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8 TITLE “Multicenter, randomized clinical trial to
9 evaluate the efficacy and safety of hyperthermic
10 intraperitoneal chemotherapy (HIPEC) with
11 Mitomycin C associated with surgery in the
12 treatment of locally advanced colorectal
13 carcinoma.”
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Version : 1.3 de 31th January 2018

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22 promoter and is therefore provided confidentially. It may not be disclosed to other people without the
23 written authorization of the sponsor, except for the use that may be made of it to obtain the informed
24 consent of the people who are going to receive the investigational drug, as well as in communications to
25 the competent health authorities, the Research Ethics Committees or those who are going to carry out the
26 study.
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30 GENERAL INFORMATION

31 A. Test Identification: Title: "Multicenter, randomized clinical trial to evaluate the efficacy and safety of
32 hyperthermic intraperitoneal chemotherapy (HIPEC) with Mitomycin C associated with surgery in the
33 treatment of locally advanced colorectal carcinoma." EudraCT No.: 2015-001801-15 Protocol code: FCO-
34 HIP-2015-01 Version: 1.3 of January 31, 2018
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62 **PROTOCOL SUMMARY**

63 _1.0 Development phase: Phase III

64 1.1. Study disease: colon and rectal cancer

65 1.2 Objectives of the study:

66 1.2.1 Main objective: To evaluate the efficacy of hyperthermic intraperitoneal chemotherapy
67 (HIPEC) with Mitomycin C associated with extended cytoreductive surgery by locoregional
68 control (LC) in the treatment of locally advanced colorectal carcinoma (cT4).

69 1.2.2 Secondary objectives: 1) To assess the effect on overall survival (OS) of adding HIPEC
70 with Mitomycin C to extended surgery at 12 months and 3 years.

71 2) To assess the effect on disease-free survival (DFS) of adding HIPEC with Mitomycin C to
72 extended surgery at 12 months and 3 years.

73 3) Evaluate the safety (morbidity and mortality) of adding HIPEC to extended surgery for
74 cT4NxM0 colorectal carcinoma.

75 4) Evaluate the quality of life in patients who have received HIPEC associated with extended
76 surgery in colorectal carcinoma.

77

78 1.3. Study design: Clinical, multicenter, randomized and open trial to evaluate the efficacy and
79 safety of hyperthermic intraperitoneal chemotherapy (HIPEC) with Mitomycin C associated
80 with extended cytoreductive surgery in the treatment of locally advanced colorectal
81 carcinoma.

82 1.4 Description of treatment groups: Experimental Group: Cytoreductive surgery + target
83 organ surgery + HIPEC Control Group: Cytoreductive surgery + target organ surgery

84 1.5. Number of patients / Allocation to treatment: N= 200. Assignment to treatment 100/100.

85 1.6. Variables:

86 1.6.1 Efficiency: - Primary variable: Locoregional control (LC) in months (time to locoregional
87 recurrence/carcinomatosis) and rate of locoregional disease control (LC%) (% of patients
88 without signs of locoregional recurrence) at 12 months and 3 years .

89 Secondary variables: 1) Peri- and post-operative morbidity using the CTCAE adverse event
90 classification system and peri-operative mortality, up to 30 and 90 days post-intervention. 2)
91 Overall survival (OS) in months and survival rate (% OS at 12 months, 3 years). 3) Disease-free
92 survival (DFS) in months and disease-free period rate (% DFS at 12 months, 3 years). 4) Effect
93 on the quality of life of patients using the QLQ-C30 and QLQ-CR29 questionnaires.

94 1.6.2 Security: The safety of both treatment groups will be assessed as a secondary endpoint
95 as follows: • Peri- and post-operative morbidity through the CTCAE adverse event classification
96 system and peri-operative mortality, up to 30 and 90 days post-intervention. • Incidence and
97 severity of adverse events (AEs).

98 1.7. Study Population: Patients diagnosed with cT4NxM0 locally advanced colorectal cancer.
99 1.7.1 Selection criteria: Patients who meet ALL the inclusion criteria and NO exclusion criteria
100 will be prospectively included in the study

101 Inclusion criteria:

102 1) Patients of both sexes, aged ≥ 18 years and ≤ 75 years.

103 2) Adenocarcinoma of the colon, sigmoid and recto-sigma junction that present cT4a/b
104 according to the seventh TNM edition of the American Joint Committee on Cancer (AJCC).

105 3) Lymph node extension: N0, the presence of N1/2 according to AJCC TNM 7th edition is
106 allowed as long as they can be resected.

107 4) Metastatic extension: M0.

108 5) Karnofsky index >70 or Performance status ≤ 2 .

109 6) Informed consent duly completed.

110

111 Exclusion criteria:

112 1) Presence of metastases (M1), in case of liver or peritoneal metastases at the time of
113 surgery, the patient will be excluded from the trial and treated according to their new stage.

114 2) Presence of unresectability criteria.

115 3) Urgent intervention for obstruction or perforation if there is tumor removal, previous
116 interventions such as referrals without removal of the primary tumor or drainage of collections
117 prior to scheduled surgery will be accepted.

118 4) Extraperitoneal rectal cancer (medium-low) (avoiding neoadjuvant alterations).

119 5) Coexistence of another malignant neoplastic disease (synchronous tumors of the upper
120 colon and rectum are accepted as long as the stage is equal to or less than the tumor treated).

121 6) Severely impaired liver, kidney, or cardiovascular function.

122 7) Intolerance to treatment.

123 8) Administration of chemotherapy prior to the trial (use of neoadjuvant therapy is ruled out).

124 9) Women in gestational period or lactating.

125 1.7.2 Study withdrawal criteria 1. Withdrawal of the patient's informed consent. 2. Protocol
126 deviation. If the researchers consider it appropriate from the clinical point of view due to
127 worsening of symptoms. 3. Administrative decision made by the researchers, sponsor or a
128 regulatory authority. 4. Loss of contact during follow-up. 5. Serious adverse event (SAE) or
129 clinically relevant. 6. Unexpected Serious Adverse Reaction (SARI)

130

131 1.8. Treatment under study: Drug: Mitomycin C Dose: 30 mg/m² in 4 liters of infusion fluid
132 Guideline: single dose Pharmaceutical Form: Powder for injectable solution. The product,
133 before reconstitution, is a purple-blue, crystalline powder. Administration Route:
134 Intraperitoneal Pharmacotherapeutic group: Mitomycin ATC code: L01DC03

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1.9. Administration of treatments: Experimental group: will receive intraperitoneal Mitomycin C in hyperthermia in 4000cc of 1.5% dextrose for 60 minutes after completing cytoreductive and target organ surgery.

1.10. Study Procedures: The total expected duration of each patient in the study will be 36 months and the following visits and procedures will be performed:

Cronogram visits	Selection	Basal	V1	1º-7º PO day	Month 1	Month 3	Month 6	Month 12	Month 18	Month 24	Month 30	Month 36
Patient selection	X											
Preoperative evaluation	X											
Consent inform	X											
Treatment and surgery			X									
Clinical evaluation	X			X	X	X	X	X	X	X	X	X
Tumoral Markers: CEA and CA 19.9	X					X	X	X	X	X	X	X
Blood analytic	X			X	X							
Morbidity analysis		X	X	X	X	X	X	X	X	X	X	X
CT/MRI	X						X	X	X	X	X	X
QLQ-C30/CR29		X			X		X	X		X		X

147 Table 1. Visits.

148

149 **1.11. Statistic analysis:**

150

151 1.11.1. Sample size determination

152 The calculation of the sample size of the clinical trial is based on the regional control rate of
153 the disease (LC rate %) at 36 months after the intervention (main end point). We have
154 assumed that the proportion of patients in the treatment group with local control of the
155 disease (LC rate %) at 36 months is 82% (peritoneal recurrence in 18% at 36 months) and that
156 the proportion of patients in the group control with local control of the disease (LC rate %) at
157 36 months is 64% (peritoneal recurrence in 36% at 36 months). With this estimation (error $\alpha =$
158 0.05, power = 0.80, double tail) the calculated sample size is 190 patients, 95 patients in each
159 arm. Contemplating an approximate loss of 5% of patients, the definitive N is 200 patients.

160

161 **1.11.2. Statistical methods** - Descriptive analysis for quantitative variables by calculating
162 arithmetic means (m) and typical or standard deviations (SD); and for qualitative variables by
163 calculating counts of percentages and proportions (%). -Determination of the goodness of fit to
164 a normal distribution (normal data) using the Shapiro-Wilk test. The homogeneity of variances
165 will also be checked using Levene's test. -Comparison of the mean values of the quantitative
166 variables between the two groups using Student's t-test (parametric test) or Mann-Whitney U-
167 test (non-parametric test). -Comparison of proportions between the different groups using chi-
168 square tests for contingency tables; in the case of 2 x 2 tables, the chi-square statistic with
169 Yates' correction will be used, and when some expected frequency is ≤ 5 , Fisher's exact test
170 will be applied.

171

172 -Association between quantitative variables by calculating Pearson's linear correlation
173 coefficients (parametric test) or Spearman's correlation (non-parametric test), as appropriate.
174 - Analysis of locoregional control rate, disease-free time and overall survival will be based on
175 the intention-to-treat population. Survival curves will be studied using the Kaplan-Meier
176 method and comparison using Log-Rank to analyze the effect of the different factors on
177 survival. - Multiple logistic regression analysis to evaluate the risk factors in the recurrence of
178 the disease as well as mortality. Hazard ratios and their corresponding 95% confidence
179 intervals will be estimated using Cox models. - Previous analyzes will be stratified according to:
180 laparoscopic approach yes/no, closed/open or semi-open HIPEC, K-Ras mutation (yes/no),
181 definitive pT (T3b/T4a/T4b), pN0/N1 lymph node involvement /N2 and degree of
182 differentiation (good/moderate/little-signet ring-mucinous).

183

184 All hypothesis tests will be two-sided. And in all the statistical tests, "significant" values will be
185 considered those whose confidence level is 95% ($p < 0.05$).

186

187 1.12. Workplan The expected total duration of the trial is 5 years from the inclusion of the first
188 patient: • Preparation of the protocol. Application for authorization to the AEMPS. Evaluation
189 request to the CEIm: 2 months. • Start of the study: the first patient is expected to be included:
190 November 2015. • Patient recruitment/inclusion period: 24 months from the end of opening
191 of centers. • Treatment period: each included patient will receive treatment for: 1 day. •
192 Follow-up period per patient: 36 months. • Intermediate analysis with the first 100 patients
193 recruited. • Completion of the study: May 2022. Statistical analysis and writing of the final
194 report: September 2022.

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304 1. BACKGROUND AND JUSTIFICATION OF THE STUDY**305 1.1 Background**

306

307 Colorectal cancer (CRC) is one of the most frequent neoplasms in our environment, with a
308 growing trend observed in the last decade. According to data from the International Agency
309 for Research on Cancer (IARC), in Spain in 2008, 16,896 cases of colon and rectal cancer were
310 diagnosed in men and 12,005 in women, with an overall incidence of 45.7 cases per 100,000
311 inhabitants per year. . This represents the second most frequent neoplasm in our country with
312 a mortality rate of 21%, being the second most frequent cause of death from cancer in our
313 country (1).

