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Age-based Interpretation of Anti-Mullerian Hormone (AMH) Levels in Non-Infertile Women

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INTRODUCTION

Data related to AMH levels in non-infertile women are scarce, making interpretation for this population difficult. This study represents the largest analysis to date of AMH levels in non-infertile women.

AIM

We aimed to characterize age-based AMH levels in a non-infertile population to simplify interpretation of AMH results.

METHOD

This retrospective cohort study includes all women undergoing fertility assessments at Extend Fertility Medical Practice, a large oocyte cryopreservation practice, from 3/1/2016 to 9/30/2018. The study was granted IRB exempt status. AMH levels were measure by an independent laboratory using the Gen-II ELISA platform. To simplify clinical interpretation of AMH levels, age was categorized according to the Society for Assisted Reproductive Technologies standard. Association between age and AMH was made using Kruskal-Wallis.

RESULTS

Total	Age Mean±SD	AMH (ng/mL) Median [IQR]	P-value
2623	35.9±3.6	1.9 [0.9-3.5]	<0.0001

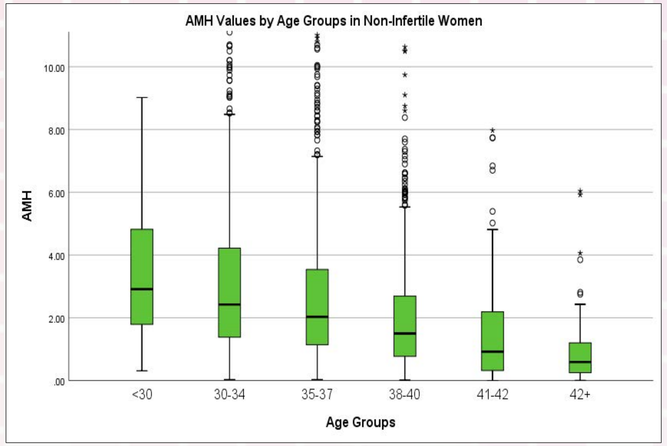
Table 1 (left): *Mean age and median AMH for entire cohort. AMH was negatively associated with age (p<0.0001).*

Table 2	AMG (ng/mL) Percentiles by Age Group						
Age (n)	**5**	**10**	**25**	**50**	**75**	**90**	**95**
<30 (107)	0.64	1.03	1.79	**2.91**	4.83	7.47	11.23
30-34 (770)	0.45	0.72	1.38	**2.42**	4.23	6.56	8.49
35-37 (937)	0.30	0.60	1.14	**2.03**	3.54	5.74	7.35
38-40 (570)	0.20	0.39	0.77	**1.50**	2.69	4.77	6.04
41-42 (137)	0.05	0.12	0.32	**0.92**	2.19	3.69	5.06
>42 (101)	0.03	0.07	0.25	**0.59**	1.21	2.15	2.80

Table 2 (above-right): *AMH percentiles by age category*, median bolded.*

Figure 1 (right): *Visual representation of AMH values in cohort, by age group*.*

**Age categorized according to the Society for Assisted Reproductive Technologies standard.*



CONCLUSIONS

Accurate representation of physiologic AMH ranges in non-infertile women is a critical element of counseling women regarding their reproductive goals.
Median AMH levels in our population were generally lower than prior published reports and more likely represent physiologic levels. Data from infertility cohorts may be confounded by anovulatory subjects with preferentially higher AMH levels. Additional studies are needed to assess what thresholds in each age group constitute a pathologic AMH level.

REFERENCES

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