

GIM3-FATA

First Adjuvant Trial on All aromatase inhibitors in early breast cancer

**A phase III study comparing anastrozole, letrozole and exemestane,
upfront (for 5 years) or sequentially (for 3 years after 2 years of tamoxifen),
as adjuvant treatment of postmenopausal patients
with endocrine-responsive breast cancer**

S.De Placido, C.Gallo, M.De Laurentiis, G.Bisagni, G.Arpinò, M.G.Sarobba, F.Riccardi,
A.Russo, L.Del Mastro, A.A.Cogoni, F.Cognetti, S.Gori, A.Frassoldati, D.Amoroso,
L.Laudadio, L.Moscetti, F.Montemurro, F.Nuzzo, P.Carlini and F.Perrone
on behalf of the GIM Investigators.



EUDRACT number: 2006 – 004018 - 42



AIFA code: FARM5K3MEE

GIM3-FATA



Adjuvant anastrozole versus exemestane versus letrozole, upfront or after 2 years of tamoxifen, in endocrine-sensitive breast cancer (FATA-GIM3): a randomised, phase 3 trial



Sabino De Placido*, Ciro Gallo*, Michelino De Laurentiis, Giancarlo Bisagni, Grazia Arpino, Maria Giuseppa Sarobba, Ferdinando Riccardi, Antonio Russo, Lucia Del Mastro, Alessio Aligi Cogoni, Francesco Cognetti, Stefania Gori, Jennifer Foglietta, Antonio Frassoldati, Domenico Amoroso, Lucio Laudadio, Luca Moscetti, Filippo Montemurro, Claudio Verusio, Antonio Bernardo, Vito Lorusso, Adriano Gravina, Gabriella Moretti, Rossella Lauria, Antonella Lai, Carmen Mocerino, Sergio Rizzo, Francesco Nuzzo, Paolo Carlini, Francesco Perrone*, on behalf of the GIM Investigators*

Summary

Background Uncertainty exists about the optimal schedule of adjuvant treatment of breast cancer with aromatase inhibitors and, to our knowledge, no trial has directly compared the three aromatase inhibitors anastrozole, exemestane, and letrozole. We investigated the schedule and type of aromatase inhibitors to be used as adjuvant treatment for hormone receptor-positive early breast cancer.

Lancet Oncol 2018

Published Online

February 23, 2018

[http://dx.doi.org/10.1016/S1470-2045\(18\)30116-5](http://dx.doi.org/10.1016/S1470-2045(18)30116-5)



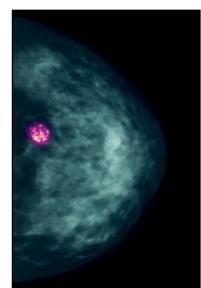
Adjuvant aromatase inhibition: more options for patients



Aromatase inhibitors are the preferred treatment for postmenopausal patients with hormone receptor-positive early breast cancer.¹ Third-generation aromatase inhibitors exist in two classes with different modes of action: reversible binding of the aromatase enzyme by the non-steroidal aromatase inhibitors anastrazole and letrozole, and irreversible inhibition of the enzyme by the steroidal aromatase inhibitor exemestane.

It is conceivable that clinical differences exist between the steroidal and non-steroidal aromatase inhibitors given the irreversible aromatase inhibition by

An important issue discussed extensively by the authors is the slower than expected accrual and event rates, which led the independent data monitoring committee to do a time-based analysis of the study after a median follow-up of 5 years, rather than the initially planned event-driven analysis. After 5 years, disease-free survival was 88.5% (95% CI 86.7–90.0) with the switch strategy and 89.8% (88.2–91.2) with the upfront aromatase inhibitor regimen (hazard ratio 0.89, 95% CI 0.73–1.08; $p=0.23$). The assumption was that only a 2% absolute difference in 5-year disease-



VisionScience Photo Library

Luc Y Dirix
AZ-Sint-Augustinus, University of Antwerp, Antwerp B-2610,
Belgium

Background

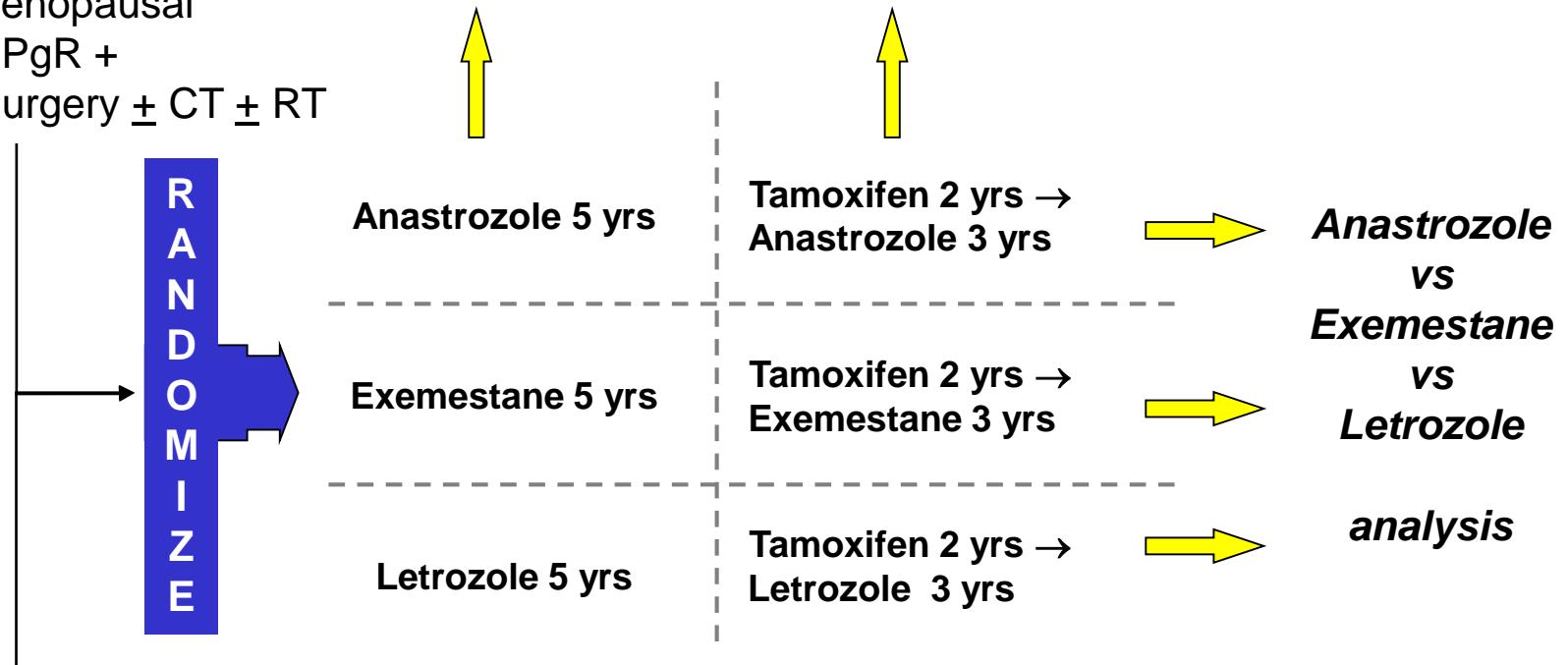
- **Uncertainty exists about the optimal schedule of adjuvant treatment with Aromatase Inhibitors (AI) in postmenopausal patients with hormone-responsive breast cancer**
- **No trial has ever compared all the three AI**

Study design

Patient population

- Early breast cancer
- Postmenopausal
- ER or PgR +
- After surgery \pm CT \pm RT