314

315 The prognosis of colon and rectal cancer is primarily established using the TNM or Dukes
316 staging systems. These classification systems have their limitations, especially when most
317 patients are included in stages II and III, which are very heterogeneous categories. Other
318 pathological variables have been investigated as prognostic tools in these stages, such as
319 lymphatic and venous invasion, histological type, degree of differentiation, peritumoral
320 lymphocytic infiltration, resection margin status, number of resected nodes, and the tumor
321 location. The most relevant histological characteristic (pT4) has also been recognized as an
322 important prognostic factor in locoregional recurrence and survival (2). Shepherd et al.(3)
323 established transserous invasion with local peritoneal involvement (LPI) as a significant risk
324 factor for peritoneal recurrence in colorectal cancer, establishing type 3 LPI (tumor present on
325 the peritoneal surface with inflammatory reaction, mesothelial hyperplasia and/or erosion or
326 ulceration) and LPI 4 (free tumor cells on the peritoneal surface with evidence of ulceration in
327 the visceral peritoneum) as corresponding to pT4 in the TNM classification with equal risk of
328 locoregional recurrence.

329 In this sense, if we assess the prognosis of patients with pT4, we observe that overall survival
330 at 5 years is 20% (for T1-2 it is 91%), obtaining a prognosis similar to that of patients with N2
331 and M1. This leads us to consider the pT category by itself, as a prognostic factor in survival.
332 The same does not occur with other typified prognostic factors such as lymphatic and venous
333 invasion in the piece. In this way, the TNM categories are distorted in survival figures, because,
334 when we stratify in pT4, there is a variation in the survival of patients with stage II from 80% at
335 5 years, it decreases to 50%. % at 5 years when pT4 is present. In stage III the effect is similar,
336 survival is 56% at 5 years, reducing with the presence of pT4 to 30% at 5 years, being in N2
337 37% at 5 years. In stage IV, pT4 is not a prognostic factor in survival (2).

338 The addition of adjuvant therapy in stages II is controversial today, being applicable to those
339 patients with risk factors of which the one that determines a worse prognosis is the presence
340 of category T4; In this way, several studies have observed that patients with T4N0M0 (II) have
341 a worse prognosis than T1 N1 M0 (III), so lymph node invasion is not only the main prognostic
342 factor, as postulated in the TNM and Dukes classifications. Until now, only a few retrospective
343 studies consider the addition of adjuvant therapy to be beneficial in patients with stage II and
344 pT4 based on 5-FU (2).

345

346 Hompes et al. (4) through their epidemiological study in patients with T4 assessed the
347 probability of peritoneal recurrence in 379 patients undergoing surgery for pT4 colorectal
348 cancer and stages II and III, ruling out T4 with distant metastases. For these patients, local
349 recurrence and appearance of peritoneal carcinomatosis was 15.6% at 12 months after
350 surgery, while for T3 it was 4.5% at 12 months ($p = 0.008$). Locoregional recurrence in patients
351 with T3 was 20% at 5 years, while for T4 it was 40% at 5 years, of which in 62% of them it was
352 the only location of metastasis. It is this 26% of all T4 who could have benefited from adjuvant

353 treatment with hyperthermic intraperitoneal chemotherapy (HIPEC) at the time of surgical
354 resection, because survival in those patients who recurred with peritoneal carcinomatosis was
355 only 6% at 5 years (4).

356

357 1.2 Preclinical and clinical experience: HIPEC acquired its expansion thanks to the application
358 and diffusion of peritonectomy procedures associated with HIPEC in the treatment of
359 peritoneal metastases in colorectal cancer, which was developed by P.H Sugarbaker (5). This
360 procedure allows complete cytoreduction of all visible lesions in the abdomen, after which the
361 application of intraperitoneal chemotherapy in hyperthermia allows high concentrations of
362 chemotherapy to achieve destruction of microscopic lesions with minimal systemic adverse
363 effects.

364 The application of this therapeutic modality has made it possible to significantly improve
365 survival in patients with carcinomatosis of colonic origin, passing globally from 23 months and
366 13% at 5 years with the best systemic chemotherapy up to 62 months and 51% at 5 years. ,
367 supporting these results until reaching levels of evidence IA (6-8) . Today, new concepts are
368 being studied in the application of intraperitoneal chemotherapy, either as early postoperative
369 administration (EPIC), as neoadjuvant or adjuvant, or the application of intraperitoneal
370 chemotherapy in hyperthermia as chemoprophylaxis or adjuvant in locally advanced or high-
371 risk tumors. develop carcinomatosis, a widespread concept in gastric carcinoma.

372 In this line, the French group of the Gustave Roussy Institute investigates (9) the performance
373 of a second-look surgery and HIPEC for those patients with a high risk of developing peritoneal
374 carcinomatosis of colonic origin 12 months after the first intervention. Of these, 56% had
375 peritoneal disease at the time of the second surgery and could be treated by cytoreductive
376 surgery and HIPEC, increasing their survival compared to those who did not receive HIPEC.
377 After this preliminary study, the Prophylotchip study was launched in France to compare
378 standard follow-up with second-look surgery + HIPEC.

379

380 This same concept of applying HIPEC in adjuvant therapy has also been more extensively
381 studied for locally advanced gastric tumors with serosal involvement, improving the prognosis
382 of these patients (10).

383

384 Tentes et al. (11) conducted a study on the application of HIPEC with Mitomycin C or
385 oxaliplatin on 41 patients and EPIC on 63, with a 3-year survival rate of 100% in the HIPEC
386 group, with the patients included being T3 and T4 and finding a clear superiority of HIPEC in
387 terms of survival compared to EPIC.

388 Sammartino et al. (12) propose something similar in their study, the application of HIPEC with
389 oxaliplatin for mucinous T3/T4 colorectal carcinoma and compare it with a control group with
390 standard surgery. They only recruited 25 patients in the experimental group with a recurrence
391 at 36 months of 4% compared to 22% in the control group, with the reservation that targeting
392 surgery was performed in the experimental group (surgery extended to omentectomy,
393 oophorectomy bilateral in postmenopausal women and appendectomy) and in the control
394 group no.

395 The suggestion by Hompes et al. (4) and also by Baratti et al. (13) to add HIPEC as an adjuvant
396 or as a second look to risk groups is not new, but it has not been extensively studied, only a
397 few pilot studies have been able to conclude survival benefits and, above all, safety of the
398 treatment provided. In this sense, only one long prospective study carried out by Noura et al.
399 (14) explored the effects of HIPEC in patients with colorectal carcinoma with positive
400 peritoneal lavage as prevention for their locoregional recurrence, concluding that HIPEC with
401 Mitomycin C seemed effective in preventing peritoneal recurrence and prolonging survival,
402 achieving a reduction from 50% in the non-HIPEC group to 12% in the HIPEC group with no
403 increase in morbidity and mortality.

404

405

406 1.3 Justification of the study: The approach of our study is aimed at the search for an effective
407 and safe treatment to prevent the appearance of peritoneal disease after tumor resection,
408 increasing locoregional control of the disease, disease-free period and survival, in patients with
409 pT4NxM0 colorectal carcinoma. with the use of hyperthermic intraperitoneal chemotherapy
410 (HIPEC) with Mitomycin C and surgery extended to target organs, establishing the differences
411 with the control group (surgery extended to target organs). Thus, HIPEC meets the expectation
412 of a locally aggressive treatment with minimal side effects that has also provided clear benefits
413 in terms of survival in patients with advanced cancer disease.

414 This would suggest the potential benefit that HIPEC would provide as adjuvant or
415 chemoprophylaxis to improve disease-free survival and therefore overall survival in patients
416 with locally advanced colorectal carcinoma (pT4) with little associated morbidity. This option is
417 attractive for professionals who face peritoneal recurrences every day after performing
418 extremely complex surgeries, but its application is difficult today due to the increase that it
419 would entail in economic cost and resources, which leads us to the need of its administration
420 and evaluation within clinical trials, which, in order to obtain adequate power and significance,
421 need to be multicenter, carried out in centers with specialized Oncology Surgery Units and
422 extensive experience in peritoneal carcinomatosis that perform cytoreduction procedures and
423 HIPEC.(15-18).

424 This set of Oncology Surgery Units focused on the treatment of disseminated peritoneal
425 disease (GECOP Group under the auspices of the SEOQ) is the field of implementation of the
426 study that we present. The GECOP group was born to respond to the need to find a union
427 between those groups that embarked on the treatment of disseminated peritoneal disease
428 with peritonectomy and HIPEC procedures, each of the constituent Units becoming points of
429 reference for referral of highly complex patients such as those who are eligible for said
430 treatment (digestive, gynecological or peritoneal carcinomatosis). The application of HIPEC as
431 adjuvant therapy in locally advanced carcinomas with risk of subsequent development of
432 carcinomatosis is a topic that is always on the rise, both within our national group of GECOP
433 and in the international community, where it is currently the trend of the different trials clinics
434 launched by different groups of advanced cancer surgery.

435

436

437

438 2. OBJECTIVES OF THE STUDY

439 2.1. Main goal

440 To evaluate the efficacy of hyperthermic intraperitoneal chemotherapy (HIPEC) with
441 Mitomycin C associated with extended cytoreductive surgery by locoregional control (LC) in
442 the treatment of locally advanced colorectal carcinoma (cT4).

443

444 2.2. Secondary Objectives

445 1) To assess the effect on overall survival (OS) of adding HIPEC with Mitomycin C to extended
446 surgery at 12 months and 3 years.

447

448 2) To assess the effect on disease-free survival (DFS) of adding HIPEC with Mitomycin C to
449 extended surgery at 12 months and 3 years.

450

451 3) To assess the safety (morbidity and mortality) of adding HIPEC to extended surgery for cT4
452 colorectal carcinoma.

453

454 4) Evaluate the quality of life in patients who have received HIPEC associated with extended
455 surgery in colorectal carcinoma.

456

457 3. STUDY DESIGN

458 3.1 Overview of study design

459 Clinical, multicenter, randomized and open trial to evaluate the efficacy and safety of
460 hyperthermic intraperitoneal chemotherapy (HIPEC) with Mitomycin C associated with
461 extended cytoreductive surgery in the treatment of locally advanced colorectal carcinoma.

462

463 3.2 Study variables

464

465 3.2.1 Efficacy Variables Main variable: Locoregional control (LC) in months (time to
466 locoregional recurrence/carcinomatosis) and rate of locoregional disease control (LC%) (% of
467 patients without signs of locoregional recurrence) at 12 months and 3 years.

468 Secondary variables: 1) Peri- and post-operative morbidity using the CTCAE adverse event
469 classification system and peri-operative mortality, up to 30 and 90 days post-intervention. 2)
470 Overall survival (OS) in months and survival rate (% OS at 12 months, 3 years). 3) Disease-free
471 survival (DFS) in months and disease-free period rate (% DFS at 12 months, 3 years). 4) Effect
472 on the quality of life of patients using the QLQ-C30 and CR29 questionnaire.

473

474 3.2.2 Security Variables

475 The safety of both treatment groups will be assessed as a secondary endpoint as follows:

476 • Peri- and post-operative morbidity through the CTCAE adverse event classification system
477 and peri-operative mortality, up to 30 and 90 days post-intervention.

478 • Incidence and severity of adverse events (AEs).

