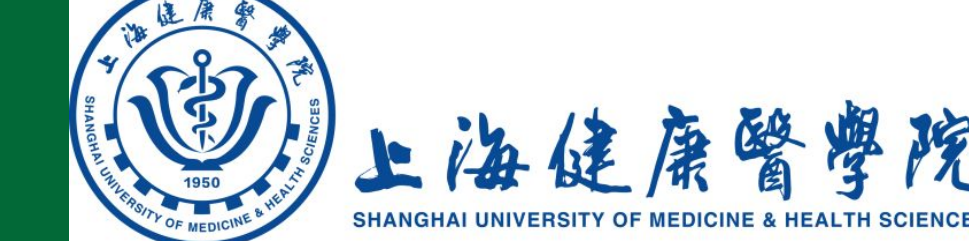


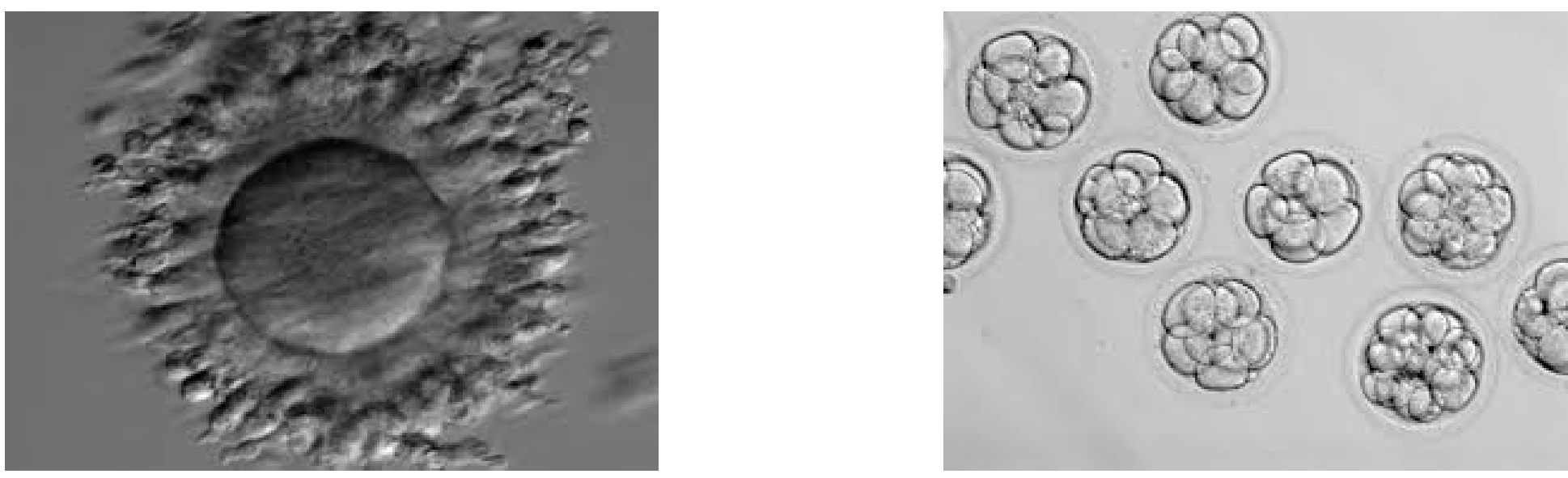
Oncofertility Awareness and Attitudes Among Health Care Providers and Breast Cancer Patients in a Chinese Academic Setting¹



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BACKGROUND

- Cancer incidence and mortality continue to increase worldwide, fortunately mortality has decreased due to advancements in treatment regimens.²
- There are a large number of cancer types in Adolescents and Young Adults (AYA), which have led to a rise in AYA cancer survivors – many of which are infertile due to the same treatment regimens.²
- Fortunately, many options to preserve fertility are now available including oocyte and embryo banking (oncofertility).³



- Specific to China, cancer poses challenging issues due to:
 - Large population
 - Increase incidence of all cancer types,
 - Severe regional disparities in cancer epidemiology.
 - Oncofertility is an underutilized service for AYA cancer survivors in the Chinese healthcare setting.⁴

OBJECTIVE

- To identify gaps in knowledge, communication, and oncofertility referrals among medical and surgical oncologists and breast cancer patients (BCPs) in Shanghai academic settings.

