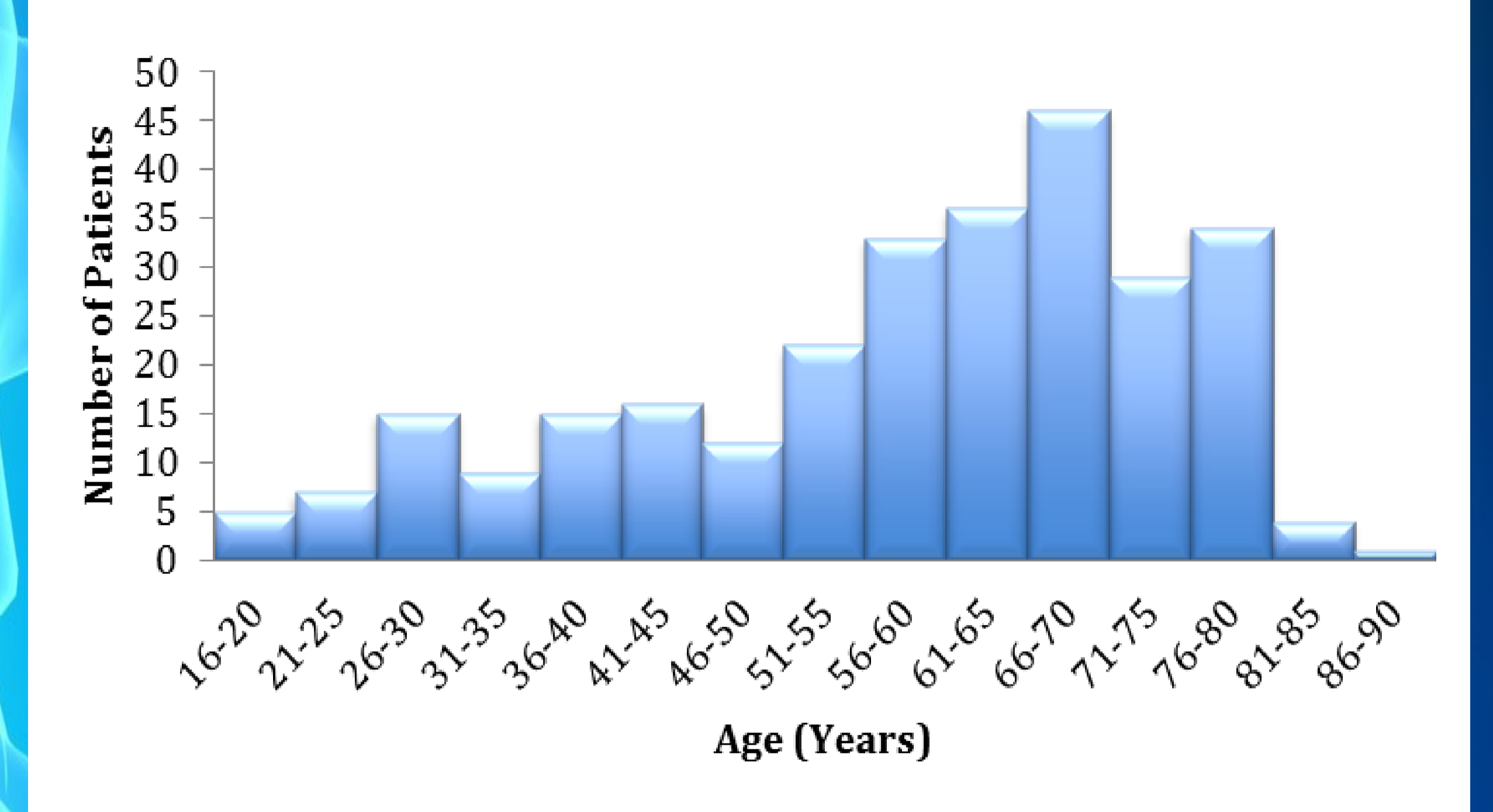


Table-1. Patient information, clinical information and survival rates.

	<75 Years (n= 240)	>75 Years (n= 44)	P Value
Presenting Creatinine (µmol/L)	514.90	548.62	0.6361
Male:Female	137:103	25:19	0.1308
Average CYP Dose (mg)	4329	2241	0.0126
Patient survival			
1 Year	80%	72%	0.2160
3 Year	72%	54%	0.0266
5 Year	63%	38%	0.0034
Renal survival			
1 Year	56%	44%	0.0905
3 Year	49%	36%	0.1002
5 Year	43%	29%	0.0770

Discussion

Patients over 75 years received a lower cumulative CYP dose. This is explained by the CYP protocol, which states that a reduced dose should be given in elderly patients to reduce the risk of infection.

As expected, older patients with AAV have poor survival compared to their younger counterparts. Flossman (2011), *et al*, found a 90% mortality rate in untreated AAV patients. Our data shows a significantly improved one-year mortality rate of 28%.