479

480 3.3 Randomization and masking

481 It is planned to include a total of 200 patients who will be divided into two groups:

482 • Treatment Group: 100 patients

483 • Control Group: 100 patients

484

485 Patients will be randomly assigned to one of two treatment groups in a 1:1 ratio, using a
486 random assignment list generated by a dedicated computer system.

487

488 This is an open study, so blinding is not necessary. As it is an application of intraoperative
489 treatment, it is not possible to mask the patient or the doctor, due to the inherent
490 characteristic of the surgical technique and to the fact that the patient systematically receives
491 a hospital discharge report with a description of the surgical procedure carried out. cape.
492 Knowledge of the applied technique does not influence the variables under study.

493 3.4 Participating centers

494 Spanish centers with the capacity to perform HIPEC (see Annex 3).

495

496 3.5 Work plan

497 The expected total duration of the trial is 60 months, from the inclusion of the first patient:

498

499 • Preparation of the protocol. Application for authorization to the AEMPS. Evaluation request
500 to the CEIm: 2 months

501 • Start of the study: After obtaining authorization from the AEMPS and a favorable opinion
502 from the CEIm, the first patient is expected to be included in 2015.

503 • Patient recruitment/inclusion period: 2 years from the opening of the last center

504 • Treatment period: each included patient will receive treatment in a single session.

505 • Follow-up period per patient: 36 months after finishing treatment.

506 • An interim study will be carried out after the recruitment of patient 100.

507 • Completion of the study (last contact of the last patient included): 2022.

508 • Statistical analysis and writing of the final report: two months after the last patient.

509 The expected total duration of each patient in the study is 36 months. Each patient will make a
510 total of 14 visits, in the following sequence (see table 1):

511 • Selection period.

512 • Inclusion and randomization period: baseline.

513 • Treatment period.

514 • Follow-up period: 1st, 2nd, 3rd, 4th and 7th postoperative days, 1, 3, 6, 12, 18, 24, 30 and 36
515 months.

516

517 The trial visits are described below:

518

519 Screening Visit (VS)

520

521 - (Day -15): Inform the patient about the study and obtain their Informed Consent.
522 Evaluation of inclusion and exclusion criteria. Clinical history and physical examination,
523 vital signs, laboratory samples, pre-anesthetic study and radiological study.

524

525 - Baseline inclusion and randomization visit (V0): Review of the inclusion and exclusion criteria,
526 randomization. Quality of life questionnaires will be provided to patients.

527

528 - Visit 1 (V1): surgical procedure and treatment.

529

530 - Visits V2-V6 (1st, 2nd, 3rd, 4th and 7th postoperative days): the first visits will be
531 hospitalized, where safety variables, laboratory tests and physical examination will be
532 evaluated.

533

534 - Visits V7-V14 (at one month, 3 months, 6 months, 12 months, 18 months, 24 months,
535 30 months and 36 months): performing clinical examination, laboratory samples
536 (month 1), tumor markers (month 3, month 6, month 12, month 18, month 24, month
537 30 and month 36) and evaluation by CT/MRI thoraco-abdomino-pelvic imaging tests
538 (6, 12, 18, 24, 30, 36).

539

540 3.6 Termination and interruption of the study

541 The study will be terminated when the last patient included in the trial has made the last
542 follow-up visit or withdraws from it for the reasons indicated in Section
543 4.3. "Criteria for termination and withdrawal from the study by the subjects".

544

545 If the study is terminated prematurely or is suspended, the sponsor must promptly inform the
546 investigators, the participating center and the regulatory authorities of the termination or
547 suspension and the reasons for it. In addition, the promoter must promptly inform the CEIm
548 and provide the justification for the termination or suspension, as specified by the relevant
549 legal requirements.

550

551 Whether the study is completed or terminated prematurely, the sponsor must ensure that trial
552 reports are prepared and provided to regulatory agencies as specified by applicable legal
553 requirements.

554

555 Whether the study is completed or terminated prematurely, the sponsor must ensure that trial
556 reports are prepared and provided to regulatory agencies as specified by applicable legal
557 requirements.

558

559 4. STUDY POPULATION

560 4.1 General characteristics

561 Patients diagnosed with locally advanced adenocarcinoma of the colon and upper rectum.

562

563 4.2 Selection criteria

564 Patients who meet ALL the inclusion criteria and NO exclusion criteria will be prospectively
565 included in the study.

566 Inclusion criteria:

567 1) Patients of both sexes, aged ≥ 18 years and ≤ 75 years.

568 2) Adenocarcinoma of the colon, sigmoid and recto-sigma junction that present cT4a/b
569 according to the seventh TNM edition of the American Joint Committee on Cancer (AJCC).

570 3) Lymph node extension: N0, the presence of N1/2 according to AJCC TNM 7th edition is
571 allowed as long as they can be resected.

572 4) Metastatic extension: M0.

573 5) Karnofsky index >70 or Performance status ≤ 2 .

574 6) Informed consent duly completed.

575

576 Exclusion criteria:

577 1) Presence of metastases (M1), in case of liver or peritoneal metastases at the time of
578 surgery, the patient will be excluded from the trial and treated according to their new stage.

579 2) Presence of unresectability criteria.

580 3) Urgent intervention for obstruction or perforation if there is tumor removal, previous
581 interventions such as referrals without removal of the primary tumor or drainage of collections
582 prior to scheduled surgery will be accepted.

583 4) Extraperitoneal rectal cancer (medium-low) (avoiding neoadjuvant alterations).

584 5) Coexistence of another malignant neoplastic disease (synchronous tumors of the upper
585 colon and rectum are accepted as long as the stage is equal to or less than the tumor treated).

586 6) Severely impaired liver, kidney, or cardiovascular function.

587 7) Intolerance to treatment.

588 8) Administration of chemotherapy prior to the trial (use of neoadjuvant therapy is ruled out).

589 9) Women in gestational period or lactating.

590

591 4.3 Subject termination and withdrawal criteria

592 A subject will be considered to have completed the trial at the last scheduled follow-up visit.

593

594 Any subject who does not follow the study procedure, has not followed up, or for whom no
595 further information is available since the date of withdrawal or last contact will be classified as
596 "withdrawal" from the study.

597

598 The reasons for the withdrawal will be analyzed in full accordance with the principles of
599 Bioethics, in terms of guaranteeing the rights of patients and autonomous and informed
600 decision.

601

602 Patients may withdraw at any time throughout the study, for any reason, and without
603 prejudice to future medical treatment.

604 Although patients can withdraw without having to explain why, as soon as a patient has
605 decided to do so, the investigators will try to contact subjects who do not return for scheduled
606 visits or check-ups and establish that the patient's decision is a choice. informed, as well as to
607 check to what extent the patient might be willing to continue to participate in the study on a
608 limited basis, e.g. whether they would be willing to continue to be contacted or seen, in order
609 to obtain follow-up information .

610

611 In the event of premature withdrawal, the investigator will perform all examinations scheduled
612 for the end-of-study visit.

613

614 The relevant information for the withdrawal will be documented in the CRD. The investigator
615 will indicate whether the decision to withdraw from the study was made by the patient or by
616 the investigator and indicate which of the following possible reasons led to withdrawal:

617

618

619 1. Patient request and withdrawal of informed consent.

620 2. Protocol violation or deviation.

621 3. If the researchers consider it appropriate, from the clinical point of view, due to worsening
622 of the patient's disease state.

623 4. Administrative decision made by the investigators, sponsor or a regulatory authority.

624 5. Loss of contact during follow-up.

625 6. Unexpected Serious Adverse Reaction (SARI).

626 7. Serious Adverse Event (SAE).

627 8. Any adverse or intercurrent event that is considered intolerable by the patient or
628 incompatible with the continuation of the study according to the investigator.

629 9. Suspected pregnancy or positive pregnancy test result. Any suspected pregnancy should be
630 promptly followed by a confirmatory serum pregnancy test.

631

632 A clear distinction must be made between subjects who withdraw from the study due to
633 SAE/ARGI and those who do so for other reasons. Investigators will follow subjects who
634 withdraw due to an SAE/RAGI until the event has resolved.

635 In case of withdrawal from the study, patients will be treated according to existing protocols
636 and at the discretion of the investigator.

637

638 4.4 Patient substitution

639 Retired patients will not be replaced.

640

641 4.5 Identification of patients

642 All patients who have signed the informed consent will receive a code number, which will be
643 used to identify them throughout the study.

644

645 Patients will be identified by a code that includes the center number followed by a
646 chronological inclusion number for that center (XX-YY).

647

648 5. TREATMENT OF THE STUDY

649 5.1 General description of the investigational medicinal product

650 The investigational medicinal product (IM) is defined as "a pharmaceutical form of an active
651 substance or placebo that is studied or used as a reference in a clinical trial, including products
652 with a marketing authorization when used or combined (formulated or packaged) differently
653 from the authorized form, or when used for an unauthorized indication, or to obtain more
654 information about the authorized form".

655

656 In the present study, the MI consists of Mitomycin. It is an antitumor antibiotic that is
657 activated in tissues, behaving as an alkylating agent that disorganizes deoxyribonucleic acid
658 (DNA) in cancer cells, through the formation of complexes with DNA, and also acts by inhibiting
659 cell division of cancer cells. interfering with DNA biosynthesis.

660

661 Drug: Mitomycin

662 Dose: 30mg/ M2 /4 Liter of perfusion fluid (dextrose 1.5%)

663 Guideline: Single intraoperative dose

664 Pharmaceutical Form: Powder for injectable solution. The product, before reconstitution, is a
665 purple-blue, crystalline powder.
666 Administration Route: Intraperitoneal
667 Pharmacotherapeutic group: Mitomycin
668 ATC code: L01DC03

669

670

671 5.2 Manufacturing and labeling

672 Mitomycin C will be manufactured and supplied by the Hospital Pharmacy Service of each
673 participating center, following the Good Manufacturing Practices (GMP).

674 The containers used for the test will be identified by means of a label, in accordance with
675 current GMP, GCP guidelines and current national legal requirements.

676

677 5.3 Shipping, storage and accounting

678 The investigational medication will be received by the investigator or the pharmacist (if
679 applicable) and they will be responsible for handling and storing it safely and appropriately.

680

681 The MI must be stored in the Pharmacy Service of each participating center, in a closed facility,
682 with access limited to authorized personnel of the center and under physical conditions that
683 meet the specific requirements of the investigational product.

684

685 The investigator or pharmacist should keep current temperature records to document proper
686 storage during the course of the trial.

687

688 When requested by the researcher, the responsible staff of the Pharmacy Service will prepare
689 the investigational medication in accordance with the current protocol, ensuring optimal
690 safety conditions at all times. Once the medication is prepared, it will be sent to the operating
691 room for intraoperative administration.

692 The investigator must ensure that MI is administered only to patients participating in this
693 study.

694

695 The MI should not be used outside the context of this study protocol. The investigator or
696 authorized personnel are required to document the receipt, dispensing, and return of all IMs
697 received during this study.

698

699 The medication should not be used after the expiration date printed on the outer container.

700

701 At the end of each patient's participation in the study, all remaining MI must be returned to
702 the Promoter for an accurate accounting of MI delivered and returned.