Up-front vs sequential treatment analysis



Stratification:

- ER/PgR status (+/+, +/- or -/+, +/uk or uk/+, uk/uk)
- Previous chemotherapy (no/adjuvant/neoadjuvant or both)
- pN (pN0/pN1/pN2 or pN3)
- HER2 (positive/negative/unknown)

Drug doses:

- Anastrozole**, 1 mg daily, orally
- Exemestane**, 25 mg daily, orally
- Letrozole**, 2.5 mg daily, orally
- Tamoxifen**, 20 mg daily, orally

Study endpoint

Primary objectives:

- To compare the disease free survival (DFS) in patients treated with:
 - sequential (Tamoxifen 2 yrs → AIs 3 yrs) vs upfront (AIs 5 yrs) strategy of treatment
 - The three AIs (A – anastrozole, E – exemestane, L – Letrozole) among themselves

Secondary objectives:

- Overall survival (OS)
- Toxicity
- Distant-metastasis-free survival (DMFS),
- Cumulative incidence of contralateral breast cancer as first event
- Breast cancer-free survival
- Cumulative incidence and type of second non-breast invasive cancer

Sample size

- Sample size was calculated to detect a **2% absolute advantage in DFS at 5yrs** with Up-front schedule (HR=0.79)
 - assuming 90% 5-yr DFS in the switch arm
 - 2-sided alpha error = 0.05
 - 80% power
- 669 events required
- 3600 patients planned

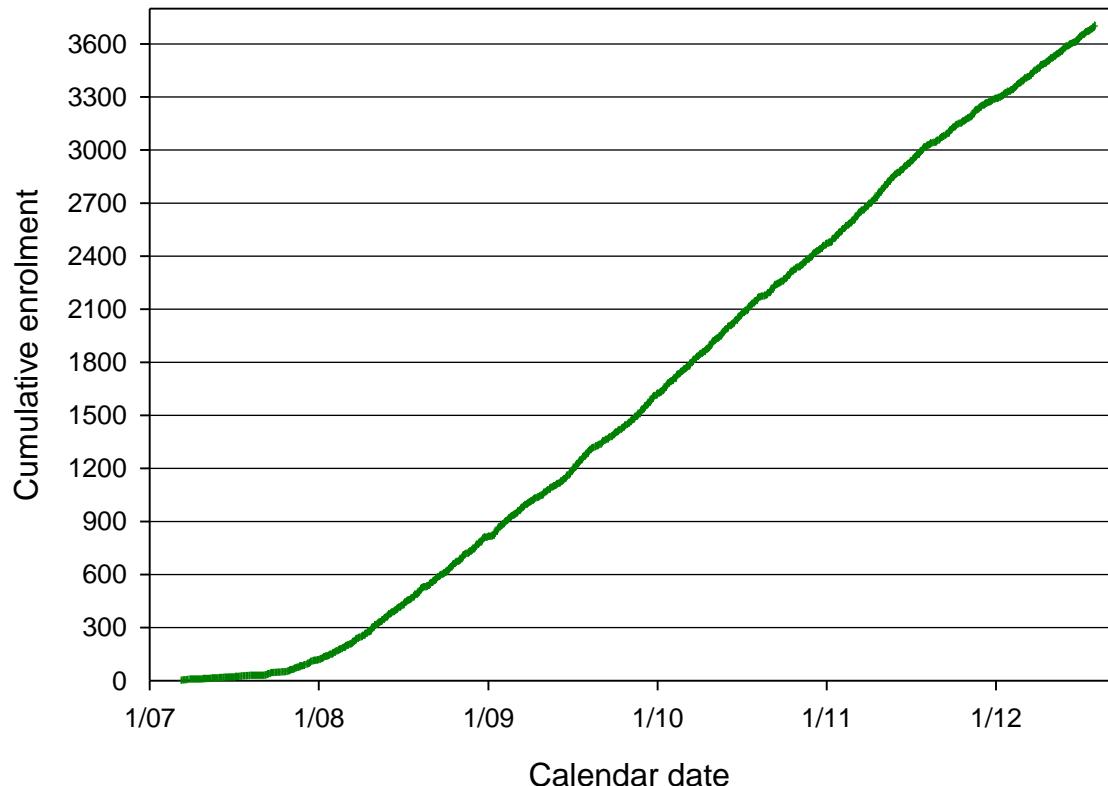
Participating Centres: 96

Centres enrolled at least one patient: 76

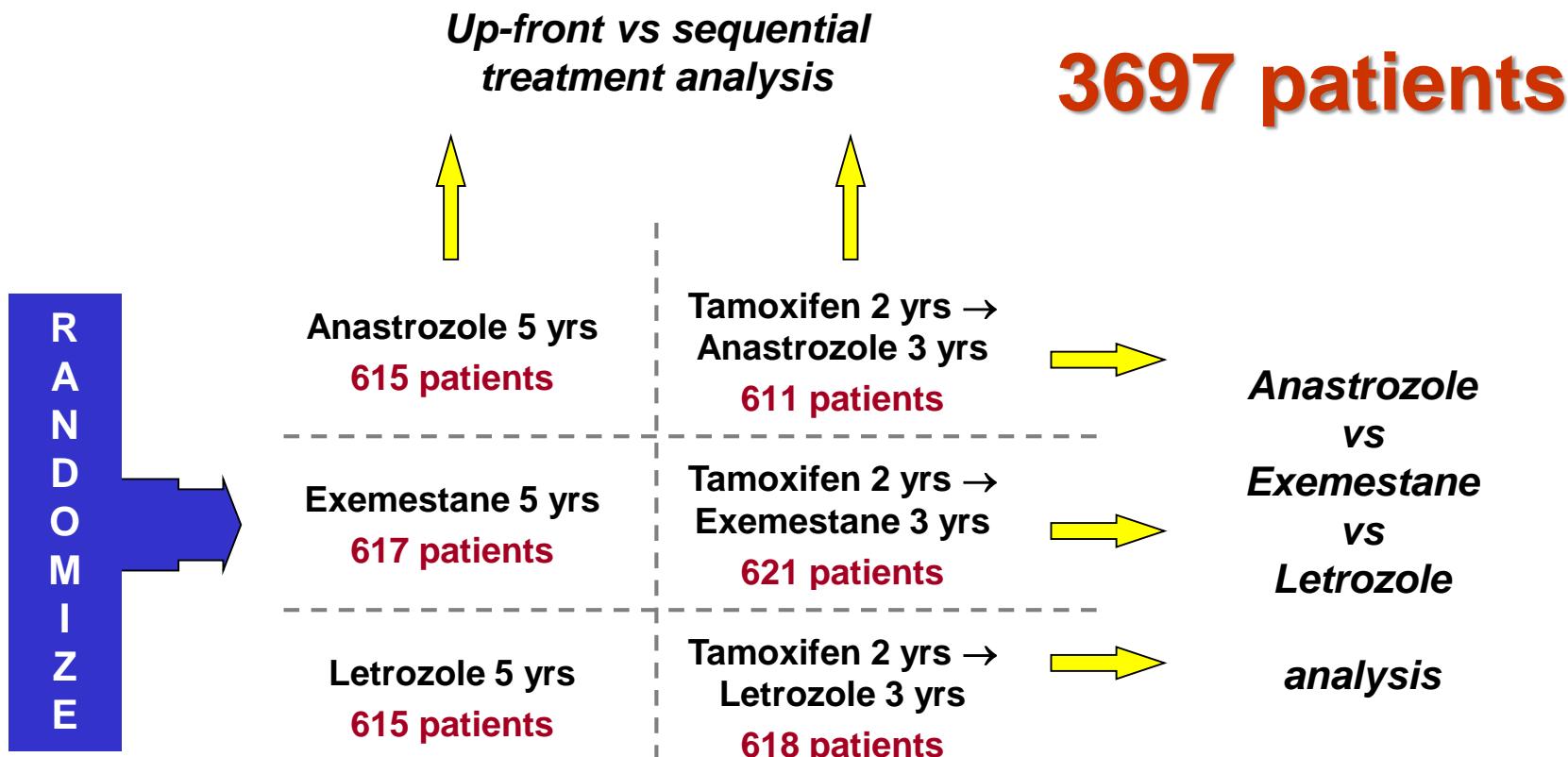
Enrolment of first patient: March 9th, 2007

