

## **Evaluation of Data Quality in the Spanish EURECCA Esophagogastric Cancer Registry**

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**ABSTRACT (word count 239)**

**Background:** Although the number of nationwide clinical registries in upper gastrointestinal cancer is increasing, few of them perform regular clinical audits. The Spanish EURECCA Esophagogastric Cancer Registry (SEEGCR) was launched in 2013. The aim of this study was to assess the reliability of the data in terms of completeness and accuracy.

**Methods:** Patients who were registered (2014-2017) in the online SEEGCR and underwent esophagectomy or gastrectomy with curative intent were selected for auditing. Independent teams of surgeons visited each center between July 2018 and December 2019 and checked the reliability of data entered into the registry. Completeness was established by comparing the cases reported in the registry with those provided by the Medical Documentation Service of each center. Twenty percent of randomly selected cases per hospital were checked during on-site visits for testing the accuracy of data (27 items per patient file). Correlation between the quality of the data and the hospital volume was also assessed.

**Results:** Some 1839 patients from 19 centers were included in the registry. The mean completeness rate in the whole series was 97.8% (range 82.8-100%). For the accuracy, 462 (25.1%) cases were checked. Out of 12,312 items, 10,905 were available for verification, resulting in a perfect agreement of 95% (87.1-98.7%). There were 509 (4.7%) incorrect and 35 (0.3%) missing entries. No correlation between hospital volume and the rate of completeness and accuracy was observed.

**Conclusions:** Our results indicate that the SEEGCR contains reliable data.

**Keywords:** registry; clinical audit; esophagogastric cancer; nationwide; healthcare quality

## INTRODUCTION

The value of nationwide clinical databases and registries of cancer patients is increasingly recognized to monitor care processes and outcomes with the main objective of improving cancer care quality [1,2]. In the case of esophagogastric cancer surgery, Denmark has been probably the first European country that developed, in 2003, a nationwide clinical registry (Danish Esophagus, Cardia and Stomach Neoplasm Database, DECV) [3,4] followed by Sweden (National Register for Esophageal and Gastric Cancer, NREV) [5] and England and Wales (National Oesophago-Gastric Cancer Audit, NOGCA) [6] in 2006, and the Netherlands (Dutch Upper Gastrointestinal Cancer Audit, DUCA) [7] in 2011. All these registries provide surgical teams with periodic benchmarking information on processes and outcome measures, thus favoring an improvement of results and a reduction of hospital-based differences in the management of these patients.

The EUropean REgistration of Cancer Care (EURECCA project) began in 2007 with the aim of improving the quality of care for patients with rectal cancer in the framework of different European countries [8]. The EURECCA Upper Gastrointestinal (GI) Cancer project was developed in 2013 and focused exclusively on esophagogastric cancer. In order to compare the current practice in a number of European countries, a consensus about a uniform dataset was reached and data were collected from five national and/or regional participating registries [9]. However, differences in disease presentation, treatment approaches and outcomes between countries have been recognized [10,11].

In Spain, outcomes of esophagogastric cancer surgery are scarce and most information comes from administrative databases [12]. On the other hand, this type of cancer surgery has recently undergone a centralization process in Catalonia and Navarra, only 2 of the total 17 Spanish autonomous communities. In these two regions, the Spanish EURECCA Esophagogastric Cancer Registry (SEEGCR) was initiated as part of the European project in January 2014 [13].

Variables and their definitions were agreed upon according to recent international consensus on standardization of data collection [14-16].

Clinical audits assessing comparability, completeness, accuracy, and timeliness of data entered in the registries have become essential tools in the use of collected information for quality-of-care assessment programs and high-quality research purposes [2,5,7,17,19]. This study aimed to assess the quality of data collected in the SEEGCR in terms of completeness and accuracy following an audit process.

## **METHODS**

### **Development and organization of the registry**

The SEEGCR is a population-based surgical quality registry linked to the EURECCA Upper GI network that collects clinical data of all esophageal, gastroesophageal junction and gastric cancer patients undergoing surgery with curative intent. Patients with non-epithelial tumors are excluded. The registry was launched in 2013 with the initial participation of 19 hospitals from two Spanish autonomous communities (Catalonia and Navarra) but over the next years, four other autonomous communities (Basque Country, La Rioja, Castilla-La Mancha, and Balearic Islands) joined the project. At present, a total of 49 hospitals participate in the SEEGCR covering a population of more than 14 million people. Since this is a population-based initiative, eligibility to be included in the registry is limited to those autonomous communities in which all their public hospitals committed to entering all cases of esophageal and gastric cancer resection from the time of patient's enrollment and signing the membership agreement form. The SEEGCR was approved by the Parc de Salut MAR Clinical Research Ethics Committee (study protocol 2013/5047/I) in 2013, and subsequently by the respective ethics committees of the participating centers. All patients signed an informed consent document.