MATERIALS AND METHODS

- IRB approval by the Ethics Committee of Zhongshan Hospital, Fudan University (2019-B099) and conducted in compliance with privacy-act guidelines.
- An online questionnaire regarding oncofertility assessing 3 main themes: 1. Knowledge 2. Attitudes 3. Utilization was distributed via Wechat-based program to medical and surgical oncologists and BCPs in 5 academic hospitals in Shanghai from June to August 2019.

- Statistics**
- Chi-square, Fisher-exact test and Spearman’s rank correlation used to assess differences between HCPs and BCPs and logistic regression models used to predict the influence of demographic characteristics on experiences and attitudes.
 - Significance was set at 0.05.

RESULTS

▪ In total, 101 HCPs (Medical Oncologists-n=33, and Surgical Oncologists-n=28) and 153 BCP responded to survey

DEMOGRAPHICS

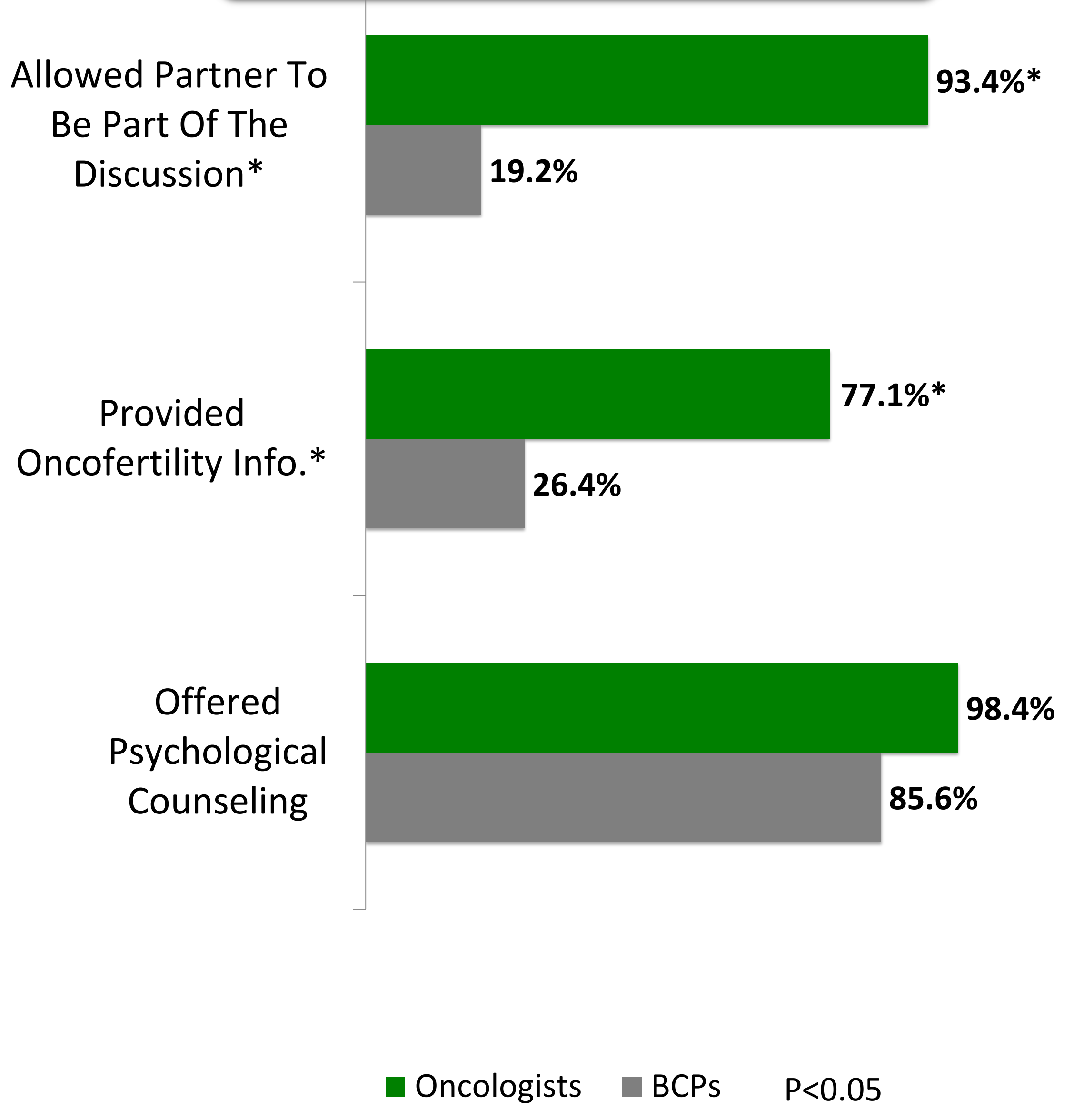
HCPs

Characteristics	All Oncologists (61)	Medical Oncologists (28)	Surgical Oncologists (33)	p value
Physician Age (years) Mean ± SDa	35.7 ± 6.0	33.7 ± 6.3	37.4 ± 5.2	0.014
Experience of physician				0.002
<5 years	15 (24.6)	13 (46.4)	2 (6.1)	
5-10 years	20 (32.8)	8 (28.6)	12 (36.4)	
11-20 years	22 (36.1)	6 (21.4)	16 (48.5)	
>20 years	4 (6.6)	1 (3.6)	3 (9.1)	
Physician Sex				0.117
Male	37 (60.7)	14 (50.0)	23 (69.7)	
Female	24 (39.3)	14 (50.0)	10 (30.3)	