Enrolment of last patient: July 31st, 2012

3697 patients



Study design



Baseline characteristics

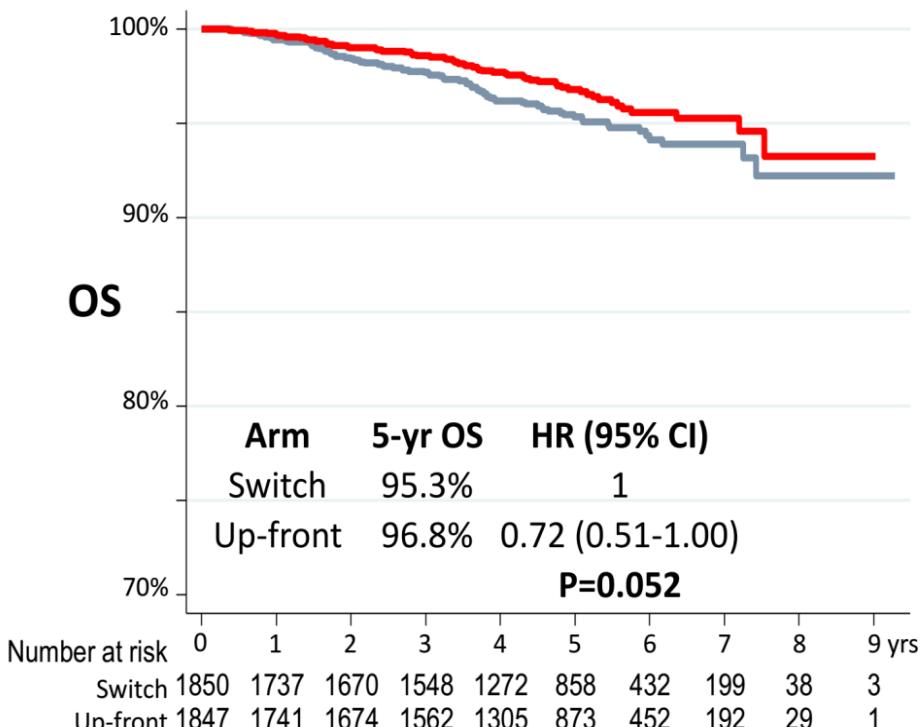
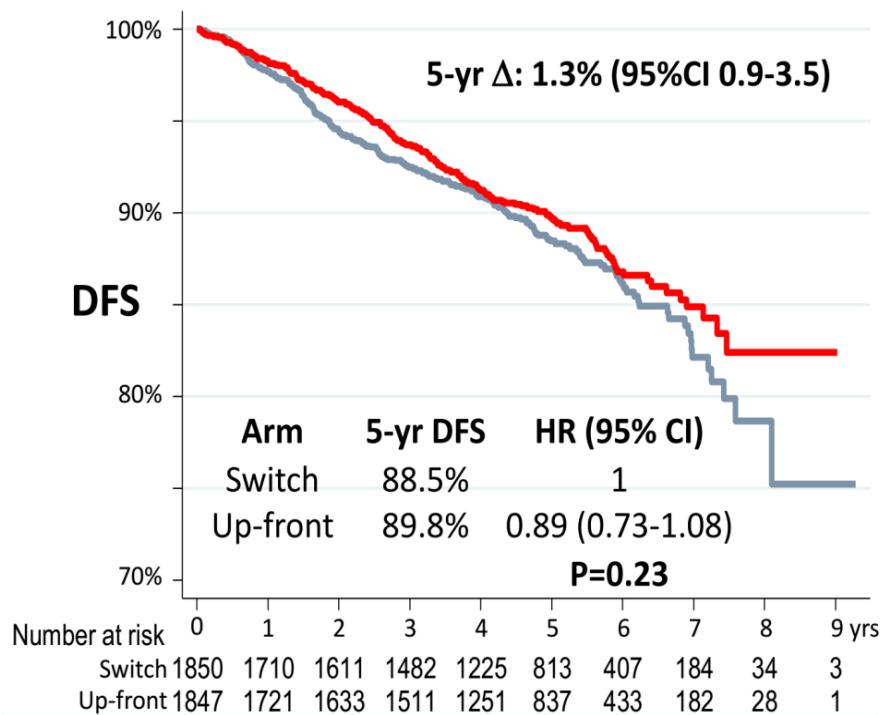
All balanced
among
comparison
arms

Age category		pT category	
Median (IQR)	64 (58-70)	pT1	2586 (69.9%)
<60	1152 (31.2%)	pT2	893 (24.2%)
60 – 69	1510 (40.8%)	pT3/pT4	91 (2.5%)
70 +	1035 (28.0%)	Unknown	127 (3.4%)
BMI category		Histologic grading	
Under/Normal	1031 (27.9%)	Low	485 (13.1%)
Overweight	1105 (29.9%)	Intermediate	2129 (57.6%)
Obese	842 (22.8%)	High	797 (21.6%)
Unknown	719 (19.4%)	Unknown	286 (7.7%)
Hormone receptors		Previous chemo	
Both positive	3288 (88.9%)	No	2282 (61.7%)
Only one positive	409 (11.1%)	Yes	1415 (38.3%)
HER-2 status		Trastuzumab	
Negative	3332 (90.1%)	No	3323 (89.9%)
Positive	330 (8.9%)	Yes	257 (7.0%)
Unknown	35 (0.9%)	Unknown	117 (3.2%)
pN category		Radiotherapy	
pN0	2378 (64.3%)	No	1080 (29.2%)
pN1	928 (25.1%)	Yes	2500 (67.6%)
pN2/pN3	391 (10.6%)	Unknown	117 (3.2%)