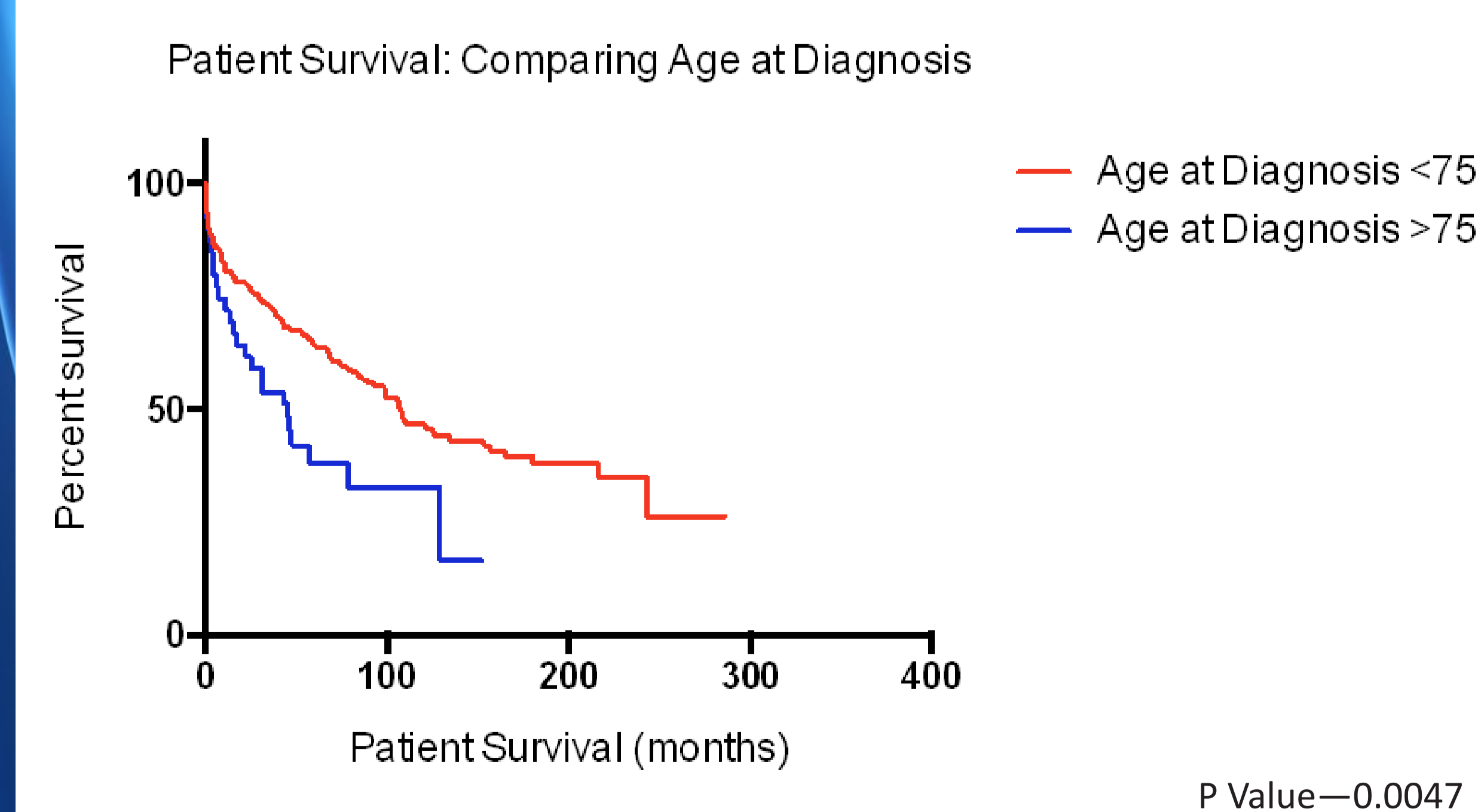
Flossman (2011), *et al*, also found the most common cause of death in AAV, within the first year of diagnosis, was infection. Higher CYP dose may further increase the mortality rate resulting in poorer survival rates in this population, supporting the use lower CYP doses in elderly patients.

Our study also shows comparable renal survival in both groups and suggests that older patients should be actively treated for AAV.

Conclusions

1. Patients who present with AAV at a younger age have improved patient survival rates.
2. Presenting creatinine was comparable between the two groups.
3. Renal survival was comparable in the two groups.
4. There is a significant difference between the dose of CYP given to older patients diagnosed with AAV. This could possibly explain the

Figure-1. A comparison of patient survival rates



References

1. Higgins, Goldsmith, Connolly, et al: Vasculitis and rapidly progressive glomerulonephritis in the elderly. *Postgrad Med J*. 1996 Jan;72(843):11-14.
2. Flossman O, Berden J, de Groot K, Hagen C, Harper L, Heijl C, et al: Long-term patient survival in ANCA-associated vasculitis. *Ann Rheum Dis*. 2011; 70:488-491.
3. Picture Reference: Bone Marrow MX (2012). *Multiple Myeloma and Kidney Failure*. Available: <http://www.bonemarrowmx.com/multiple-myeloma-and-kidney-failure/>. Last accessed 17/05/2014.

