

European Value-Based Healthcare Benchmarking: Moving from Theory to Practice

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RATIONALE

VOICE community

8 European healthcare centres driven by *Biosistemak Institute*



VOICE's objective

Address VBCH from theory into practice in **breast cancer** and lung cancer

Measuring outcomes

- Health outcomes (CROs, PROs)
- Care-Process Related Outcomes (CAPROs)
- Economic-Related Outcomes (EROs)

Benchmarking of health, care-process and economic outcomes across healthcare centers

Best practice sharing across healthcare centres

VOICE's pathway



DATA

- 6 healthcare centres
- 690 patients diagnosed with breast cancer
 $N_A=273$; $N_B=58$; $N_C=42$; $N_D=99$; $N_E=127$; $N_F=91$

CROs, PROs, CAPROs

- ICHOM Standard set
- 6-month follow up

EROS

- own standard set
- 1 year follow-up

INDICATOR SET

Definition of an appropriate, manageable and relevant indicator set on which to base the benchmarking

Methods

- DELPHI methodology
- 28 experts

Results

50 INDICATORS



PATIENT ARCHETYPES

Patient classification to ensure outcomes' comparability between sites based on patient's characteristics and healthcare pathway

Methods

- Clinical criteria
- Statistical approach (Hierarchical Clustering on Principal Components)

Results

Table 1. Most representative patient per archetype

Archetype	Sample	Age	Surgery	Axillary surgery	Chemo.	Radio.	Hormon.
In situ carcinoma	15%	-	-	-	-	-	-
C1	12.1%	>70	BCT	SNL	No	Yes	Yes
C2.1	10%	50-70	BCT	SNL	Yes	Yes	Yes
C2.2	29%	50-70	BCT	SNL	No	Yes	Yes
C3	7.9%	50-70	BCT	SNL	Yes	Yes	No
C4	8.2%	<50	Mast. w/o rec.	Axillary clearance	Yes	Yes	Yes
C5	7.5%	<50	Mast. with rec.	SNL	No	No	Yes
C6	10.3%	<50	Mast. with rec.	Axillary clearance	Yes	Yes	Yes