Events

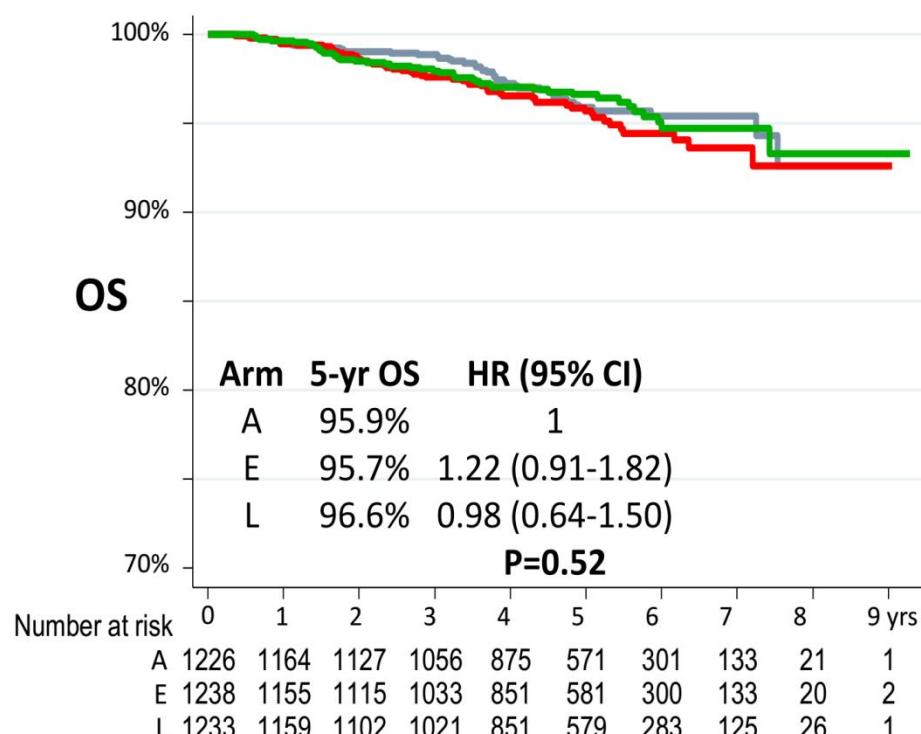
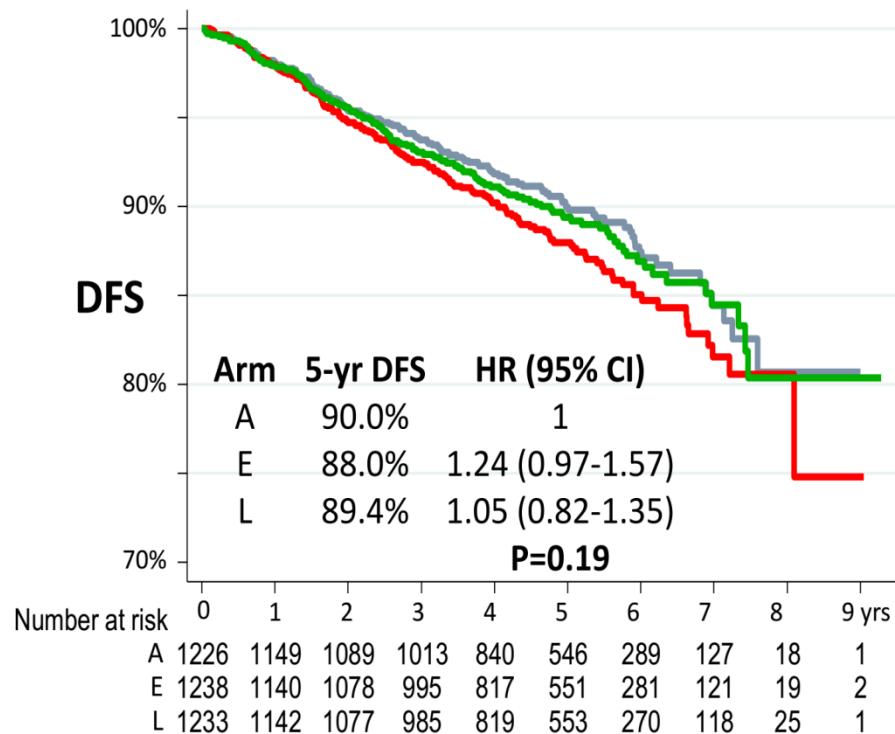
	Switch	Up-front	Anastrozole	Exemestane	Letrozole
	N=1850	N=1847	N=1226	N=1238	N=1233
DFS events	211 (11.4)	190 (10.3)	124 (10.1)	148 (12.0%)	129 (10.5%)
Type of 1st DFS event					
Locoregional	30 (1.6%)	26 (1.4%)	12 (1.0%)	30 (2.4%)	14 (1.1%)
Distant	99 (5.4%)	84 (4.5%)	63 (5.1%)	57 (4.6%)	63 (5.1%)
2 nd breast cancer	13 (0.7%)	16 (0.9%)	12 (1.0%)	11 (0.9%)	6 (0.5%)
2 nd non-breast cancer	44 (2.4%)	36 (1.9%)	26 (2.1%)	29 (2.3%)	25 (2.0%)
Death without cancer	25 (1.4%)	28 (1.5%)	11 (0.9%)	21 (1.7%)	21 (1.7%)
Deaths	80 (4.3%)	58 (3.1%)	43 (3.5%)	52 (4.2%)	43 (3.5%)