Since its foundation, this project was led by surgeons. A strategic board and scientific committee comprising different medical professionals involved in the care of patients with esophagogastric cancer (surgeons, medical oncologists, pathologists, epidemiologists, and statisticians) were established. Structural funding was achieved through research grant applications only.

### **Data entry and privacy**

A secure online registry ([www.proyectoeurecca.com](http://www.proyectoeurecca.com)) was developed to enable data entry. The online database was placed in a server located at the Hospital del Mar, Barcelona, Spain. Data contributors (lead surgeon or a designated assistant) from each hospital were authenticated individually to access the database. Patients were anonymized by a 6-digit ID code automatically generated by the system, although individual sites kept a document which links their patients to the SEEGCR ID code. Each center maintains ownership of its data that can be exported into an excel document. The SEEGCR data manager (DM) is the only person who has access to the entire dataset. One of the authors (M.P.) had the final responsibility for the security and safety of data entered into the database. The SEEGCR DM provides regularly a feedback to each center, summarizing the missing variables and potentially erroneous data to be checked by the principal local investigators.

### **Data set and quality measures**

In accordance with a general consensus achieved by the SEEGCR scientific committee, the online dataset comprises 96 items covering information on four different categories (Table 1), including “patient characteristics” (patient data [6 items] and comorbidities [5 items]); “care process” (diagnosis and staging [11 items], preoperative optimization [4 items], and neoadjuvant therapy [4 items]); “surgery and histopathology” (surgery [17 items] and histopathology [24 items]); and “postoperative period” (hospital stay and complications [16 items] and follow-up [9 items]).

A clear definition of each item was provided to all participants. Postoperative complications were defined and recorded according to the Esophageal Complication Consensus Group (ECCG) and the Gastrectomy Complications Consensus Group (GCCG) and graded using the Clavien-Dindo classification [14-16,19]. The seventh edition of the TNM (TNM-7) was used for tumor staging [20]. In addition, pathologists from hospitals integrated within the SEEGCR developed a consensus document after two workshops to follow standardized histopathology protocols for reporting esophageal, esophagogastric junction and gastric cancer.

### **Audit process**

The audit process was coordinated by Hospital del Mar in Barcelona. For the purpose of this study, only hospitals from the autonomous communities (Catalonia and Navarra) that had completed at least a 4-year recruitment period (from January 1, 2014 to December 31, 2017) were included. The audit study was approved by the Ethics Committees of participating hospitals. The study was registered in Clinical Trials (ClinicalTrials.gov NCT03541629).

A standard methodology was established and applied during all audit visits. The validation of the data collected in the registry was carried out at two levels: first, the assessment of completeness and second, the evaluation of accuracy. Data extraction was carried out by the SEEGCR DM 1 week before the audit visit. Also, an *ad hoc* questionnaire to assess the 27 variables proposed by the scientific committee of the SEEGCR for verification was developed (Table 1, see asterisks). The SEEGCR DM organized the final agenda according to the availability of the auditors and the dates proposed by the leads of the centers. All audits were performed by two to four auditors (surgeons) from a different hospital than that of the center audited. Auditors signed a confidentiality agreement form before having access to the patient information.

### **Completeness of reporting**

To ensure that cases were collected consecutively (unselected) and that the registry included all patients with esophageal, gastroesophageal junction and gastric cancer operated on with curative intent, the first step of the audit process was a cross-check of the patients reported to the SEEGCR with those registered in the Clinical Documentation Service of each hospital. Each Clinical Documentation Service allowed esophagogastric cancer cases to be identified according to the ICD-9 and ICD-10 codes. Unmatched cases were followed back to verify their reportability. Missed, misclassified or duplicated cases were identified.