703

704

705 A record should be kept of receipt, use, return, loss, or other disposition of IM. The
706 investigator or, where applicable, the pharmacist, must sign the reception forms. The
707 investigator or pharmacist, or other appropriately trained person at the investigational site,
708 must keep records on delivery to the site, inventory at the site, use by each patient, and return
709 to the IM Promoter. These records should include dates, quantities, lot numbers, and unique
710 code numbers assigned to IMs and patients. Investigators must keep records documenting that
711 patients received the doses specified in the protocol. In addition, they must reconcile all IM
712 received from the Promoter. It is the investigator's responsibility to explain any discrepancies
713 in the MI accounting.

714

715 All remaining MI will be collected and returned to the Promoter for destruction at the end of
716 the study.

717 5.4 Administration of investigational medication (experimental group only)

718 Mitomycin C will be administered intraoperatively intraperitoneally in continuous perfusion by
719 means of a hyperthermia machine for 60 minutes at a temperature of 42-43°C, in a solution of
720 4000cc of 1.5% dextrose at a dose of 30mg/M2. (HIPEC).

721

722 Once cytoreduction has been completed, including a complete cytoreduction of the tumor plus
723 removal of target organs such as the greater omentum, ileocecal appendix, round ligament
724 and bilateral oophorectomy in postmenopausal women, hyperthermic intraoperative
725 intraperitoneal chemotherapy (HIPEC) with Mitomycin C will be administered. The solution
726 containing the cytostatic it will be administered in the abdominal cavity (Mitomycin C at a dose
727 of 30 mg/m2 for every 4 liters of 1.5% dextrose solution) for 60 minutes. During the perfusion
728 time, which will be maintained at an intra-abdominal temperature between 42-43°C by means
729 of a heat exchanger, all internal anatomical structures of the peritoneal cavity will be uniformly
730 exposed to chemotherapy. Two infusion pumps will send the chemotherapy solution with a
731 high flow rate (1l/min) into the abdomen through two infusion catheters and will extract it
732 through four suction drains placed in the abdominal cavity (subdiaphragmatic and pelvic).
733 Through a smoke evacuator, the air will be extracted under a plastic cover that will isolate the
734 bell-shaped cavity, thus avoiding possible contamination of the air in the operating room by
735 cytotoxic aerosols. When the intraoperative infusion is finished, all fluid will be aspirated from
736 the abdomen.

737

738 5.5 Dose Modification and Management of Toxicity

739 The dose will depend on the calculation of body surface at a rate of 30mg/M2/4 liters. Patients
740 with nephropathy, liver disease or pregnant women will not be included, so no dose
741 modification is required.

742

743 5.6 Risks and precautions in the use of investigational medication

744 The possible adverse reactions and the contraindications, warnings and precautions for use are
745 collected in the Technical Data Sheet (FT) of Mitomycin C.

746

747 5.7 Concomitant medication

748 It is defined as any medication other than the investigational medication of the trial.

749

750 Concomitant treatments will be recorded in the patient's CRF and the name of the drug, the
751 total daily dose, the route of administration, the start and end dates, as well as the reason for
752 administration will be specified.

753

754 Patients receiving any prohibited concomitant medication or any medication in a dosage that
755 is not permitted and cannot be discontinued or reduced will not be eligible to participate in
756 the study.

757

758

759 5.7.1 Concomitant medication allowed

760 The following concomitant treatments are allowed during the study:

- 761 • Any chronic treatment of the patient will be allowed.
- 762 • Thus, the administration of adjuvant therapy will be allowed through schemes based on
763 fluoropyrimidines (5-FU, Capecitabine), platinum (Oxaliplatin).
- 764 • Possibility of adjuvant radiotherapy if the protocol of the center or in a multidisciplinary
765 session is decided.

766 • Monoclonal antibodies such as bevacizumab and cetuximab.
767
768 5.7.2 Concomitant medication prohibited
769 The treatments prohibited throughout the study are:
770 • Neoadjuvant chemotherapy/radiotherapy treatment.
771
772
773 5.7.3 Interactions with other treatments
774 The following treatments are not recommended during the entire active treatment phase:
775 • They do not exist.
776
777 5.8 Overdose
778 There is no known antidote for Mitomycin C overdose.
779
780 In case of overdose, the patient should be closely monitored and any manifested toxicities
781 treated.
782
783 5.9 Modification of treatment regimens due to adverse events
784 In the case of AA, its impact on the patient and the relationship with the administered
785 investigational drug will be assessed.
786
787 5.10 Destruction of investigational medication
788 At the end of the trial, unused investigational products will be disposed of.
789
790 If destruction takes place at the trial site, the investigator must ensure that the materials are
791 destroyed in compliance with applicable environmental regulations, site policy. Destruction
792 must be properly documented.
793
794 6. STUDY PROCEDURES
795
796 6.1 Procedures for the selection and inclusion of patients
797 Before carrying out any study activity, patients will be asked to read and sign an informed
798 consent form that has been approved by a Drug Research Ethics Committee (CEIm) and that
799 meets the regulatory requirements. Patients will be given time to review any study-related
800 information provided by the investigator. As part of the informed consent procedure, patients
801 will be allowed to ask the investigator any questions about the possible risks and benefits of
802 participating in the study.
803
804 To participate in the study, patients must meet ALL inclusion criteria, and NO exclusion criteria.
805
806 Once the selection criteria are confirmed and the patient is considered suitable to participate
807 in the study, they will be randomly assigned to a treatment group.
808
809 The investigator will document in the CRF the fulfillment of the selection criteria of the
810 subjects considered to participate in the study. In addition, you must maintain a list of
811 inclusion and patient identification codes.
812
813 6.2 Procedures per visit
814
815
816

817 SELECTION VISIT (VS) (Day -15)

818 The following evaluations and studies will be carried out:

819

820 • Inform the patient about the trial and obtain their informed consent in writing, signed and
821 dated.

822 • Document demographic data.

823 • Evaluation of the selection criteria.

824 • Document the patient's medical history.

825 • Perform a physical examination (including height, weight, vital signs).

826 • Blood sample to carry out complete blood count, biochemistry, coagulation, tumor markers
827 (according to normal clinical practice).

828 • Radiological study by thoraco-abdomino-pelvic MRI/CT (PET or other imaging technique will
829 be allowed if necessary for staging) according to usual clinical practice).

830 • Check the patient's current methods of birth control and perform serum pregnancy testing
831 for women of childbearing potential (if applicable).

832 • Concomitant medications or non-pharmacological therapies, including the reason for
833 administration.

834 • Make an appointment for the next visit.

835

836

837 BASELINE OR INITIAL VISIT (V0)

838 The baseline visit can take place up to 15 days after the screening visit when all the results of
839 the screening evaluation are available.

840

841 The following evaluations will be carried out:

842 • Hospitalization.

843 • Reassessment of inclusion and exclusion criteria.

844 • Perform a physical examination (including height, weight, vital signs).

845 • Inclusion in the trial, randomization and treatment assignment.

846 • Document the patient's medical history.

847 • Blood sample.

848 • Quality of life questionnaire QLQ-C30 and QLQ CR29.

849

850 VISIT 1 (Surgical intervention and treatment)

851 • Surgical treatment and HIPEC.

852 • Record of possible adverse events.

853

854 VISIT 2 (1st postoperative day)

855 • Clinical examination.

856 • Analytics (biochemistry, blood count and coagulation).

857 • Record of possible adverse events.

858

859 VISIT 3 (2nd postoperative day)

860 • Clinical examination.

861 • Analytics (biochemistry, blood count and coagulation).

862 • Record of possible adverse events.

863

864 VISIT 4 (3rd postoperative day)

865 • Clinical examination.

866 • Analytics (biochemistry, blood count and coagulation).

867 • Record of possible adverse events.

- 868 VISIT 5 (4th postoperative day)
- 869 • Clinical examination.
 - 870 • Analytics (biochemistry, blood count and coagulation).
 - 871 • Record of possible adverse events.
- 872
- 873 VISIT 6 (7th postoperative day)
- 874 • Clinical examination.
 - 875 • Analytics (biochemistry, blood count and coagulation).
 - 876 • Record of possible adverse events.
- 877
- 878 VISIT TO THE HOSPITAL DISCHARGE
- 879 Carried out by the principal investigator and collaborators on the hospitalization floor:
- 880 • Clinical examination.
 - 881 • Analytics (biochemistry, blood count and coagulation).
 - 882 • Record of possible adverse events.
 - 883 • Record of hospital stay (days).
 - 884 • Record of postoperative morbidity.
- 885
- 886 VISIT 7 (1 month post-treatment)
- 887 • Clinical examination.
 - 888 • Analytics (biochemistry, blood count and coagulation).
 - 889 • Record of possible adverse events.
 - 890 • Questionnaire QLQ-C30 and CR29.
- 891
- 892 VISIT 8 (3 months post-treatment)
- 893 • Clinical examination.
 - 894 • CEA and CA 19.9 tumor markers.
 - 895 • Record of possible adverse events.
- 896
- 897 VISIT 9 (6 months post-treatment)
- 898 • Clinical examination.
 - 899 • CEA and CA 19.9 tumor markers.
 - 900 • CT/MRI thoraco-abdomino-pelvic.
 - 901 • Record of possible adverse events.
 - 902 • Questionnaire QLQ-C30 and CR29.
- 903
- 904 VISIT 10 (12 months post-treatment)
- 905 • Clinical examination.
 - 906 • CEA and CA 19.9 tumor markers.
 - 907 • CT/MRI thoraco-abdomino-pelvic.
 - 908 • Record of possible adverse events.
 - 909 • Questionnaire QLQ-C30 and CR29.
- 910
- 911 VISIT 11 (18 months post-treatment)
- 912 • Clinical examination.
 - 913 • CEA and CA 19.9 tumor markers.
 - 914 • CT/MRI thoraco-abdomino-pelvic.
 - 915 • Record of possible adverse events.
- 916
- 917 VISIT 12 (24 months post-treatment)
- 918 • Clinical examination.