Schedule comparison



Adjusted by ER status, HER2 status, Nodal status and Previous Chemotherapy

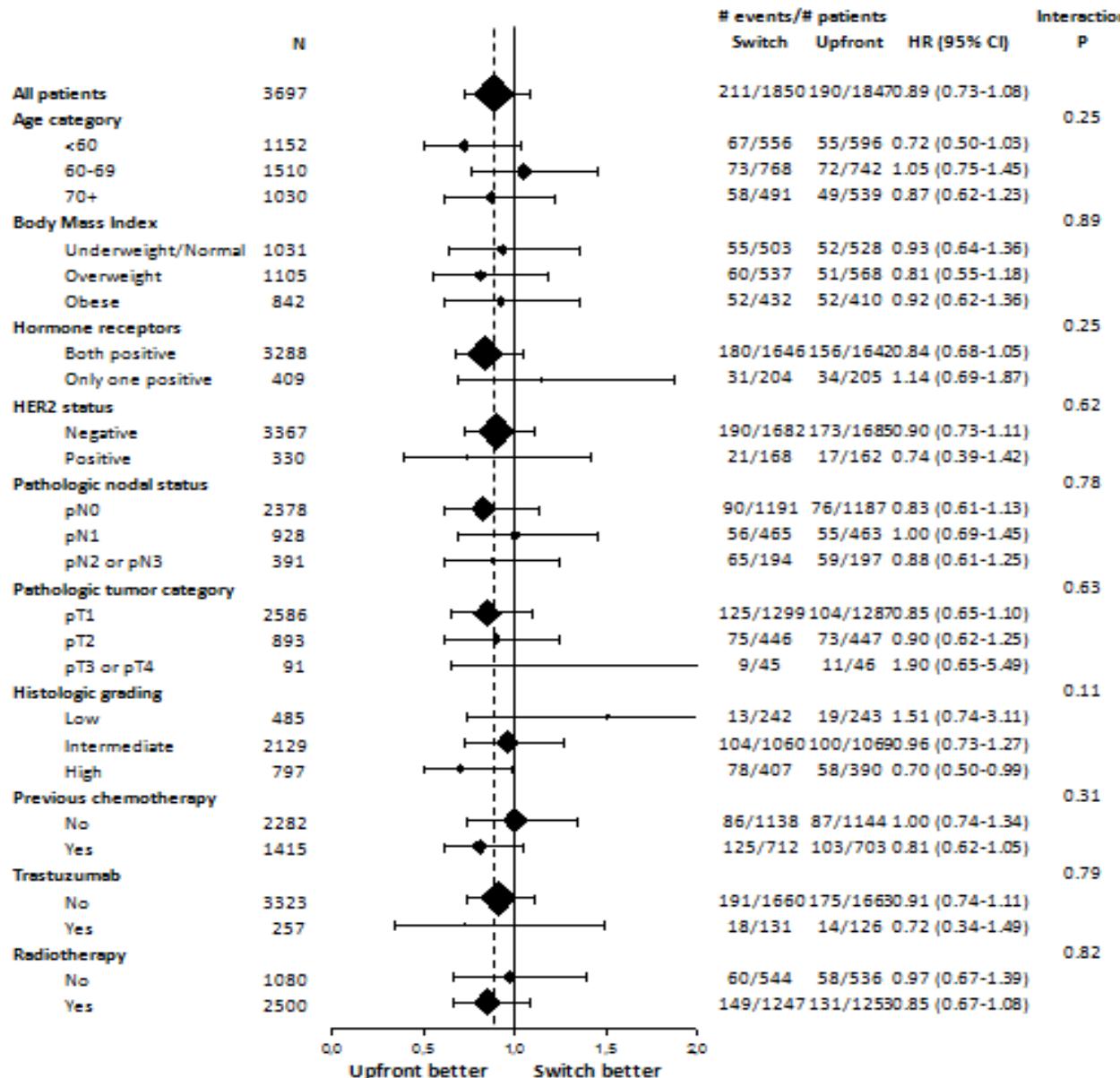
Als comparison



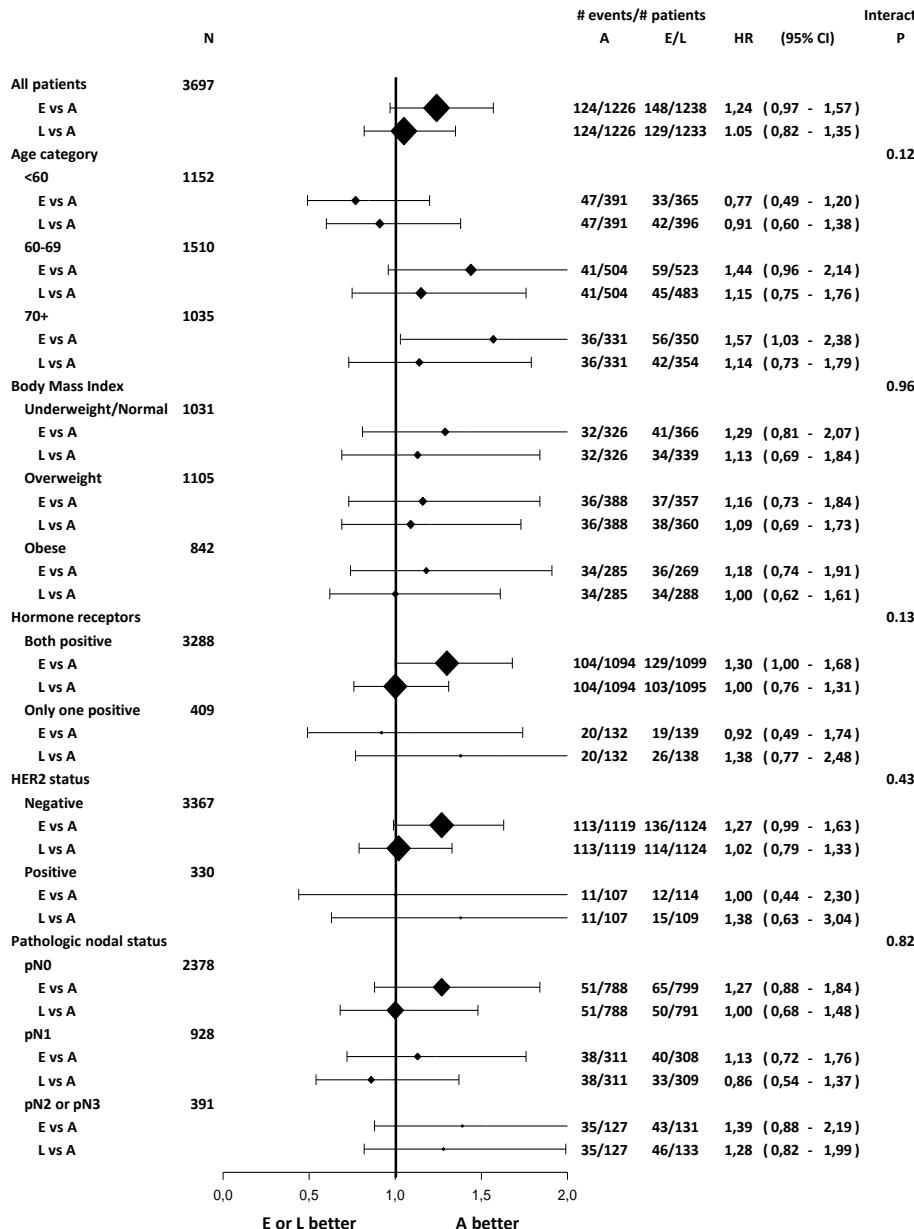
— Anastrozole — Exemestane — Letrozole

Adjusted by ER status, HER2 status, Nodal status and Previous Chemotherapy

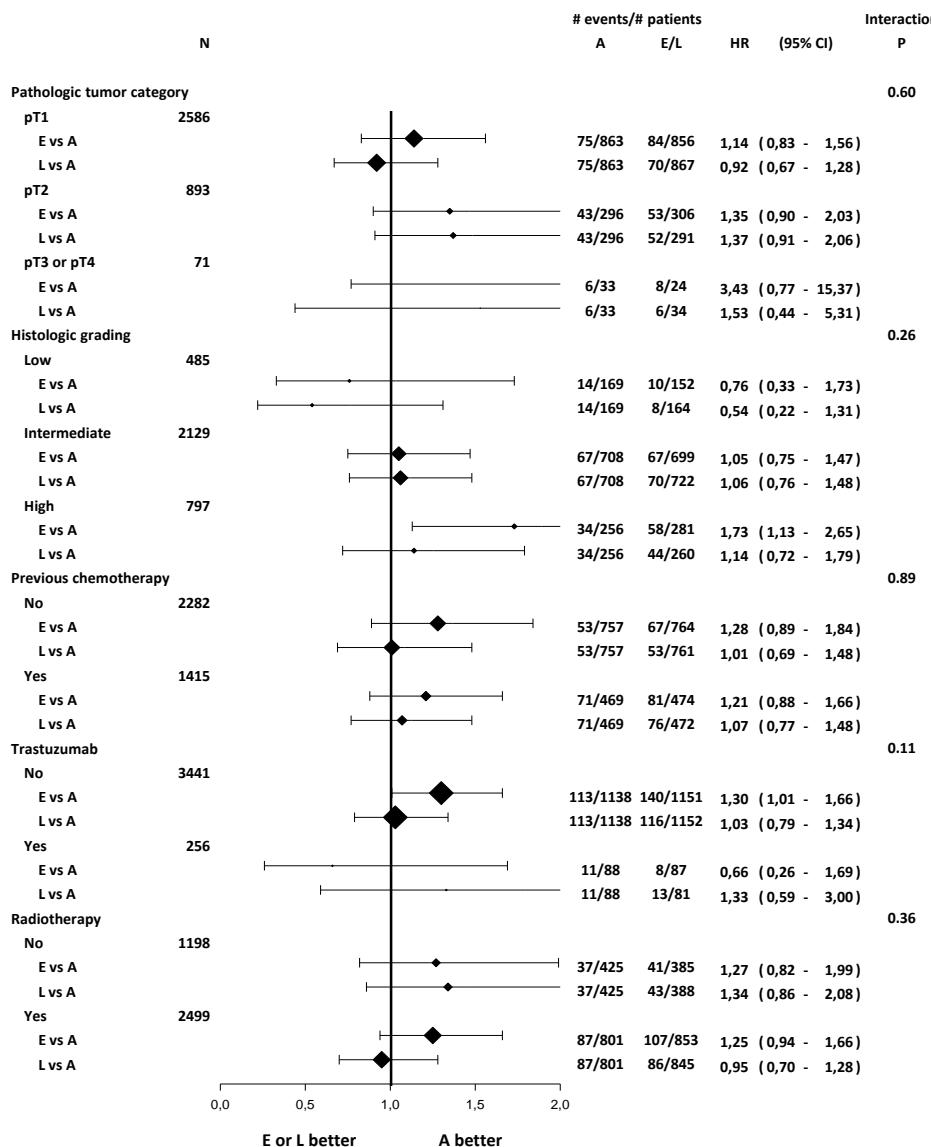
Forest plot of the effect of schedule on the HR of progression or death according to patients' and tumors' characteristics