### **Cases selected for verification**

A random sample of patients was selected for each participating center 1 week before the auditors' visit. For those centers in which the total number of cases was  $\leq 20$ , the entire sample (100%) was analyzed, when the total number of cases ranged between 21 and 100, a random sample of 20 patients was selected, and when the total number of cases was greater than 100, a sample of the 20% of cases (up to a maximum of 50 patients) was chosen

### **Accuracy**

A concordance process between data from the medical chart during the on-site review and the data recorded in the SEEGCR was performed using the *ad hoc* questionnaire. A report with perfect agreements, errors and missing data was given to the SEEGCR DM for analysis. Perioperative blood transfusion was assessed on the day of the auditors' visit according to detailed information about the blood transfusion history of all patients included in the audit available in the Blood Bank Service of each hospital.

### **Statistical analysis**

Descriptive analysis was performed, presenting the results as frequencies and percentages. A correlation model was used to assess the rates of completeness



and accuracy in relation to the hospital volume. Analysis was performed using the SPSS (Statistical Package for the Social Sciences) Software (IBM SPSS Statistics 22).

## **RESULTS**

From July 2018 to December 2019, 19 centers from Catalonia and Navarra were audited. Some 1839 esophageal and gastric cancer patients had been included in the online SEEGCR during the period 2014-2017.

### **Completeness**

After information cross-check between SEEGCR and Clinical Documentation Services, we found 23 (1.3%) duplicated and 15 (0.8%) misclassified cases (7 gastrointestinal stromal tumors, 5 neuroendocrine tumors, 1 malignant melanoma, 1 head and neck tumor, and 1 benign lesion). These cases were automatically removed from the registry. Moreover, 33 cases were missing and later on included in the registry, but these cases could not have been randomized to assess accuracy. Among these patients, 12 (36.4%) had developed complications (8 classified as severe: Clavien-Dindo > IIIb), of whom 6 (18.2%) died within 90 days after surgery.

Overall, 71 errors (3.9%) in the inclusion process were detected. The mean completeness rate of site reporting was 97.8%, ranging from 82.8% to 100% among participating hospitals. Nine of the 19 hospitals correctly included 100% of cases.

### **Accuracy**

Of the 1839 patients initially included in the SEEGCR, 462 (25.1%) were randomly selected. During the audit visit, 6 cases were excluded (3 duplicates, 2 misclassified and 1 missing by the auditor's team). Thus, 456 cases comprising

12,312 items remained to be verified. Of these, 1361 (11%) were “not applicable” for the specific cases and 46 (0.4%) were missing for the audit team. Finally, 10,905 items were available for assessment.

In the overall analysis by items (Table 2), 509 (4.7%) were incorrect and 35 (0.3%) missing. The most commonly incorrect variables were the Charlson comorbidity index (CCI) score (12.4 %) and the pN stage for esophageal cancer (11.8 %), whereas the most frequently missed items were the pM stage (2.4%) and the number of red blood cell (RBC) units transfused postoperatively (2.2%). Thus, perfect agreement was achieved in 10,361/10,905 items (accuracy 95%). The highest accuracy was obtained for the “type of gastrectomy” item (98.7%) and the lowest for “pN stage-esophagus” (87.1%). For 18 items, the observed accuracy was > 95%.

The mean accuracy rate by center was 94.8% (range 91.1-99.0%) (Table 3). In 9 centers, the accuracy was > 95%.

### **Correlation between the quality of data and the hospital volume**

No significant correlation between hospital volume during the study period and incompleteness or accuracy rates was observed ( $r^2 = 0.002$ ,  $P = \text{NS}$  and  $r^2 = 0.019$ ,  $P = \text{NS}$ , respectively) (data not shown).

## **DISCUSSION**

This study reports the implementation of the SEEGCR and the results of the audit process following a standardized methodology to assess the quality of the data entered. Overall, data included in the SEEGCR is reliable, with a completeness and accuracy rates of 97.8% and 95%, respectively.

The results of the audit process in the SEEGCR are similar in terms of data quality to those reported in previous audits of two nationwide upper gastrointestinal cancer registries in Europe, the Swedish NREV [5] and the DUCA [7,21,22].

Completeness rate exceeds 95% in both registries, with minor differences between esophageal and gastric cancers, while the overall accuracy was 91.1% in the Swedish NREV and ranged between 93% and 99.8% in the different items of the DUCA.

Regarding the assessment of completeness two aspects of the present data can be highlighted. Firstly, in agreement with the Swedish NREV [5], all patients included in the SEEGCR during the whole study period were analyzed, whereas DUCA performed two pilot audits evaluating only patients registered over 1-year period (2013 and 2016) [21,22]. Secondly, we performed a systematic cross-check with the Documentation Service of the participating hospitals to detect discrepancies, as the DUCA did just in their two pilot studies [21,22], but not the Swedish NREV [5].