- 919
- 920 • CEA and CA 19.9 tumor markers.
- 921 • CT/MRI thoraco-abdomino-pelvic.
- 922 • Record of possible adverse events.
- 923 • Questionnaire QLQ-C30 and CR29.
- 924
- 925 VISIT 13 (30 months post-treatment)
- 926 • Clinical examination.
- 927 • CEA and CA 19.9 tumor markers.
- 928 • CT/MRI thoraco-abdomino-pelvic.
- 929 • Record of possible adverse events.
- 930
- 931 VISIT 14 (36 months post-treatment)
- 932 • Clinical examination.
- 933 • CEA and CA 19.9 tumor markers.
- 934 • CT/MRI thoraco-abdomino-pelvic.
- 935 • Record of possible adverse events.
- 936 • Questionnaire QLQ-C30 and CR29.
- 937
- 938 6.3 Biological samples
- 939
- 940 6.3.1 Blood samples.
- 941 During the trial, several extractions will be performed to determine the blood count,
- 942 biochemistry, coagulation and serum levels of tumor markers CEA and Ca19.9 (extractions in
- 943 accordance with routine clinical practice).
- 944 Estas determinaciones se realizarán en el Servicio de Análisis Clínicos de cada hospital
- 945 participante.
- 946
- 947 The extraction, storage and confidentiality of the same will be carried out in accordance with
- 948 the regulations for the use and storage of biological samples contained in Title V of Law
- 949 14/2007, of July 3, on biomedical research and the REGULATION (EU) 2016/679 OF THE
- 950 EUROPEAN PARLIAMENT AND OF THE COUNCIL of April 27, 2016 regarding the protection of
- 951 natural persons with regard to the processing of personal data and the free circulation of these
- 952 data and Organic Law 3/2018, of 5 December, Protection of Personal Data and guarantee of
- 953 digital rights.
- 954
- 955 7. SAFETY ASSESSMENT / ADVERSE EVENTS
- 956 7.1 Safety assessment
- 957 The principal investigator will be responsible for detecting and documenting adverse events
- 958 (AEs) throughout the study.
- 959
- 960 It is the responsibility of the principal investigator to report all AEs in the CRF, both observed
- 961 by him or spontaneously reported by the participants, regardless of the relationship with the
- 962 investigational medication.
- 963
- 964 All AEs must be reported during all phases of the study and followed until resolution or until an
- 965 adequate explanation is found, even if the patient has completed study treatment. Likewise,
- 966 reports will be made periodically on the AEs that occurred during the study, including an
- 967 evaluation of causality, severity and intensity.
- 968

969 Patients will be informed of the possible adverse reactions of the investigational medication
970 through the Patient Information Sheet, as well as their commitment to report any adverse
971 event they experience. They will be provided with a contact form with the study investigators
972 for this purpose. At all study visits, patients will be questioned about the presence of new AAs
973 or about the evolution of pre-existing ones.

974

975 7.2 Definition of adverse event

976 An adverse event (AE) is any occurrence that is detrimental to the health of a patient or clinical
977 trial subject treated with a drug, even if it is not necessarily related to said treatment.

978 Therefore, an AE can be any unfavorable and unintended sign (including an abnormal
979 laboratory finding), symptom or disease (new or exacerbation of a pre-existing one)
980 temporarily associated with the use of an investigational product. In the case of marketed
981 medicines, the lack of expected benefits (ie, lack of efficacy), abuse and misuse are also
982 included.

983

984 AAs include the following:

985

986 • Significant or unexpected worsening or exacerbation (either an increase in the frequency of
987 onset or intensity of the disease) of a pre-existing chronic or intermittent disease, as well as of
988 the disease or indication under study.

989 • New diseases detected or diagnosed after administration of the investigational product, even
990 though they may have been present before the trial began.

991 • Signs, symptoms or clinical sequelae of a suspected interaction.

992 • Signs, symptoms or clinical sequelae of a suspected overdose of the investigational product
993 or concomitant medication.

994 • Lack of efficacy, understood as a significant failure of the expected pharmacological or
995 biological action.

996

997 AEs may encompass events that occurred before or after treatment as a result of protocol-
998 specified procedures (eg, modification of the subject's previous treatment or testing).

999 Pregnancies occurring during the trial will also be considered AA and will be followed up.

1000

1001 7.3 Definition of serious adverse event

1002 A serious adverse event (SAE) is any experience that suggests a significant risk,
1003 contraindication, side effect, or precaution.

1004

1005 This is an AA that, at any dose, meets at least one of the following criteria:

1006

1007 • Causes death (death is a consequence, not an event, so death cannot be considered as an
1008 identification of the adverse event).

1009 • Is life-threatening (the term "life-threatening" refers to an event that posed an immediate
1010 risk of death to the patient at the time it occurred and not an event that hypothetically could
1011 have caused death if it had been more intense).

1012 • Requires hospital admission or extension of current hospitalization (in general,
1013 "hospitalization" means that the subject has been admitted, at least one night, in the hospital
1014 or in the emergency room, for observation or to receive treatment that could not have been
1015 performed in the doctor's office or on an outpatient basis Complications that occur during
1016 hospitalization are AE if they prolong hospitalization or meet any other severity criteria, in this
1017 case the event being an SAE.

1018

1019

1020 • Causes significant or permanent disability/incapacity (this definition does not include
1021 experiences that may be considered less medically relevant, such as headache, nausea,
1022 vomiting, diarrhoea, flu, or accidental trauma (e.g., sprained ankle), which may interfere with
1023 or prevent the development of the functions of daily life and that, however, do not
1024 constitute a substantial alteration of these).

1025 • Causes a congenital abnormality or birth defect.

1026 For notification purposes, suspected AEs that are considered medically important will also be
1027 treated as serious, even though they do not meet the above criteria, or require an
1028 intervention to prevent any of the consequences indicated above, and those that lead to the
1029 transmission of an infectious agent through the medicine.

1030

1031 Pregnancies occurring during the trial will also be considered SAEs.

1032

1033 7.4 Definition of adverse reaction

1034 An adverse reaction (AR) is any harmful and unintended reaction to an investigational drug,
1035 regardless of the dose administered.

1036 Unlike an AE, in the case of an AR there is a suspected causal relationship between the drug
1037 under investigation and the adverse event.

1038

1039 7.5 Definition of serious and unexpected adverse reaction

1040 An unexpected adverse reaction (RAI) is any AR whose nature, intensity or consequences do
1041 not correspond to the information regarding the drug (eg the Investigator's Manual in the
1042 case of an investigational drug not authorized for marketing, or the File Product technique in
1043 the case of an authorized drug).

1044

1045 The unexpected character of an adverse reaction is based on the fact that it has not been
1046 previously observed and will not be based on what could be anticipated based on the
1047 pharmacological properties of the drug. The concept of Serious Unexpected Adverse
1048 Reaction (SARI) has been described above and in Section 7.3 of the protocol.

1049

1050 7.6 Analytical abnormalities and other abnormal evaluations

1051 The results of the laboratory tests will be recorded in the CRD.

1052

1053 Laboratory abnormalities or other assessments (e.g., vital signs) that are abnormal and
1054 clinically significant in the investigator's judgment, detected during the trial or present at Visit
1055 0 or baseline and significantly worsening after the start of the trial, will be recorded. as AA
1056 (serious or non-serious if they meet the corresponding definition). However, laboratory
1057 abnormalities or other clinically significant abnormal evaluations that are associated with the
1058 disease under study, unless judged by the investigator to be more severe than expected for
1059 the subject's condition or present or detected early of the trial and do not worsen, they will
1060 not be reported as AA.

1061

1062 In the event of unexplained abnormal laboratory test values that are clinically significant,
1063 repeat testing and follow-up will be performed until values are restored to the normal range,
1064 return to baseline, and/or a finding is found. clear explanation of the anomaly.

1065 7.7 Intensity evaluation

1066 The severity of all AEs will be graded according to the National Cancer Institute (NCI-CTCAE)
1067 criteria, version 4.0, on a five-point scale (grades 1 to 5) and will be recorded in detail on the
1068 CRD.

1069 An AE described as "severe" should not be confused with a "serious" AE. Intensity is a category
1070 used to qualify the intensity of an adverse event and both non-serious AEs and SAEs can be

1071 classified as intense or severe. An adverse event is defined as serious when it produces one of
1072 the predefined outcomes described in Section 7.3 of the protocol.

1073

1074 7.8 Assessment of causality

1075 The Principal Investigator will assess the causal relationship of the AE to the study medication.

1076

1077 If there are reasonable suspicions indicating that the study medication has a causal
1078 relationship with the AE, that is, there are facts (indications) or arguments that suggest said
1079 relationship, the causality algorithm used by the Spanish Pharmacovigilance System (Karch and
1080 Modified Lasagna) that uses 5 criteria:

1081 - Temporal Sequence (ST), reasonable with the administration of the drug.

1082 - Prior Knowledge (CP). Follows a known response pattern to the suspect drug.

1083 - Evolution after withdrawal (RT). Disappears or decreases when treatment is stopped or the
1084 dose is reduced.

1085 - Effect of re-exposure (RX). It recurs when the drug is reintroduced.

1086 - Alternative cause (AC). Natural history of underlying diseases, concomitant treatments or
1087 other risk factors.

1088

1089 The total imputability score classifies the causal relationship into 5 categories:

1090

1091 • UNLIKELY.....≤ 0

1092 • CONDITIONAL.....1-3

1093 • POSSIBLE.....4-5

1094 • LIKELY.....6-7

1095 • DEFINED.....≥ 8

1096

1097 The causal relationship will be DEFINED if the AE is related to the administration of the drug,
1098 improves when it is suppressed and reappears with its readministration without being able to
1099 be explained by other causes; PROBABLE if it is related to the administration of the drug, it
1100 improves when it is stopped without being able to be explained by other causes; POSSIBLE
1101 when related to drug administration but can be explained by other causes; CONDITIONAL
1102 when there is a causal relationship with the administration of the drug but it does not coincide
1103 with the AE of the drug and can be explained by alternative causes. Finally, UNLIKELY or there
1104 is no causal relationship (unrelated) if there is no time sequence, it does not coincide with the
1105 AE described for the drug and it can be explained by other causes.

1106

1107 7.9 Collection and monitoring of adverse events

1108 The principal investigator will collect all AEs that occur from the time the patient signs the
1109 informed consent until the last follow-up visit, including those caused by trial procedures.

1110

1111 All AEs will be recorded in the patient's medical record and in the CRF.

1112

1113 These may be self-reported by the patient or may be revealed through open questions,
1114 explorations, or assessments during interviews at study visits. In order to avoid reporting bias,
1115 patients should not be asked about the specific manifestation of one or more AE.

1116

1117 After the initial collection of data on the AE, the researcher must actively follow the evolution
1118 of each patient and provide new information on their situation. In this sense, all AAs will be
1119 monitored until their resolution, until the problem is stabilized, an alternative explanation is
1120 found, or until it is impossible to trace the subject.

1121

1122 At the end of the patient's participation in the study, only the following AEs will be followed
1123 up:

1124

1125 • SAA and RAGI still present

1126 • Non-serious AEs related to investigational product or trial procedures still present until
1127 resolved or until an alternative explanation is found or subject follow-up becomes impossible.

1128

1129 Once resolved, the AA page in the CRF will be updated. The investigator will ensure that the
1130 follow-up includes as many additional investigations as necessary to elucidate the nature and
1131 causality of the AE. This may include additional laboratory tests or tests, histopathological
1132 examinations, or consultation with other healthcare professionals.

1133

1134

1135 7.10 Reporting of serious adverse events

1136 All AEs that are serious and manifest during the course of the study, regardless of the
1137 treatment group in which they occur, must be reported to the sponsor within one business day
1138 (24 hours) from the time the investigator be aware of the event.

1139

1140 The notification form must always be completed in as much detail as possible, with all the
1141 specific information available, and must be signed by the investigator. The minimum
1142 information in the initial report includes: patient identification, adverse event identification,
1143 onset date, reason considered serious, causal relationship to study medication, name of
1144 person originally reporting the event, and all event-specific information available. In case the
1145 investigator does not have all the information about the SAE, he will not wait to receive it
1146 before reporting the event. The additional information must be notified in the same form
1147 within 24 hours after its knowledge.

1148

1149 The preferred method for the promoter to receive this information is to send a fax with the
1150 notification form:

1151

1152 FIBICO Pharmacovigilance Unit

1153 Fax: +34 957 76 35 71

1154

1155 In exceptional circumstances, and in the absence of a fax machine, notification by email or
1156 telephone is accepted, with a copy of the form being sent by express mail (or attached to the
1157 email message). Initial notification by email or phone does not replace the need for the
1158 investigator to complete, sign, and return the notification form within the timeframes noted
1159 above.

