

# Adjuvant Endocrine Therapy in patients with Breast Cancer: relationship between Side Effects, Quality of Life and Treatment Adherence

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## BACKGROUND

- Adjuvant endocrine therapy (ET) is associated with increased recurrence-free survival of breast cancer.
- ET is responsible for multiple side effects which could negatively impact the quality of life (QL) and treatment adherence.
- Evidence from clinical practice settings shows that the prevalence of adherence to ET ranged from 41-72%.
- This study analyses the relationship between endocrine-related symptoms, QL and treatment adherence in patients with breast cancer.

## METHODS

- A cross-sectional study based on two structured self-report questionnaires.
- Women who underwent adjuvant ET at least for three months were included.
- The **FACT-ES** (version 4) was used to measure QL (FACT-G, 4 domains, 27 items) and to evaluate 19 endocrine-related symptoms (ESS-19 module, 19 items).
- Morisky Medication Adherence Scale-4 (**MMAS-4**, 4 items) was used for measuring the patient's adherence.
- Bivariate analysis was performed using the Spearman coefficient and the Mann-Whitney test (significance level of 5%).

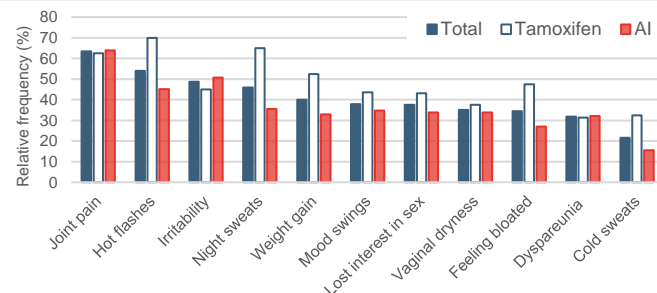
## RESULTS

### POPULATION STUDY AND SIDE EFFECTS

A total of **113 women** have valid questionnaires and were included in this study.

**Table 1:** Sociodemographic and clinicopathological characteristics (N=113).

Characteristics	All	Treatment details	All
Age, median (extremes)	55 (29-83)	Current ET:	
≤ 45 years	24 (21.2%)	Tamoxifen	40 (35.4%)
> 65 years	22 (19.5%)	Aromatase inhibitor (AI)	73 (64.6%)
Married	75 (66.4%)	Goserelin	28 (24.8%)
Living with children (<18y)	28 (24.8%)	Duration of ET, months:	
Employed	46 (40.7%)	Median (extremes)	21 (3-89)
Psychiatry and/or Psychology follow-up	21 (18.6%)	> 24 months	51 (45.1%)
Family history of breast cancer (1 <sup>st</sup> / 2 <sup>nd</sup> degree)	23 (20.4%)	> 60 months	11 (9.7%)
Menopausal status	57 (50.4%)	Mastectomy	34 (30.1%)
Stage II-III	53 (46.9%)	Axillary dissection	32 (28.3%)
		Previous chemotherapy	69 (61.1%)
		Trastuzumab	31 (27.4%)
		Previous radiotherapy	92 (81.4%)



**Graph 1:** The severe endocrine-related symptoms described by patients (relative frequency of symptoms indicated "very much" or "quite a bit"), grouped by HT class. AI: aromatase inhibitor.

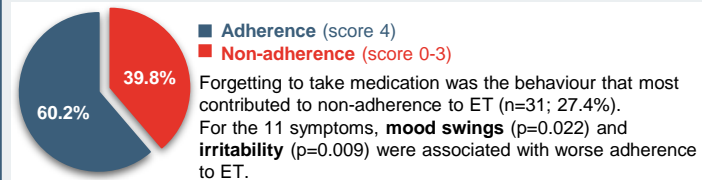
### QUALITY OF LIFE AND TREATMENT ADHERENCE

**Table 2:** Of the 11 most severe symptoms (graph 1), 7 endocrine-related symptoms had a weak-to-moderate correlation with a worse QL score.

Side effect	PWB	SWB	EWB	FWB	FACT-G
Dyspareunia	0.240*	0.176	0.009	0.018	0.213*
Lost interest in sex	0.258*	0.223*	0.119	0.194	0.272**
Weight gain	0.185	0.100	0.200*	0.142	0.205*
Feeling bloated	0.250**	0.180	0.169	0.179	0.248**
<b>Mood swings</b>	<b>0.449***</b>	0.215*	<b>0.357***</b>	0.261**	<b>0.420***</b>
<b>Irritability</b>	<b>0.352***</b>	0.268**	<b>0.429***</b>	0.284**	<b>0.447***</b>
<b>Joint pain</b>	<b>0.505***</b>	0.263**	0.281**	<b>0.344***</b>	<b>0.468***</b>
ESS-19	0.545***	0.217*	0.297**	0.279**	<b>0.453***</b>

**Legends:** PWB – physical well-being; SWB – social well-being; EWB – emotional well-being; FWB – functional well-being; FACT-G – total score of QL; ESS-19 – average score of 19 endocrine-related symptoms. \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

**Joint pain, mood swings and irritability** were moderately associated with a worse QL score.



**Graph 2:** Adherence to adjuvant ET (N=113).

#### Other results:

- No association was found among ET class, different QL domains (PWB, SWB, EWB, FWB) and treatment adherence.
- Women with a low level of adherence had worse QL scores, without statistical significance ( $p=0.085$ ).

## CONCLUSIONS

- Vasomotor symptoms, mood changes and joint pain were the most severe endocrine-related symptoms reported.
- Mood swings and irritability were associated with worse QL score and low treatment adherence, which was suboptimal, especially in a country where women have free access to this medication.
- In clinical practice, in addition to ensuring the most effective and appropriate treatment for each patient, it is important to assess and manage the adverse effects of adjuvant ET and to optimize the quality of life and adherence to ET.

## REFERENCES

- Davies C, et al. Relevance of breast cancer hormone receptors and other factors to the efficacy of adjuvant tamoxifen: patient-level meta-analysis of randomised trials. *Lancet*. 08 2011;378(9793):771-84.
- Ganz PA, et al. Impact of Adjuvant Endocrine Therapy on Quality of Life and Symptoms: Observational Data Over 12 Months From the Mind-Body Study. *J Clin Oncol*. Mar 2016;34(8):816-24.
- Ferreira AR, et al. Differential impact of endocrine therapy and chemotherapy on quality of life of breast cancer survivors: a prospective patient-reported outcomes analysis. *Ann Oncol*. 11 2019;30(11):1784-1795.
- Murphy CC, et al. Adherence to adjuvant hormonal therapy among breast cancer survivors in clinical practice: a systematic review. *Breast Cancer Res Treat*. Jul 2012;134(2):459-78.
- Stahlschmidt R, et al. Adherence and quality of life in women with breast cancer being treated with oral hormone therapy. *Support Care Cancer*. Oct 2019;27(10):3799-3804.

## MORE INFORMATIONS

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