In terms of accuracy, a particularly robust aspect of our audit was the extent, both in percentage of audited patients and number of variables analyzed. The Swedish NREV [5] centered the accuracy assessment in 2 years (2009-2010) of the 5-year study period, randomly selecting 400 patients, which accounted for 6.6% from the whole study period (2009-2013). However, they re-abstracted 60 variables. In the two DUCA pilot studies [21,22], a sample of 44.7% and 16% of the total number of audited cases were selected for assessment of accuracy. However, both pilot studies only covered just 1-year study period. Moreover, in these pilot studies a limited number of variables (18 and 7, respectively) were tested. The SEEGCR audit randomly selected a greater number of patients (25.1%) from all hospitals and verified an intermediate number of variables per patient (up to 27). The verification of 10,905 items is a relevant strength of the study.

Despite having a very high level of completeness of almost 98%, it is remarkable that several obvious errors were detected, such as duplicates, misclassified or missing cases. It has been suggested as possible causes behind unregistered cases, the fear of hospitals to be criticized for having a high rate of complications or mortality, or for the lack of follow-up of patients with complications when they are no longer in the surgical wards [22]. Details of the “missing patients” (1.8%)

were reviewed. A quarter of these patients (8/33) developed severe complications, including 6 deaths. Overall, a mistake rather than a voluntary act seems the most plausible cause. Some kind of periodic collaboration between the lead surgeon and the administrative staff of the Clinical Documentation Service of each hospital should be established to ensure that all consecutive cases have been registered.

Although the overall accuracy is high, some variables such as the Clavien-Dindo grade, the CCI score and the pN stage of the esophagus deserve some comments. While the accuracy rate of overall complications, particularly procedure-related complications, is very high (> 96%), the accuracy of the Clavien-Dindo grade did not exceed 90%. The same applies for the CCI score that only reached an accuracy of 87%. Neither Clavien-Dindo grading classification nor the CCI score have been assessed in previous audits by the Swedish NERV and DUCA, which have recently been incorporated in their registries [5,21,23]. An effort to provide a clearer definition of variables and help in relation to doubts is needed. An unexpected finding of our audit was an accuracy rate of only 87.1% in the variable of esophageal pN-stage. Most of the incorrect data may have resulted from an error in the design of the database. The database is common for both esophageal and gastric cancer, but the two have two different pN stages in two different entries in the registry. Although the data reported were correct, they were not registered in the appropriate entry and were therefore considered erroneous by the auditors. A new version of the database will avoid dual reporting of esophageal and gastric pN-stage.

Another comment should be made about the accuracy by centers. As previously mentioned, this is a project led by surgeons and each center has a surgeon responsible for the registry. However, some centers have delegated the entry of data into the registry by surgical postgraduates and it is precisely in these few centers where inferior quality results had been observed. In view of this finding, this point has been discussed in the meetings of the SEEGCR and with these centers in particular. Finally, we correlated hospital volume with the quality of data, based on the hypothesis that high-volume centers would provide highest

quality data. Although there is a certain trend that confirms the hypothesis, statistical significance was not reached.

Besides the high completeness and accuracy rates, another strength of the SEEGCR is that, since its launch in 2013, international recommendations were followed, such as the use of ICD-9 and ICD-10 coding systems, TNM-7 staging [20], complication definitions and grading according to the recommendations of the Esophageal Complications Consensus Group (ECCG), the Gastrectomy Complications Consensus Group (GCCG) and the Clavien-Dindo classification [14,16,19]. In this scenario, SEEGCR provides diagnostic, procedural, and complication data comparable to similar nationwide databases.

On the other hand, our study has several limitations. Due to the current design of the registry, no information about time intervals from several index dates to completion of the registry (timeless) at each center could be assessed. This aspect will be analyzed in future strategic board and scientific committee meetings for its implementation. Moreover, SEEGCR does not register patients with esophageal or gastric cancer undergoing non-curative surgical or palliative procedures. Thus, no information about resection rates and cases undergoing unnecessary surgical procedures can be obtained. Finally, this audit has been limited to 19 hospitals in the two Spanish autonomous communities that initiated the project, in which greater involvement and better results could be expected. It is important to demonstrate that we are capable to maintain these quality indices with the increasing number of participating centers.