1160

1161 The sponsor will review the form received and, if applicable, request additional information
1162 from the investigator.

1163

1164 If the investigator receives additional information about the SAE, or the SAE is resolved or
1165 unlikely to change, a follow-up report should be completed and also faxed to FIBICO's
1166 Pharmacovigilance Unit within 24 hours of completion. your knowledge.

1167 All cases of pregnancy are considered SAEs and therefore must be notified according to the
1168 procedure described above.

1169

1170 The immediate notification of the SAE in the form will be in addition to the collection of these
1171 data in the patient's clinical history and in the CRD.

1172

1173
1174 The promoter can delegate tasks to third parties, although the ultimate responsibility will
1175 remain with the promoter.
1176
1177 The sponsor will not actively look for ADRs attributable to either medication or trial
1178 procedures that occur after the subject's participation in the trial has ended. However, if
1179 the researcher communicates them, the sponsor will collect and process them accordingly.
1180 Such cases will be subject to expedited notification as required by regulatory authorities.
1181
1182 The sponsor must expeditiously notify all information that could modify the risk/benefit ratio
1183 of the investigational drug, or determine changes in its administration schedule or in the
1184 conduct of the trial, for example:
1185
1186 • A qualitative change or an increase in the percentage of appearance of the expected SARs,
1187 which is considered clinically important.
1188 • RAGI that occur after the completion of a clinical trial and that are reported by the
1189 investigator to the sponsor.
1190 • New events related to the conduct of the trial or the development of the investigational drug
1191 and that are likely to affect the safety of the subjects, such as:
1192 • SAEs that may be associated with the trial procedures and that may affect the performance
1193 of the trial.
1194 • A significant risk to subjects such as the lack of efficacy of an investigational drug used for the
1195 treatment of a life-threatening disease.
1196 • Important new safety findings from new animal studies (such as carcinogenicity).
1197 • Any premature termination or temporary stoppage of a clinical trial with the same
1198 investigational drug for safety reasons, carried out in another country and by the same
1199 sponsor.
1200 • RAGI related only to an NMI that are considered relevant as they are not subject to the
1201 general rules of expedited notification of individual RAGI cases.
1202 • Any recommendation of the Data Monitoring Committee, which is relevant to the safety of
1203 the subjects.
1204
1205 This relevant information must be notified as soon as possible and no later than 15 days after
1206 the promoter has become aware of it. In addition, if additional relevant information is
1207 obtained, it must be notified as quickly as possible.
1208
1209 The sponsor must communicate to all the investigators involved any information that may
1210 affect the safety of the trial subjects, as soon as possible. You will also be informed,
1211 throughout the study, of any safety issues that impact the conduct of the clinical trial or the
1212 development of the product, including the interruption of the development program or
1213 changes to the protocol related to safety.
1214
1215 The study will meet all local regulatory requirements. It will also meet all the requirements of
1216 the ICH Guideline for Clinical Safety Data Management, Definitions and Standards for
1217 Expedited Reporting, Topic E2A.
1218
1219 7.11 Expedited notification of RAGIs to health authorities / RECs
1220 The sponsor, through the FIBICO Pharmacovigilance Unit, is responsible for notifying the
1221 AEMPS, the CEIs involved and the Autonomous Communities where the trial is carried out, of
1222 all the RAGI that are collected in the study, following the procedure indicated in the current
1223 legislation.

1224 For suspected RAGI that occur in Spanish territory, only the official Spanish language of the
1225 State will be accepted and the RAGI notification form included in the investigator's file will be
1226 used.

1227

1228 The maximum period for notification of an individual case of suspected RAGI will be 15
1229 calendar days from the moment in which the promoter became aware of it. When the
1230 suspicion of RAGI has caused the death of the patient, or put his life in danger, the promoter
1231 will send the information within a period of 7 calendar days from the moment in which he
1232 becomes aware of it. It will complete said information, as far as possible, in the following 8
1233 days.

1234

1235 This information should include an evaluation of the importance and implication of the
1236 findings, including previous relevant experience with the same or similar drugs.

1237

1238 The notification may be made by fax (+34 918225076), by post or in person at the AEMPS
1239 (Parque Empresarial Las Mercedes Edificio 8, C/ Campezo 1 - 28022 Madrid) addressed to the
1240 Clinical Trials Area of the General Subdirectorate of Medicines for Human Use. Suspected
1241 adverse reactions will be accompanied by an accompanying letter.

1242

1243 The AEMPS will make public the date from which it will accept the electronic notification sent
1244 by the promoters. Likewise, the AEMPS will determine the deadline from which it will not
1245 accept notifications in digital or paper format, except for justified reasons. Until then,
1246 promoters may continue to make notifications in paper format, without prejudice to the fact
1247 that in the case of RAGI notifications occurring outside of Spain, when the RAGI is notified to
1248 Eudravigilance, additional notification to the AEMPS is not necessary.

1249

1250 Each of the RECs involved in a clinical trial must be notified of all the RAGI that have occurred
1251 in the participating subjects in the centers in their area of influence.

1252

1253 Likewise, the competent body of each of the Autonomous Communities where the test is
1254 carried out must be notified of suspected RAGI occurring in the health centers of their
1255 Community. In both cases, the RAGI notification form will be used for this.

1256

1257 The sponsor will annually send the researchers the information on the RAGI in an aggregated
1258 form in a list together with a brief analysis of the data provided.

1259

1260 7.12 Annual Safety Reports

1261 The annual safety reports that will include the RAGIs and AAGs collected in the study since the
1262 patient is randomized, will be sent by FIBICO to the AEMPS (Clinical Trials Area of the General
1263 Subdirectorate of Medicines for Human Use), the Autonomous Communities and the CEIs,
1264 within the terms established in current legislation.

1265

1266 7.13 Treatment of adverse events

1267 Treatment of any adverse event is at the discretion of the investigator and is based on current
1268 Good Clinical Practice standards. Any medication administered to treat an AE will be listed on
1269 the subject's CRF.

1270

1271 7.14 Pregnancy

1272 According to ICH Guideline M3, precautions should be taken to minimize risk to the fetus or
1273 embryo when women of childbearing potential are included in clinical studies. These
1274 precautions include performing a serum pregnancy test at the baseline evaluation to rule out

1275 pregnancy, the use of highly effective contraceptive measures and continued monitoring in
1276 case of pregnancy.

1277

1278 If a pregnancy occurs during the patient's participation in the clinical trial, it will be considered
1279 an SAE and the investigator will record the information about the pregnancy on the CRF. In
1280 addition, the patient will be followed up to determine the outcome of the pregnancy (also
1281 including premature termination of the pregnancy).

1282

1283 Pregnancy complications and voluntary termination for medical reasons and spontaneous
1284 abortions should also be reported using the serious adverse event report.

1285

1286 The investigator shall immediately notify the sponsor of any SAE related to pregnancy or the
1287 newborn/child that he or she considers may be related to the investigational medicinal
1288 product during the trial and after the patient has completed the trial.

1289

1290

1291 Any pregnancy that occurred during the study and its outcome should be recorded and
1292 followed up to rule out abnormalities or congenital malformations. Information will be
1293 collected on:

- 1294 • Normal birth, spontaneous or therapeutic abortion (any congenital anomaly detected in the
1295 aborted fetus must be documented) stillborn fetus, congenital anomaly
- 1296 • Neonatal deaths occurring within 30 days of birth
- 1297 • Death of an infant after 30 days if suspected by the investigator to be related to in utero
1298 exposure to study medication

1299

1300 All infants born after fetal exposure should be followed for the first 12 months after delivery.

1301

1302 7.15 Deaths

1303 Deaths occurring during treatment with the investigational product or within 12 weeks of
1304 discontinuation of treatment, whether or not considered treatment-related, should be
1305 reported.

1306 All deaths considered to be related to study drug at any time will be reported as SAEs,
1307 regardless of time since last dose of investigational product.

1308

1309 8. STATISTICAL METHODOLOGY

1310

1311 8.1 Analysis data sets

1312

1313 8.1.1 Intention-to-treat (ITT) population

1314 The ITT population is defined as all randomized patients, whether or not they received the MI.
1315 Patients will be classified according to the treatment group to which they have been
1316 randomised, regardless of the actual treatment received. This population provides the basis for
1317 the main efficacy analyses.

1318

1319 8.1.2 Population per protocol (PP)

1320 The PP dataset consists of all patients from the ITT dataset without any major protocol
1321 deviations. This is the group of patients who participated in the study as planned.

1322

1323 Major deviations from the protocol are defined as:

- 1324 • Failure to comply with the inclusion and exclusion criteria.
- 1325 • Taking prohibited medications.

1326

1327 Minor deviations:

- 1328 • Failure to comply with the visit dates.
- 1329 • Missed value of the main criterion without premature suspension.
- 1330 • Failure to comply with the protocol design.
- 1331 • Any other deviation during the course of the study.

1332

1333 8.1.3 Security data set

1334 The safety data set encompasses all patients included in the study who have received at least
1335 one dose of any study drug.

1336

1337

1338 8.2 Determination of sample size

1339 The calculation of the sample size of the clinical trial is based on the regional control rate of
1340 the disease (LC rate %) at 36 months after the intervention (main end point). We have
1341 assumed that the proportion of patients in the treatment group with local control of the
1342 disease (LC rate %) at 36 months is 82% (peritoneal recurrence in 18% at 36 months) and that
1343 the proportion of patients in the group control with local control of the disease (LC rate %) at
1344 36 months is 64% (peritoneal recurrence in 36% at 36 months).

1345 With this estimation (error $\alpha = 0.05$, power = 0.80, double tail) the calculated sample size is
1346 190 patients, 95 patients in each arm. Contemplating an approximate loss of 5% of patients,
1347 the definitive N is 200 patients.

1348

1349 8.3 Types of analysis

1350 - Descriptive analysis for quantitative variables by calculating arithmetic means (m) and typical
1351 or standard deviations (SD); and for qualitative variables by calculating counts of percentages
1352 and proportions (%).

1353 - Determination of the goodness of fit to a normal distribution (normal data) using the Shapiro-
1354 Wilk test. The homogeneity of variances will also be checked using Levene's test.

1355 - Comparison of the mean values of the quantitative variables between the two groups using
1356 Student's t-test (parametric test) or Mann-Whitney U-test (non-parametric test).

1357 - Comparison of proportions between the different groups using chi-square tests for
1358 contingency tables; in the case of 2 x 2 tables, the chi-square statistic with Yates' correction
1359 will be used, and when some expected frequency is ≤ 5 , Fisher's exact test will be applied.

1360 - Association between quantitative variables by calculating Pearson's linear correlation
1361 coefficients (parametric test) or Spearman's correlation (non-parametric test), as
1362 appropriate.

1363 - Survival curves will be studied using the Kaplan-Meier method and comparison using Log-
1364 Rank to analyze the effect of the different factors on survival.

1365 Todos los contrastes de hipótesis serán bilaterales. Y en todas las pruebas estadísticas se
1366 considerarán valores "significativos" aquellos cuyo nivel de confianza sea del 95% ($p < 0,05$).