Forest plot of the effect of different aromatase inhibitors on the HR of progression or death according to major patient's and tumor's characteristics. A=anastrozole, E=Exemestane, L=Letrozole



(continued). Forest plot of the effect of different aromatase inhibitors on the HR of progression or death according to major patient's and tumor's characteristics. A=anastrozole, E=Exemestane, L=Letrozole



Causes of treatment interruption

	Tam→Anastrozole	Tam→Exemestane	Tam→Letrozole	Anastrozole	Exemestane	Letrozole
	N=611	N=621	N=618	N=615	N=617	N=615
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Tamoxifen						
Death	3 (0·5)	2 (0·3)	4 (0·6)			
Relapse/second cancer	22 (3·6)	31 (5·0)	16 (2·6)			
Patient refusal	11 (1·8)	14 (2·3)	11 (1·8)			
Toxicity	74 (12·1)	61 (9·8)	69 (11·2)			
Other	22 (3·6)	13 (2·1)	16 (2·6)			
Aromatase inhibitors						
Death	4 (0·7)	5 (0·8)	2 (0·3)	4 (0·7)	8 (1·3)	5 (0·8)
Relapse/second cancer	23 (3·8)	13 (2·1)	17 (2·8)	29 (4·7)	44 (7·1)	36 (5·9)
Patient refusal	9 (1·5)	14 (2·3)	12 (1·9)	12 (2·0)	15 (2·4)	17 (2·8)
Toxicity	22 (3·6)	29 (4·7)	42 (6·8)	43 (7·0)	44 (7·1)	44 (7·2)
Other	23 (3·8)	24 (3·9)	21 (3·4)	19 (3·1)	23 (3·7)	21 (3·4)

Toxicity

TAM = 204

AI = 93

AI = 131

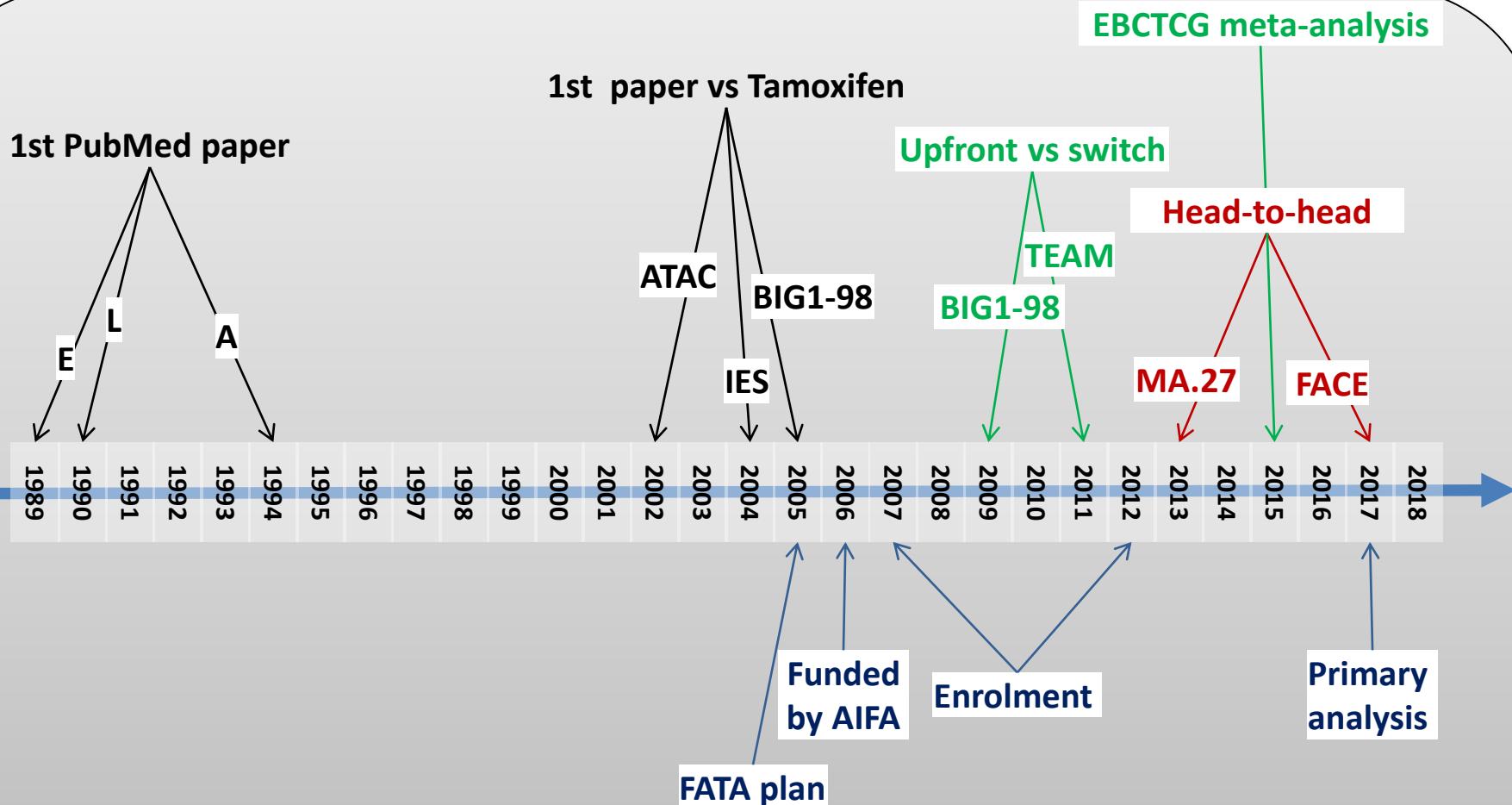
Side effects - schedule

	Any CTCAE grade >0, n (%)				P
	Switch (N=1761)		Upfront (N=1766)		
Hot flushes	193	(11,0)	145	(8,2)	0.005
Cholesterol	1040	(59,1)	1163	(65,9)	<0.0001
Triglyceride	549	(31,2)	460	(26,0)	0.0007
Osteoporosis	343	(19,5)	422	(23,9)	0.003
Arthritis	456	(25,9)	595	(33,7)	0.0001
Muscle weakness/pain	230	(13,1)	294	(16,6)	0.003
Bone pain	387	(22,0)	483	(27,3)	0.0001
Neurology other	50	(2,8)	79	(4,5)	0.001
Vaginal other	29	(1,6)	6	(0,3)	<0.0001
Vascular	68	(3,9)	41	(2,3)	0.007

Side effects – AIs

	Any CTCAE grade >0, n (%)						P
	Anastrozole (N=1175)		Exemestane (N=1177)		Letrozole (N=1175)		
Gastrointestinal	116	(9,9)	144	(12,2)	89	(7,6)	0.0007
Cholesterol	752	(64,0)	698	(59,3)	753	(64,1)	<0.0001