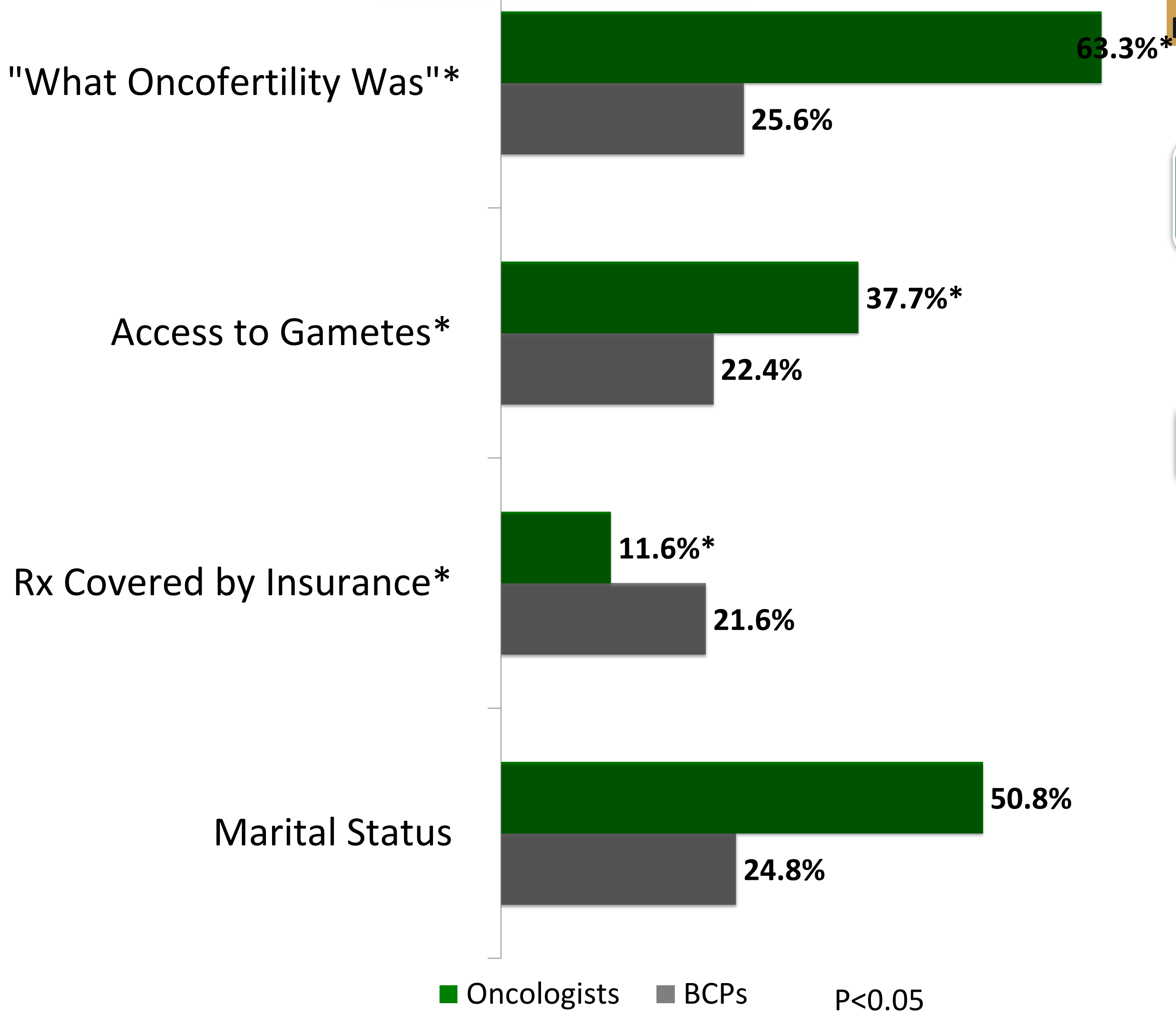
BCPs

Characteristics	n (%)
Patient Age (years) Mean ± SDa	40.9 ± 5.0
<40 years	42 (33.6)
40-49 years	83 (66.4)
Where they lived	
Shanghai	55 (44.0)
Outside Shanghai ≥1 million inhabitants	34 (27.2)
Outside Shanghai <1 million inhabitants	21 (16.8)
Rural Area	15 (12.0)
Education	
Primary School	10 (8.0)
High School	43 (34.4)
University	66 (52.8)
Other	6 (4.8)

ATTITUDES AND SERVICES



KNOWLEDGE



COMPARISON OF MEDICAL VS SURGICAL ONCOLOGISTS

• **No Significant Difference** Was Noted With Respect To Knowledge Of Oncofertility, Marital Status Requirements, Access to Gametes, And Ability For Treatment To Be Covered By Insurance.

FACTORS ASSOCIATED WITH “KNOWING WHAT ONCOFERTILITY WAS” AMONG ONCOLOGISTS

	Univariate logistic regression		Multiple logistic regression ^a	
	OR (95% CI)	p value	AOR (95% CI)	p value
Age (years)	0.99 (0.90, 1.08)	0.755		
Sex: Male vs Female	0.42 (0.13, 1.30)	0.130	0.48 (0.15, 1.53)	0.213
Specialty: Medical vs Surgical	2.65 (0.88, 7.97)	0.083	2.37 (0.77, 7.29)	0.133

FACTORS ASSOCIATED WITH “DISCUSSING ONCOFERTILITY” WITH REPRODUCTIVE-AGED PATIENTS AMONG ONCOLOGISTS

	Univariate logistic regression		Multiple logistic regression	