1367

1368 9. ADMINISTRATIVE OBLIGATIONS

1369

1370 9.1 Source documents

1371 The source documents are any document, original, electronic or paper data records from
1372 which the patient's CRF data is obtained.

1373

1374 9.2 Data collection and management

1375 The Principal Investigator must maintain a list of appropriately qualified individuals to whom
1376 they have delegated study tasks. All persons authorized to make entries and/or corrections to
1377 the CRFs will be listed on the delegation of authority form, signed by the sponsor.
1378

1379 Researchers must complete a CRD for each patient participating in the trial, where all the data
1380 requested in this study will be collected, including laboratory data.
1381

1382
1383 All forms must be completed clearly and legibly. Corrections should be made by crossing out
1384 the incorrect entry (without erasing or rendering it illegible), inserting the correct information,
1385 date, and initials of the investigator or authorized delegate making the correction, next to the
1386 corrected portion. Investigators will ensure the accuracy, completeness, readability, and
1387 timeliness of the data in the CRDs and in all requested records.
1388

1389 Once the study has been completed by the patient, the principal investigator will sign the CRF
1390 and deliver it to the sponsor (or designated technical personnel) for their file. This also applies
1391 to CRFs for subjects who do not complete the study.
1392

1393 All data necessary for analysis and communications will be entered into a validated database.
1394 The closure of the database will take place when the data management quality control
1395 procedures have been completed.
1396

1397
1398 The monitor will verify adherence to the protocol and its integrity, coherence and accuracy of
1399 the data entered in the CRD, in addition to ensuring that the clinical trial is carried out in
1400 accordance with the Good Clinical Practice (GCP) Standards, and all applicable regulatory
1401 requirements. .
1402

1403 Adequate and accurate records shall be maintained so that the performance of the trial is fully
1404 documented and the subsequent verification of the trial data.
1405

1406 9.3 Investigator's file / Conservation of documents
1407 Adequate and accurate records must be kept by the investigator to allow the study to be fully
1408 documented and so that the study data can be subsequently verified. These documents should
1409 be classified into two different categories: the investigator's study file and the patient's original
1410 clinical documentation.
1411

1412 The investigator's study file will contain the protocol and amendments, the approval of the
1413 CEIm and the competent authorities along with correspondence, the model informed consent
1414 form, medication records, team resumes, authorization forms and other appropriate
1415 documents and correspondence.
1416

1417 Original patient clinical documentation will include the patient's hospital records, physician
1418 and nursing staff notes, appointment book, original laboratory reports, signed informed
1419 consent forms, consultation reports, and screening records. patient inclusion.
1420

1421 The investigator must archive the two types of documents described above for a minimum of
1422 15 years from the date of termination or cancellation of the study or for a longer period, if
1423 required by local law. After this period of time, documents may be destroyed in accordance
1424 with local law.
1425

1426 If the investigator wishes to assign the study files to another person or move them to another
1427 location, the sponsor must be notified in advance.

1428

1429 If the investigator cannot guarantee the requirements established for the filing of any or all of
1430 the study documents in the investigation center, the investigator and the sponsor must agree
1431 on special measures to keep these documents in a sealed box outside the center, so that can
1432 be returned to the investigator in this way, in the event of a regulatory audit. When original
1433 documents are required for the continued care of the patient, appropriate copies should be
1434 obtained for off-site retention.

1435

1436 The investigator must provide the sponsor, upon request, with the basic data required from
1437 the study documentation or clinical records. This is particularly important when errors in data
1438 transcription are suspected. In the event that special issues and/or queries arise from
1439 regulatory authorities or an audit inspection is required, access to full study documentation is
1440 also necessary, provided patient confidentiality is protected.

1441

1442 9.4 Data quality assurance / audits and inspections

1443 To ensure compliance with the Good Clinical Practice Standards and all applicable legal
1444 requirements, the sponsor may conduct a quality assurance audit. Regulatory Agencies could
1445 also carry out an inspection of this clinical trial. Audits and inspections may occur at any time
1446 during the clinical trial or after it has ended. In the event that an audit or inspection is carried
1447 out, the investigator and the participating center will agree to allow the auditor or inspector
1448 direct access to all records and relevant documentation of the clinical trial (provided that the
1449 confidentiality of the subjects is protected). and spend the necessary time, their own and that
1450 of their staff, to discuss the results and other relevant matters with the auditor or inspector.

1451

1452 The investigator/institution must facilitate access to the original data/documents for trial
1453 monitoring, audits, CEIm reviews and regulatory inspections. In compliance with all applicable
1454 regulations, the investigator and the center are required to allow authorized representatives of
1455 the study sponsor, the regulatory agency(ies) and the CEIm direct access to the review of the
1456 original medical records of the patients for verification of the procedures and data related to
1457 the study. This direct access includes the exploration, analysis, verification and reproduction of
1458 any records or reports that are important for the evaluation of the study. The investigator is
1459 required to inform and obtain the subject's consent to allow designated representatives access
1460 to his or her study-related records without breaching the confidentiality of the subject.
1461 Verification of the CRD data must be done by direct inspection of the original documents.

1462

1463 9.5 Posting Policy

1464 The results of this clinical trial may be published or presented at scientific meetings.

1465

1466 The publication conditions will comply with the provisions of article 42 of Royal Decree
1467 1090/2015 of December 4, which regulates clinical trials with medicines, the Ethics
1468 Committees for Research with medicines and the Spanish Registry of Studies Clinicians.

1469

1470 Once the study has finished and the statistical report has been prepared, the research team
1471 will prepare the final report of the study that will be presented to the CEIm, the AEMPS and
1472 the health authorities that request it. This final report will be the basis for the preparation of
1473 the manuscripts that are to be published in medical journals.

1474

1475

1476 .

1477
1478 9.6 Test monitoring
1479 The monitoring of the study will be carried out according to the recommendations established
1480 in the ICH Topic E6 (R2).
1481
1482 The trial monitor will contact the site, prior to subject enrollment, to review the trial protocol
1483 and procedures with site staff. In addition, the monitor will be responsible for inspecting CRDs
1484 and other pertinent data (provided subject confidentiality is maintained in accordance with
1485 legal requirements) at regular intervals throughout the clinical trial for protocol compliance
1486 and integrity. consistency and accuracy of the data being entered. The extent, nature, and
1487 frequency of site visits will be based on the objective and/or endpoints of the clinical trial, the
1488 purpose of the clinical trial, the complexity of the design, and the rate of recruitment.
1489
1490 During these contacts, the monitor:
1491 - Check the progress of the clinical trial and the rate of inclusion of patients.
1492 - Review the data collected from the clinical trial.
1493 - Verify the original documents.
1494 - Will identify any issues and address their resolution.
1495
1496 This will be done in order to verify that:
1497 - The data is authentic, exact and complete
1498 - The safety and rights of subjects are protected.
1499 - The clinical trial is carried out in accordance with the current protocol (and any
1500 amendments), the Good Clinical Practice Standards and all applicable legal requirements.
1501
1502 The monitor will be able to access the clinical records of the patients after the researcher
1503 requests it. The investigator agrees to allow the monitor direct access to all relevant
1504 documents and to spend the necessary time, himself and his team, to discuss the findings and
1505 other relevant matters with the monitor.
1506
1507 The investigator must allow the monitor, the sponsor's internal auditors, and representatives
1508 of regulatory authorities to inspect all study-related documentation and relevant medical or
1509 hospital records for confirmation of the CRF data.
1510
1511 The duties of the monitor are described below:
1512 1. Work in accordance with the promoter's SOPs.
1513 2. Visit the investigator before, during, and after the study to verify compliance with the
1514 protocol.
1515 3. Guarantee that the data is recorded correctly and completely.
1516 4. Ensure that informed consent has been obtained from all subjects prior to inclusion in the
1517 study.
1518 5. Verify that the researchers and the center where the research will be carried out are
1519 suitable for this purpose.
1520 6. Make sure that both the principal investigator and his collaborators have been properly
1521 informed and guarantee rapid communication between the investigator and the monitor at all
1522 times.
1523 7. Ensure that the storage, distribution and documentation of investigational drugs is safe and
1524 adequate.
1525 8. Submit to the sponsor reports of the monitoring visits and all the relevant contacts made
1526 with the investigator.
1527

1528

1529 10. REGULATORY AND ETHICAL OBLIGATIONS

1530

1531 10.1 Regulations

1532 This clinical study will be carried out in accordance with the protocol, the principles established
1533 in the current revised version of the Declaration of Helsinki (Fortaleza, 2013) (Annex 2) and in
1534 accordance with the applicable regulatory requirements, in particular the Tripartite Guide of
1535 the ICH "Norms of Good Clinical Practice", the Royal Decree of Clinical Trials 1090/2015, of
1536 December 4, which regulates clinical trials with medicines, the Ethics Committees of Research
1537 with medicines and the Spanish Registry of Studies Clinicians and Regulation (EU) No.
1538 536/2014 of the European Parliament and of the Council, of April 16, 2014, on clinical trials of
1539 medicinal products for human use.

1540

1541 The researcher acknowledges, when signing the protocol, that he adheres to the instructions
1542 and procedures described in it and will ensure that the established provisions are strictly
1543 complied with.

1544

1545 The promoter will obtain the approval of the Health Authorities (AEMPS), in accordance with
1546 all applicable country-specific legal requirements.

1547

1548 The study will not begin until authorization from the AEMPS and approval from the CEIm have
1549 been obtained.

1550

1551 The principal investigator is responsible for ensuring that this protocol, the site's informed
1552 consent document, and any other information that is presented or made available to
1553 prospective subjects (eg, advertisements or information that supports or supplements
1554 informed consent) is accurate. reviewed and approved by the CEIm. The researcher agrees to
1555 allow the CEIm direct access to all relevant documents. The CEIm must be constituted in
1556 accordance with all applicable legal requirements.

1557

1558 10.2 Informed consent

1559 The patient must give their consent before being included in the study. The content and the
1560 procedure for obtaining it must be in accordance with all applicable legal requirements.

1561

1562 The investigator is responsible for obtaining the written informed consent of each patient who
1563 participates in this study, after having explained in an understandable manner, the nature,
1564 objectives, methods, anticipated benefits and possible risks of the study.

1565

1566 The investigator must also explain to patients that they are completely free to refuse to
1567 participate in the study or to withdraw from the study at any time, for any reason.

1568

1569 For patients who are unable or incapable of giving legal consent, the written consent of their
1570 legally authorized representative must be obtained. In the event that the patient and their
1571 authorized legal representative are unable to read, an impartial witness must be present
1572 throughout the informed consent process. After the patient and/or their legal representative
1573 have verbally given their consent to participate in the study, the witness will sign the
1574 document to attest that the information contained in the informed consent form has been
1575 fully explained and understood.

1576

1577 The subject of the study will grant their consent, signing the corresponding model. To this end,
1578 each model must bear the signature of the investigator and the patient.

1579

1580 The CRDs for this study contain a section to document the patient's informed consent, which
1581 must be properly completed.

1582

1583 If new safety information is obtained that results in significant changes to the risk/benefit
1584 assessment, the informed consent form will be reviewed and updated, if necessary. All
1585 patients, including those already receiving treatment, must be informed of the new results and
1586 provided with a copy of the updated informed consent form in order to re-consent to continue
1587 in the study.