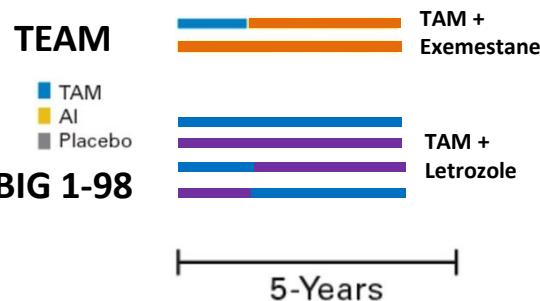
Research in context



GIM3 – FATA

GIM3 – FATA results within the current scenario

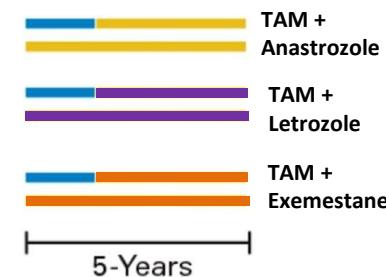
Upfront treatment with AI for 5 ys Vs. switch strategy



The EBCTCG Meta-analysis

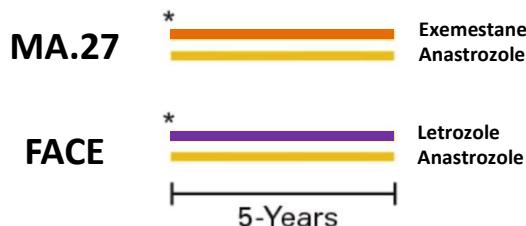
Small absolute benefit
in favor of upfront AI
Clinically relevant?

GIM3 - FATA



No difference

Comparison of AIs among each other

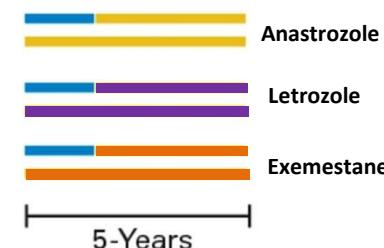


The EBCTCG Meta-analysis

Indirect comparison among AIs

No apparent difference

GIM3 - FATA



No difference

Conclusions

- In the FATA-GIM3 trial there was a small DFS advantage for Up-front vs Switch strategy (1.3% at 5yr, 95% CI 0.9-3.5), not significant according to the pre-specified hypothesis
- No significant differences of efficacy were observed among anastrozole, exemestane and letrozole
- In both comparisons, toxicity profiles were consistent with expectations

Acknowledgments

The patients participating in this trial, and the study investigators

List of participating institutions and co-authors

- Istituto Nazionale per lo Studio e la Cura dei Tumori – Fondazione G. Pascale, IRCCS, Unità Sperimentazioni Cliniche, Napoli (Francesco Perrone, Maria Carmela Piccirillo, Gennaro Daniele, Gianfranco De Feo)
- Università degli Studi della Campania Luigi Vanvitelli - Statistica Medica, Napoli (Ciro Gallo, Simona Signoriello, Paolo Chiodini, Giuseppe Signoriello, Vittorio Simeon)
- IRCCS - Istituto di Ricerca Farmacologiche Mario Negri, Laboratorio di Metodologia per la Ricerca Clinica, Milano (Valter Torri, Davide Poli, Irene Floriani, Angela Pesenti Gritt)
- Istituto Nazionale per lo Studio e la Cura dei Tumori – Fondazione G. Pascale, IRCCS, Oncologia Medica Senologica, Napoli (Andrea De Matteis, Micheline De Laurentiis, Francesca Di Rella, Adriano Gravina, Gabriella Landi, Francesco Nuzzo, Carmen Pacilio, Vincenzo Labonia, Giovanni Iodice)
- Arcispedale Santa Maria Nuova, Oncologia Medica Senologica, Reggio Emilia (Giancarlo Bisagni, Corrado Boni, Erika Gervasi)
- Università di Napoli Federico II - Facoltà di Medicina, Dipartimento di Oncologia-Endocrinologia Molecolare Clinica, Napoli (Sabino De Placido, Rossella Laura, Grazia Arpino, Valeria Forestieri, Matilde Pensabene, Mario Giuliano, Carmine De Angelis, Cinzia Cardalesi, Giuliano Palumbo, Giuseppe Buono, Francesco Schettini, Gennaro Limite, Antonello Accurso, Renato Thomas, Guglielmo Thomas, Giuseppina Cortino)
- Azienda Ospedaliera Universitaria di Sassari, Oncologia Medica - Sassari (Giuseppina Sarroba, Antonio Farris, Antonella Lai, Antonella Mura)
- Ospedale Cardarelli, UO Oncologia Medica, Napoli (Ferdinando Riccardi, Carmela Mocerino, Giacomo Carteni', Maria Giuseppa Vitale)
- Azienda Ospedaliera Universitaria Policlinico Paolo Giaccone, Oncologia Medica, Palermo (Antonio Russo, Giuseppe Badalamenti, Sergio Rizzo, Antonio Galvano, Lorena Incorvaia, Stefania Cusenza)
- Ospedale Policlinico San Martino – IRCCS per l'oncologia, Dipartimento di Oncologia Medica, UO Sviluppo Terapie Innovative, Genova (Lucia Del Mastro, Claudia Bighi, Alessia Levaggi, Sara Giraudi)
- Azienda Ospedaliera Universitaria, Oncologia Medica, Sassari (Antonio Pazzola, Alessio Cogoni, Maria Grazia Allicicco, Silvia Mura, Valeria Sanna)
- Istituto Nazionale Tumori Regina Elena, SC Oncologia Medica 1, Roma (Francesco Cognetti, Paolo Carlini, Cecilia Nistico', Alessandra Fabi, Gianluigi Ferretti)
- Ospedale Sacro Cuore Don Calabria, UOC Oncologia Medica, Negrar (Stefania Gori, Monica Turazza)
- Ospedale Silvestrini, Oncologia Medica, S.Andrea delle Fratte (Carlo Basutro, Jennifer Foglietta)
- Azienda Ospedaliera S.Anna, UO Oncologia, Ferrara (Antonio Frassoldati, Alessio Schirone, Alessandra Santini)
- Presidio Ospedaliero "F. Renzetti" USL Lanciano-Vasto-Chieti, UO Oncologia Medica, Lanciano (Antonio Nuzzo, Samantha Forciniti, Edoardo Biondi, Lucio Laudadio)
- Presidio Ospedaliero 'Belcolle', UOC Oncologia Medica, Viterbo (Luca Moscetti, Mario Chilleli, Agnese Fabbri, Giuliana D'auria)
- Ospedale Unico Versilia, UO Oncologia Medica, Lido di Camaiore (Domenico Amoruso, Sara Donati)
- IRCC - Istituto per la Ricerca e la Cura del Cancro, Divisione Oncologia Medica, Candiloro (Filippo Montemurro, Caterina Aversa)
- Azienda Ospedaliera, SC Oncologia Medica, Savona (Claudio Verusio, Giuseppe di Lucca, Claudia Poglani, Chiara Rossini)
- IRCCS- Istituti Clinici Scientifici Maugeri, UO Oncologia Medica, Pavia (Antonio Bernardo, Raffaella Palumbo, Cristina Teragni)
- Polo Oncologico, Oncologia, Lecce (Vito Lorusso, Mariangela Ciccarese, Rosachiara Forcignano)
- Ospedale S.Spirito, Day Hospital Oncologia, Casale Monferrato (Alberto Muzio, Mario Botta, Federica Grossi, Giulia Galizzi)
- Azienda Ospedaliera Fatebenefratelli ed Oftalmico, Divisione di Oncologia Medica E Chemioterapia, Milano (Gabriella Farina, Nicola La Verde)
- Ospedale Civile, Oncologia Medica, Faenza (Angelo Gambi, Laura Amaducci, Stefano Tamberi)
- Ospedale Degli Infermi, Oncologia Medica, Biella (Mario Clerico)
- Ospedale A.Perrino, Oncologia, Brindisi (Saverio Cirigli, Laura Orlando, Paola Schiavone, Palma Fedele)
- Ospedale Clinichirurgico "S.Annnunzio" - Università Degli Studi 'G. D'annunzio', Oncologia Medica, Chieti (Clara Natoli, Michele De Tursi, Antonino Grassadonia, Nicola Tinari)
- Ospedale di Circolo e Fondazione Macchi, UO Oncologia Medica, Varese (Giovanni Giardina, Graziella Pinotti)
- Ospedale Civile A. Cardarelli, UOC Oncologia Medica, Campobasso (Francesco Carrozza)
- Ospedale, Oncologia Medica, Avezzano (Francesco Recchia, Anna Di Blasio)
- Azienda Ospedaliera G.Rummo, UOC Oncologia Medica, Benevento (Vincenza Tinessa, Pasquale Zagarese, Elisabetta Carfora, Piera Federico)
- Azienda Ospedaliera Universitaria Maggiore della Carità, Dipartimento Oncologia, Novara (Oscar Alabiso)
- Azienda Sanitaria Unica Regionale Zona Territoriale 6, UO Oncologia Medica, Fabriano (Rosa Rita Silva, Cinzia Mariani)
- Ospedale Treviglio-Caravaggio, Oncologia Medica, Treviglio, (Sandro Barri, Fausto Petrelli)
- Ospedale, Oncologia Medica, Ravenna (Amelia Tienghi, Anna Cariello, Claudia Casanova, Claudio Dazzi)
- Istituto Tumori Giovanni Paolo II IRCCS Ospedale Oncologico, Oncologia Medica, Bari (Francesco Giotta, Daniele Rizzi, Agnese Latorre)