	OR (95% CI)	p value	AOR (95% CI)	p value
Age (years)	0.98 (0.89, 1.09)	0.744		
Gender: Male vs Female	1.76 (0.53, 5.89)	0.355		
Specialty: Medical vs Surgical	1.72 (0.50, 5.92)	0.387		
“Knowing what oncofertility was”: Yes vs No	7.08 (1.87, 26.9)	0.004	6.44 (1.59, 26.1)	0.009
Knowledge of oncofertility (for each 1-point increase)	1.81 (0.91, 3.61)	0.091	1.75 (0.84, 3.68)	0.138
Attitude towards oncofertility: Positive vs Negative	3.80 (0.95, 15.2)	0.060	2.19 (0.47, 10.1)	0.317

UTILIZATION

- Despite oncofertility knowledge and reported discussions, 64% HCPs reported referring **< 10 BCP** and **0% referred** > 25 BCP in the past year.

Conclusion

- Most of surveyed Chinese medical and surgical oncologists have positive attitudes toward oncofertility.
- However, a lack of fertility preservation knowledge for both healthcare providers and patients exists, which may hinder patient referrals.
- Findings emphasize need for standardization of oncofertility education and training as well as need for a rapid and effective navigation mechanism between oncologists, cancer patients, and reproductive health specialists to optimize care.

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