Detailed population-based audit data can be used for monitoring quality of care and for research purposes. Recently, SEEGCR has provided all hospitals with benchmarked information on 12 outcome parameters using funnel-plots with 95% confidence intervals around the SEEGCR average, anonymous with regard to other hospitals. Variation observed between hospitals in quality indicators may also represent an important stimulus for research. For example, a previous study of the SEEGCR showed that low hemoglobin at diagnosis and the lack of patient blood management (PBM) practices in the hospital were the two most important risk factors for red blood cell transfusion in gastric cancer patients undergoing

curative resection [24]. Subsequently, a multicenter quality improvement project assessing the implementation of a PBM program among SEEGCR hospitals resulted in a significant reduction in the transfusion rate and improvement in postoperative outcomes [25].

In summary, audit visits demonstrated that SEEGCR data are reliable with a rate of completeness of 97.8% and a rate of accuracy of 95%. It also contains comparable data that can be used to evaluate the quality of patient management, to carry out population-based clinical research, and to compare data with other nationwide registries.

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**Table1.** Variables included in the online Spanish EURECCA Esophagogastric Cancer Registry

Patient characteristics		Surgery and histopathology		63	Adjacent Barrett's esophagus
Patient data		Surgery		64	HER2 determination
1	Hospital ID	31	Date of surgery *	65	Result of HER2 determination
2	Age	32	Type of surgery	66	Pathological response to neoadjuvant therapy (Becker)
3	Gender	33	Complete resection	67	Pathological response to neoadjuvant therapy (Mandard)
4	Weight	34	Abdominal lymphadenectomy	68	Pathological T stage * *
5	Height	35	Site of anastomosis	69	Pathological N gastric stage* *
6	Body mass index (BMI)	36	Associated tumor-related resection	70	Pathological N esophageal stage* *
Comorbidities		37	Associated surgical procedure	71	Pathological M stage* *
7	Weight loss percentage	38	Intraoperative transfusion	Postoperative period	
8	ECOG functional scale	39	Feeding jejunostomy	Hospital stay and complications	
9	ASA grade *	Stomach		72	Date of hospital discharge
10	Charlson's comorbidities	40	Type of access *	73	Length of hospital stay
11	Charlson comorbidity index score *	41	Type of gastrectomy *	74	Discharge destination
Care process		42	Type of reconstruction	75	RBC* units transfused after surgery *
Diagnosis and staging		Esophagus		76	Postoperative complications *
12	Date of diagnosis *	43	Type of access *	77	Pulmonary complications (Pneumonia *)
13	Tumor location (ICD-9) *	44	Surgical approach	78	Cardiac complications
14	Histological type	45	Type of esophagectomy *	79	Gastrointestinal complications (Anastomotic leakage *)
15	Siewert classification	46	Thoracic lymphadenectomy	80	Urologic complications
16	Clinical T stage*	47	Type of reconstruction	81	Thromboembolic complications
17	Clinical N stage *	Histopathology		82	Neurologic/psychiatric complications
18	Clinical M stage*	48	Tumor location	83	Infectious complications
19	Preoperative workup	49	Histopathological type *	84	Wound/diaphragm complications
20	CEA determination	50	Lauren's histological type	85	Other complications
21	Ca 19.9 determination	51	Grade of differentiation	86	Clavien-Dindo scoring *
22	Albumin determination	52	Longitudinal resection margin	87	Surgical reintervention
Preoperative optimization		53	Shorter distance to longitudinal resection margin	Follow-up	
23	Preoperative transfusion	54	Radial resection margin	88	Date of last follow-up
24	Hemoglobin at diagnosis	55	R status *	89	Adjuvant therapy
25	Hemoglobin before surgery	56	Intraabdominal cytology	90	Type of adjuvant therapy
26	Preoperative iv iron therapy	57	Number of examined nodes *	91	Recurrence *
Neoadjuvant therapy		58	Number of positive nodes	92	Date of recurrence *
27	Neoadjuvant therapy	59	Perineural invasion	93	Type of treatment for recurrence
28	Start date of neoadjuvant therapy *	60	Lymphatic invasion	94	30 and 90-day readmission *
29	End date of neoadjuvant therapy	61	Vascular invasion	95	Follow-up status *
30	Type of neoadjuvant therapy	62	Extracapsular rupture	96	Date of death *

\* Items for verification; \* According to the 7th edition of the International Union Against Cancer tumor node metastasis staging system<sup>20</sup>; RBC: red blood cell; ECOG: Eastern Cooperative Oncology Group; ASA: American Society of Anesthesiologists; ICD-9: International Classification of Diseases 9<sup>th</sup> version.