- Azienda Ospedaliera S.Chiara, UO Oncologia Medica, Trento (Antonella Ferro, Alessia Caldara, Michela Frisinghelli)
- Centro di Riferimento Oncologico della Basilicata CROB, Unità Operativa di Oncologia Medica, Rionero In Vulture (Michele Aieta, Mariarosa Coccaro, Carmen Romano)
- Università della Campania Luigi Vanvitelli, UOC Oncoematologia, Napoli (Fortunato Ciardiello, Michele Orditura, Anna Diana)
- Ospedale Civile – ASL1, Oncologia Medica, Città di Castello (Luigi Castori, Stefano Bravi)
- Ospedale Fatebenefratelli Benevento, Oncologia Medica, Benevento (Antonio Febbraro, Ilaria Spagnoletti, Claudia Corbo)
- Ospedale Bufalini, Oncologia Medica, Cesena (Marina Faedi)
- Azienda USL - Ospedale S.Anna, Day Hospital Oncologico, Castelnovo Nei Monti (Roberto Vignoli, Alda Zanni)
- Ospedale Civile - ASL 17, Struttura Complessa di Oncologia Medica, Saluzzo (Davide Perroni, Cinzia Bergamasco, Cinzia Nigro)
- Ospedale Civile, Ginecologia, Bressanone (Verena Thalmann, Sonia Prader)
- Istituto Scientifico Romagnolo per lo Studio e la Cura dei Tumori (I.R.S.T.), Oncologia, Melinda (Dino Amadori)
- Azienda Sanitaria Regionale Molise, UO Oncologia Medica, Isernia (Liberal Di Lullo, Divina Traficante)
- Azienda Ospedaliera S.Gerardo, SC Oncologia Medica, Monza (Paolo Biddoli, Marina Cazzaniga, Antonio Ardizioza)
- Azienda Ospedaliera di Melegnano Ospedale Serbelloni, Struttura Complessa di Oncologia Medica, Gorgonzola (Luciano Isa, Mario Comande, Daniela Mandelli)
- Ospedale San Vincenzo, Oncologia Medica, Taormina (Francesco Ferràù, Rosalba Rossello)
- Ospedale Civile "San Massimo", Dipartimento di Oncologia AUSL Pescara, Penne (Donato Natale)
- Ospedale San Sebastiano, Day Hospital Oncologico - Divisione Medicina Acuti, Correggio (Alessandra Zoboli)
- Ospedale S.Croce Asur 3, Oncologia Medica, Fano (Silvia Pelliccioni, Claudia Cappelletti)
- Radioterapia Università Firenze, Radioterapia, Firenze (Lorenzo Livri)
- Azienda Ospedaliera Carlo Poma, SC Oncologia Medica Ed Ematologia, Mantova (Giovanna Cavazzini, Patrizia Morselli)
- Humanitas Centro Catanesi di Oncologia, UFC di Oncologia Medica, Catania (Michele Caruso)
- Ospedale Oncologico M.Ascoli Armas Civic, Oncologia Medica, Palermo (Biagio Agostara, Vita Leonardi)
- Università della Campania Luigi Vanvitelli, Dipartimento Assistenziale di Medicina Interna Specialistica E Sociale, Napoli (Antonio Gambardella)
- Presidio Ospedaliero Santa Maria della Misericordia USL 18, Oncologia Medica, Rovigo (Felice Pasini, Daniela Menon)
- IRCCS - Istituto di Ricovero e Cura a Carattere Scientifico 'Casa Sollievo Della Sofferenza', UO Oncologia Medica, San Giovanni Rotondo, (Evaristo Maiello, Maria Grazia Morritti)
- Azienda Ospedale San Salvatore, Oncologia Medica, Pesaro (Virginia Casadei)
- Università Cattolica Sacro Cuore Centro di Ricerca E Formazione Ad Alta Tecnologia Nelle Scienze Biomediche, Dipartimento di Oncologia, Campobasso (Aida Di Stefano)
- Azienda Ospedaliera, Oncologia Medica, Alessandria (Vittorio Fusco)
- Ospedale Santa Croce, Ss Oncologia Medica, Moncalieri (Vincenzo Dongiovanni)
- Fondazione IRCCS Policlinico San Matteo, Oncologia Medica, Pavia (Donatella Grasso)
- Ospedale Umberto I ASL Salerno 1, Dipartimento di Onco-Ematologia, Nocera Inferiore (Alfonso Maria D'arco)
- Casa di Cura La Maddalena, Oncologia, Palermo (Vittorio Gebbia)
- Ospedale San Giovanni di Dio e Ruggi D'Aragona, UO Oncologia Medica, Salerno (Clementina Savastano)
- ASL 1 Torino - Ospedale Evangelico Valdese, Struttura Complessa di Oncologia, Torino (Gianni Fornari)
- Università Campus Biomedico, Oncologia Medica, Roma (Giuseppe Tonini)
- Azienda Unità Sanitaria Locale di Piacenza, Day Hospital Onco Ematologico, Piacenza (Luigi Cavanna)
- Azienda Ospedaliera Santa Maria Degli Angeli, Oncologia Medica, Pordenone (Silvana Saracchini)
- Presidio Ospedaliero 'San Giuliano', Servizio D.H. Oncologia, Giugliano (Pasquale Incoronato)
- Università Politecnica Delle Marche, Clinica di Oncologia Medica, Ancona (Rossana Berardi)
- Azienda Ospedaliera S.Giovanni di Dio, Unità Operativa di Oncologia Medica, Agrigento (Alfredo Butera)
- Università Cattolica Sacro Cuore Policlinico Agostino Gemelli, Dipartimento Per La Tutela Della Salute Della Donna E Della Vita Nascente, Ginecologia Oncologica, Roma (Giovanni Scambia)
- Azienda Ospedaliera G.Vietri, UOS Oncologia, Larino (Lucia Moraca)