SNL: Sentinel lymph node biopsy

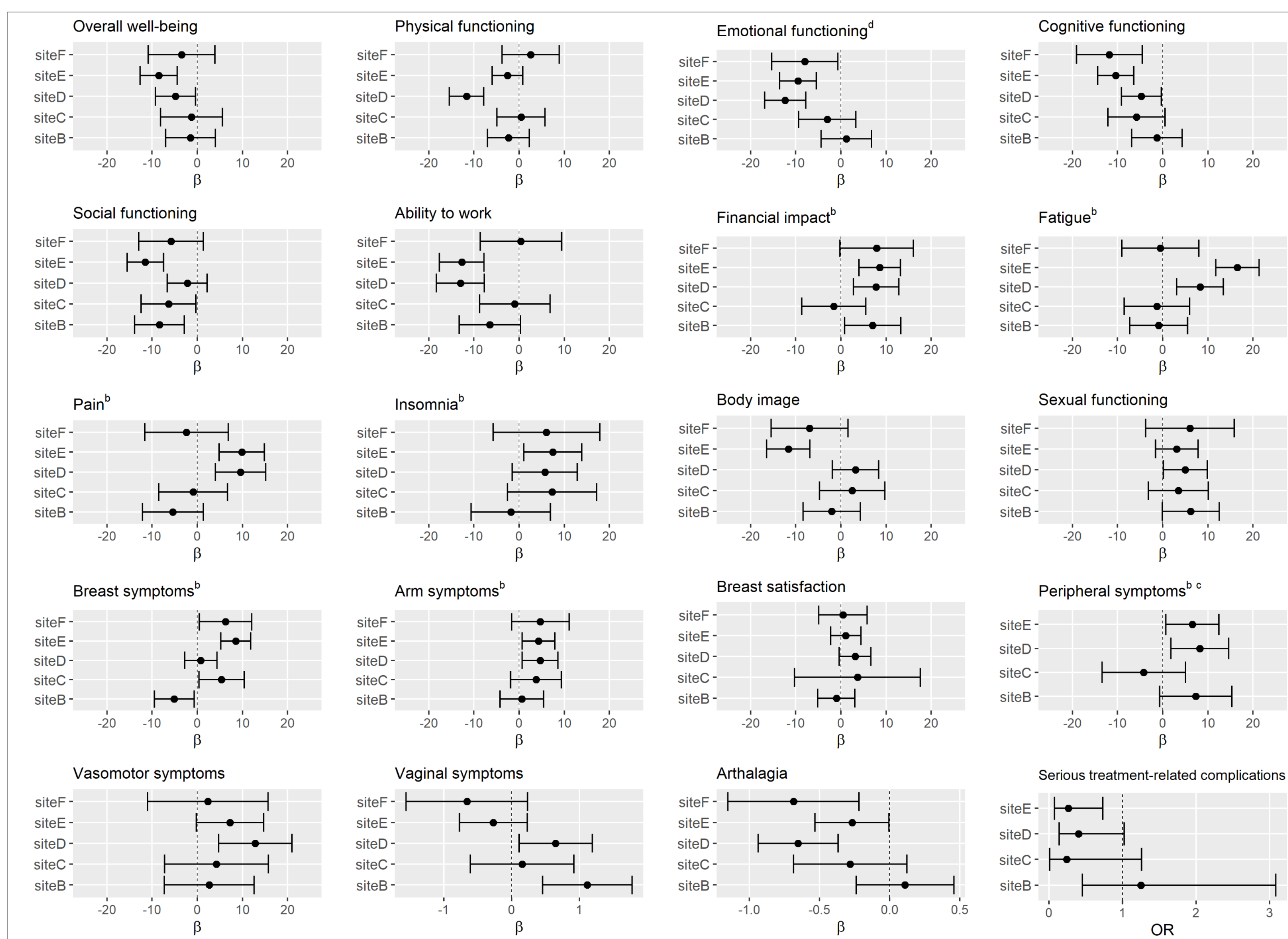
BENCHMARKING

Methods

- Descriptive analysis (see results in poster García-Lorenzo B., Alayo I., Arrospe A., Gorostiza A. and Fullaondo A. on behalf of the VOICE study group (2023). Disentangling the Value Equation: A Step Forward in Value-Based Health Care. ICHOM conference 2023)
- Regression models
 - One model per indicator
 - Control variables: patient archetype, clinical and socio-demographic variables

Results

Figure 1. Benchmarking of health outcomes indicators^a



OR:odds ratio; ^a All analyses controlling for age, archetypes, menopause, comorbidity and PROs were also adjusted for its value at baseline. Site A is the reference site. ^b Higher scores for responses indicate worst health; ^c Site F was excluded for lack of information

Benchmarking platform

- For clinicians and healthcare managers
- Powered by **HOPES** better data, best health