**Table 2.** Accuracy of verified variables (ordered by perfect agreement rate) in the Spanish EURECCA Esophagogastric Cancer Registry (2014-2017)

Variables	Audited n	Missing n (%)	Incorrect n (%)	Perfect agreement n (%)
Type of gastrectomy	373	0 (0)	5 (1.3)	368 (98.7)
Date of surgery	455	0 (0)	7 (1.5)	448 (98.5)
Stomach. Type of access	372	0 (0)	6 (1.6)	366 (98.4)
Anastomotic leak	455	0 (0)	9 (2.0)	446 (98.0)
pN gastric cancer stage	375	0 (0)	8 (2.1)	367 (97.9)
Histopathological type	455	0 (0)	10 (2.2)	445 (97.8)
R status	455	0 (0)	10 (2.2)	445 (97.8)
Type of esophagectomy	84	0 (0)	2 (2.4)	82 (97.6)
pT stage	456	0 (0)	13 (2.9)	443 (97.1)
Pneumonia	455	0 (0)	13 (2.9)	442 (97.1)
Start date of neoadjuvant therapy	454	4 (0.9)	10 (2.2)	440 (96.9)
pM stage	453	11 (2.4)	3 (0.7)	439 (96.9)
Esophagus. Type of access	84	0 (0)	3 (3.6)	81 (96.4)
Date of death	454	0 (0)	18 (4.0)	436 (96.0)
Postoperative complications	456	0 (0)	20 (4.4)	436 (95.6)
Tumor location	455	0 (0)	20 (4.4)	435 (95.6)
Follow-up status	452	1 (0.2)	19 (4.2)	432 (95.6)
30 and 90-days readmission	442	1 (0.2)	19 (4.3)	422 (95.5)
ASA grade	454	0 (0)	27 (5.9)	427 (94.1)
Number of examined nodes	456	0 (0)	34 (7.5)	422 (92.5)
Date of diagnosis	451	0 (0)	34 (7.5)	417 (92.5)
Recurrence	453	3 (0.7)	34 (7.5)	416 (91.8)
Date of recurrence	455	2 (0.4)	37 (8.1)	416 (91.4)
RBC units transfused after surgery	452	10 (2.2)	34 (7.5)	408 (90.3)
Clavien-Dindo scoring	453	0 (0)	47 (10.4)	406 (89.6)
Charlson comorbidity index score	453	2 (0.4)	56 (12.4)	395 (87.2)
pN esophageal cancer stage	93	1 (1.1)	11 (11.8)	81 (87.1)
	10905	35 (0.3)	509 (4.7)	10361 (95.0)

ASA: American Society of Anesthesiologists; RBC: red blood cell. Values in parentheses are percentages.

**Table 3.** Accuracy of the verified variables (by hospitals) in the Spanish EURECCA Esophagogastric Cancer Registry (2014-2017)

Hospital ID	Audited items n	Missing items n (%)	Incorrect items n (%)	Perfect agreement n (%)
H1	1195	2 (0.2)	10 (0.8)	1183 (99.0)
H2	452	0 (0)	9 (2.0)	443 (98.0)
H3	481	0 (0)	11 (2.3)	470 (97.7)
H4	714	0 (0)	17 (2.4)	697 (97.6)
H5	479	1 (0.2)	12 (2.5)	466 (97.3)
H6	479	0 (0)	13 (2.7)	466 (97.3)
H7	479	0 (0)	15 (3.1)	464 (96.9)
H8	477	1 (0.2)	23 (4.8)	453 (95.0)
H9	477	0 (0)	24 (5.0)	453 (95.0)
H10	837	1 (0.1)	45 (5.4)	791 (94.5)
H11	480	0 (0)	27 (5.6)	453 (94.4)
H12	504	0 (0)	30 (6.0)	474 (94.0)
H13	812	0 (0)	53 (6.5)	759 (93.5)
H14	464	11 (2.4)	25 (5.4)	428 (92.2)
H15	476	1 (0.2)	37 (7.8)	438 (92.0)
H16	473	0 (0)	38 (8.0)	435 (92.0)
H17	570	10 (1.8)	37 (6.5)	523 (91.8)
H18	528	6 (1.1)	38 (7.2)	484 (91.7)
H19	528	2 (0.4)	45 (8.5)	481 (91.1)
	10905	35 (0.3)	509 (4.9)	10361 (94.8)