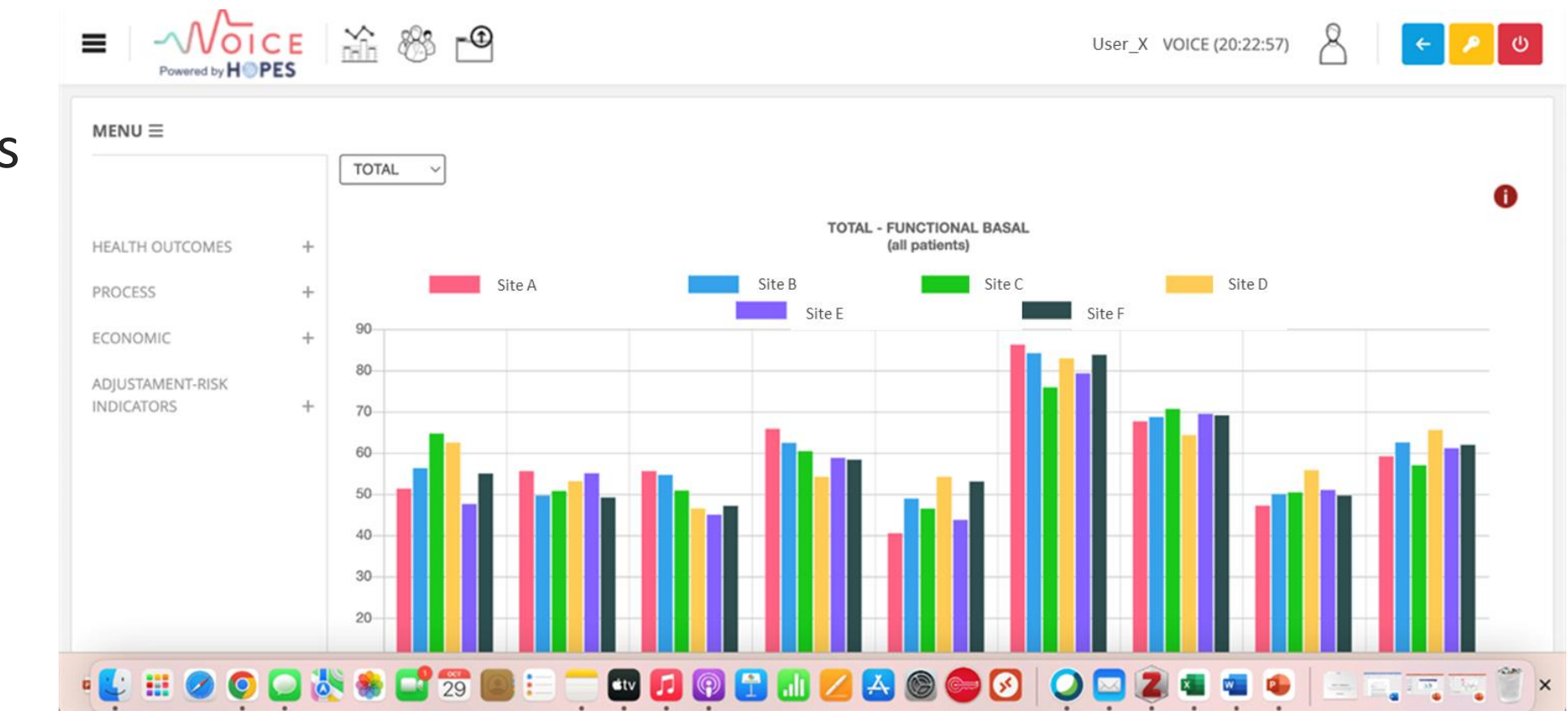
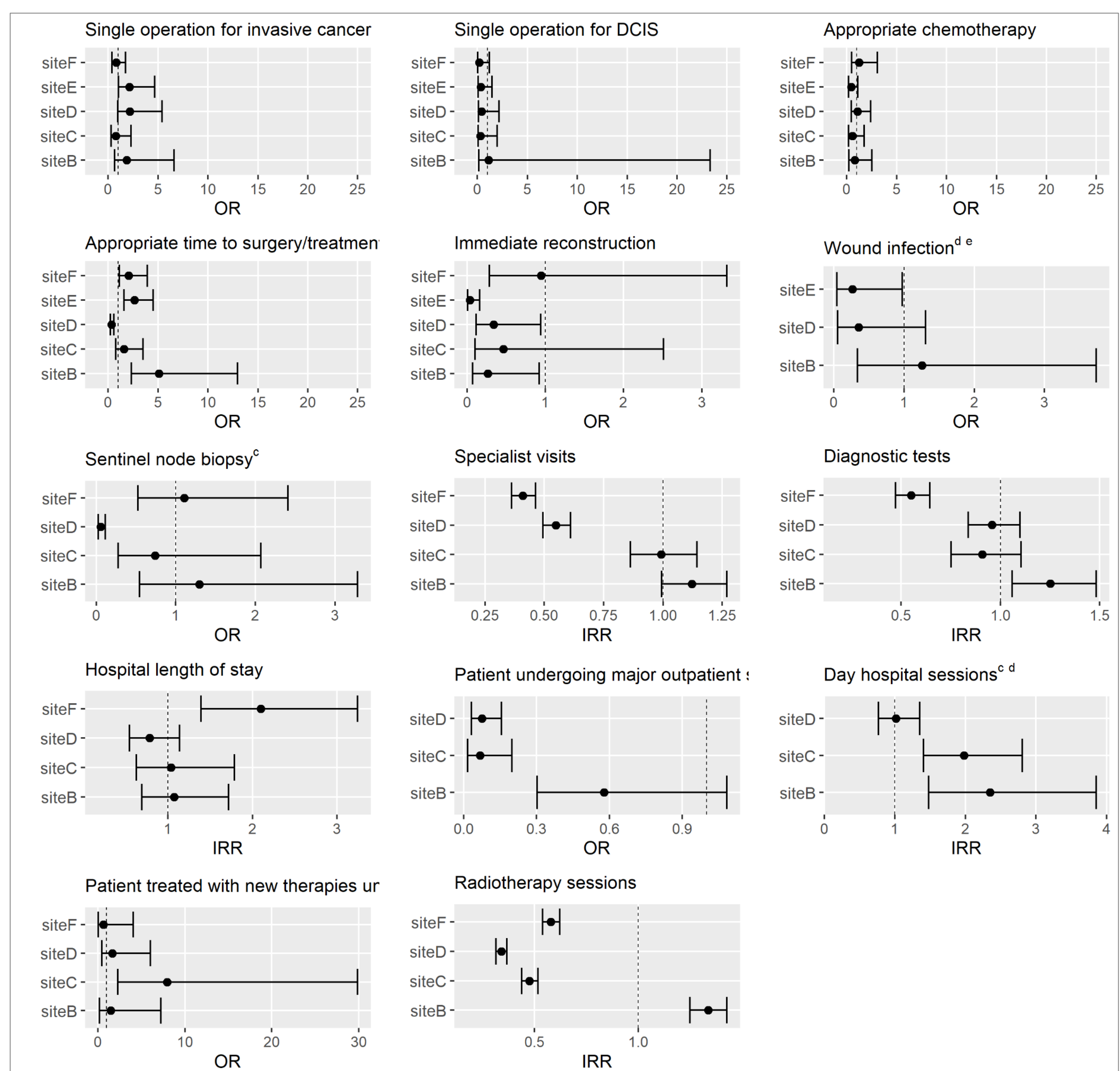


Figure 2. Benchmarking of care-process and economic indicators^a



OR: odds ratio; IRR: Incidence rate ratio; DCIS: ductal carcinoma in situ; ^a Site A is the reference site; ^b No economic information available from site E; ^c Since no variability in outcome values was observed, Site E is omitted; ^d Since no variability in outcome values was observed, Site F is omitted; ^e Since no variability in outcome values was observed, Site C is omitted

DISCUSSION

Limitations

- No Patient-Reported Experiences (PREs)
- Short PROs and CROs follow up
- No economic information for 1 centre
- Large confidence interval on estimated parameters (small sample size for some indicators due to eligibility criteria)

Conclusions

- First international experience on VBHC benchmarking intention
- Applied methods might be of use in other medical conditions

Next steps

- Best practices sharing



García-Lorenzo B., Gorostiza A., Alayo I., and Fullaondo A. on behalf of the VOICE study group (2023). European Value-Based Healthcare Benchmarking: Moving from Theory to Practice. European Journal of public Health. Forthcoming.