1588

1589 10.3 Confidentiality

1590 All information related to the study is considered confidential.

1591

1592 In order to guarantee the confidentiality of the study data, only the principal investigator and
1593 his team of collaborators, the designated technical personnel, the monitor, the sponsor, the
1594 CEIm and the pertinent health authorities will have access to them.

1595

1596 The content of the data collection notebooks, as well as the documents generated during the
1597 study and the database, will be protected from unauthorized uses by people outside the
1598 research and, therefore, will be considered strictly confidential and will not be disclosed to
1599 third parties except those specified in the previous sections.

1600

1601 The promoter guarantees that the data processing will be done with the security measures
1602 established in compliance with REGULATION (EU) 2016/679 OF THE EUROPEAN PARLIAMENT
1603 AND OF THE COUNCIL of April 27, 2016 regarding the protection of natural persons in relation
1604 to regarding the processing of personal data and the free circulation of these data and by
1605 Organic Law 3/2018, of December 5, on the Protection of Personal Data and guarantee of
1606 digital rights. By signing the informed consent, the participant shows their agreement with this
1607 use of the study data. This authorization does not have an expiration date. The participant may
1608 withdraw it at any time, but must do so in writing.

1609

1610 All material, information (oral or written), unpublished documentation that is provided to the
1611 researchers, including this protocol, the data collection notebooks and the investigator's
1612 manual, must be considered the property of the sponsor.

1613

1614 It is the researcher's obligation to consider as confidential and ensure at all times the
1615 confidentiality of the documents and results generated during the course of the trial, except
1616 for those that the legislation defines as divulgable. The data and/or material of the study may
1617 not be disclosed, in whole or in part, by the researcher or his collaborators to any
1618 unauthorized person, without the prior and written consent of the sponsor.

1619

1620 The researcher will guarantee that the anonymity of the subjects is maintained and that their
1621 identities are protected from unauthorized third parties. To maintain the confidentiality of
1622 patient data and to safeguard the doctor-patient relationship, each participating patient will
1623 be assigned a unique reference number. In the CRD or other documents presented to the
1624 sponsor, the name of the subjects should not appear, using the identification code. The
1625 investigator must maintain a record of subject recruitment showing codes and names.

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1631 All data and information generated by the center as part of the clinical trial (other than the
1632 clinical records of the subjects) will be kept confidential by the investigator and other center
1633 personnel. This information and data will not be used by the investigator or other personnel of
1634 the center for any purpose other than that of carrying out the trial. These restrictions do not
1635 apply to:

1636

1637 - Information that remains publicly available through no fault of the researcher or center staff.

1638 - Information that must be disclosed confidentially to a CEIm exclusively for clinical trial
1639 evaluation purposes.

1640 - Information that is necessary to disclose in order to offer adequate health care to a clinical
1641 trial subject.

1642 - Results of the clinical trial that can be published as described in the following paragraph.

1643

1644

1645 10.4 Responsibilities according to Good Clinical Practices (GCP)

1646

1647 10.4.1 Responsibilities of the Promoter

1648 The obligations of the Promoter will be the following:

1649 1. Establish Standardized Work Procedures (SOP).

1650 2. Sign the protocol and any modifications to it together with the researcher.

1651 3. Select the most appropriate person to direct the study and ensure that he or she will carry
1652 out this task as specified in the protocol.

1653 4. Provide all the basic and clinical information available on the investigational product and
1654 update it throughout the study.

1655 5. Request the report by the CEIs and the authorization of the General Directorate of Pharmacy
1656 and Health Products, and inform them or request their authorization, as appropriate and
1657 without prejudice to the communication to the Autonomous Communities, in case of
1658 modifications, violations of the protocol or study discontinuation.

1659 6. Hire a pharmaceutical laboratory to supply the medication to be investigated, ensuring that
1660 good manufacturing standards (GMP) have been met and that the samples are properly
1661 packaged and labeled.

1662 7. It is also responsible that in the center where the study is carried out there will be a correct
1663 procedure for handling, conservation and use of it.

1664 8. Appoint the monitor who will monitor the progress of the study.

1665

1666 9. Communicate to the Health Authorities and the RECs involved in the trial:

1667 a. Serious and unexpected adverse effects that may be related to the treatments under
1668 investigation that occurred inside or outside of Spain.

1669 b. Any information derived from animal studies that suggests a significant risk to humans,
1670 including any finding of teratogenicity or carcinogenicity. In these cases, the sponsor, together
1671 with the researcher, will take the necessary measures to protect the study subjects.

1672 10. Provide the researcher and the RECs when appropriate, any important information, to
1673 which they have access during the study.

1674 11. Ensure financial compensation to subjects in case of injury or death related to the study.

1675 12. Agree with the researcher on the obligations regarding data processing, reporting and
1676 publication of results. In any case, the promoter is responsible de elaborar informes finales o
1677 parciales y comunicarlos a la Dirección General de Farmacia y Productos Sanitarios.

1678

1679 10.4.2 Responsibilities of the Investigator

1680 The investigator's duties are:

1681 1. Agree and sign the project protocol together with the promoter.
1682 2. Know in depth the properties and characteristics of the drugs to be used.
1683 3. Obtain the informed consent of the patients before their inclusion in the study.
1684 4. Collect, record and report data correctly.
1685 5. Immediately notify the promoter of serious or unexpected adverse events.
1686 6. Guarantee that all the people involved in the study will respect the confidentiality of any
1687 information about the study subjects.
1688
1689 Failure to comply with the protocol, SOPs, GCP, and/or relevant regulatory requirements by an
1690 investigator should lead to prompt intervention, by the sponsor, to ensure compliance.
1691
1692
1693 If monitoring and/or auditing identify serious and/or persistent noncompliance by an
1694 investigator, the sponsor must withdraw the investigator from the study. When the
1695 investigator is removed due to noncompliance, the sponsor must promptly notify regulatory
1696 authorities.
1697
1698 10.5 Insurance
1699 As required by current legislation, and in particular Royal Decree 1090/2015, the sponsor will
1700 take out an insurance policy that covers the responsibilities of the sponsor, the principal
1701 investigator and their collaborators, and the hospital or center where the study is carried out.
1702 clinical trial, before possible damages that affect the patient's health during the study and in
1703 the year following its completion.
1704
1705 10.6 Conditions for modifying the protocol
1706 To guarantee the conditions of the study and the interest of the valid statistical analysis of the
1707 data, neither the researcher nor the sponsor may alter the conditions of the study agreed
1708 upon and stipulated in this protocol.
1709
1710 Any amendment shall be established in writing, indicating the reasons and prior signature of all
1711 the agreed parties. The amendment will then become an integral part of the study protocol. In
1712 the event that the amendments require the approval of the ethics committees and/or
1713 authorities, it will be necessary to obtain it. Any amendment that changes the benefit-risk ratio
1714 for the patient must be, once signed by the promoter, submitted for evaluation and approval
1715 by the AEMPS and the CEIm.
1716
1717 Modifications to the protocol must be prepared by the sponsor. The investigator will not be
1718 able to modify the protocol on his own.
1719
1720 All modifications related to the protocol, the informed consent document or any other
1721 information that the CEIm has approved to be delivered to the possible subjects, must be sent
1722 to the CEIm for its information and approval, in accordance with the legal requirements, and to
1723 the Health Authorities (if necessary). The investigator is responsible for ensuring that the CEIm
1724 reviews and approves, where appropriate, these amended documents, and such approval
1725 must be obtained before any changes can be made (except, for example, changes necessary to
1726 eliminate an immediate risk to study subjects). trial). In the event that an amendment to the
1727 informed consent form is made, the investigator must follow all applicable legal requirements
1728 related to its use, including obtaining CEIm approval of the amended document, before new
1729 subjects give their consent. to participate in the clinical trial using this version of the form.
1730

1731 **10.7** Conditions to end the study
1732 If the trial is terminated prematurely or suspended, the sponsor must promptly inform the
1733 investigator and regulatory authorities of the termination or suspension and the reason for it.
1734 The sponsor or investigator must promptly inform the CEIm and provide the reason for the
1735 termination or suspension, as specified by the relevant regulatory requirements. Both the
1736 sponsor and the investigator reserve the right to terminate their participation in the study
1737 under the circumstances agreed upon in the contract with the center. If this is necessary, both
1738 parties will decide the procedures individually, after review and consultation. At the time of
1739 termination of the study, the sponsor and the investigator will ensure that due consideration is
1740 given to the protection of the interests of the patients.

1741

1742 **11. BIBLIOGRAPHY**

- 1743 1. J. Ferlay, D.M. Parkin, E. Steliarova-Foucher. Estimates of cancer incidence and mortality in
1744 Europe in 2008. *Eur J Cancer* 2010;46(4):765–81
- 1745 2. Snaebjornsson P., Coupe V.M.H., Jonasson L. pT4 stage II and II colon cancer carry the worst
1746 prognosis in a nationwide survival analysis. Shepherd's local peritoneal involvement revisited.
1747 *Int. J. Cancer* 2013. 00, 00-00.)
- 1748 3. Shepherd NA, Baxter KJ, Love SB. The prognostic importance of peritoneal involvement in
1749 colonic cancer: a prospective evaluation. *Gastroenterology* 1997; 112:1096-102).
- 1750 4. Hompes D, Tiek J, Wolthuis A. HIPEC in T4a colon cancer: a defendable treatment to
1751 improve the oncologic outcome? *Annals of Oncology* 2012, 23; 3123-3129)
- 1752 5. Sugarbaker PH. Peritoneal carcinomatosis drugs and diseases. Boston : Kluwer; 1996
- 1753 6. Verwaal VJ, van Ruth, deBree E. Randomized trial of cytoreduction and hyperthermic
1754 intraperitoneal chemotherapy vs systemic chemotherapy and palliative surgery in patients
1755 peritoneal carcinomatosis of colorectal cancer. *J Clin Oncol* 2003; 21:3737-3743.
- 1756 7. Elias D, Lefevre JH, Chevalier J. Complete cytoreductive surgery plus intraperitoneal
1757 chemohyperthermia with oxaliplatin for peritoneal carcinomatosis of colorectal origin. *J Clin*
1758 *Oncol.* 2009; 27:681-685.
- 1759 8. Cao C, Yan TD, Black D, Morris DL. A systematic review and meta-analysis of cytoreductive
1760 surgery with perioperative intraperitoneal chemotherapy for peritoneal carcinomatosis of
1761 colorectal origin. *Ann Surg Oncol.* 2009; 16: 2152-2162
- 1762 9. Elias D, Goere D, Di Pietrantonio D. Results of systematic second-look surgery in patients
1763 with high risk of developing colorectal peritoneal carcinomatosis. *Ann Surg.* 2008; 247:445-450
- 1764 10. Yan TD, Black D, Sugarbaker PH. A systematic review and meta-analysis of the randomized
1765 controlled trial on adjuvant intraperitoneal chemotherapy for resectable gastric cancer. *Ann*
1766 *Surg Oncol.* 2007; 14: 2702-2713
- 1767 11. Tentes AAK, Spiliotis ID, Korakianitis OS. Adjuvant perioperative intraperitoneal
1768 chemotherapy in locally advanced colorectal carcinoma: preliminary results. *ISRN Surgery*
1769 volume 2011, article ID 529876.
- 1770 12. Sammartino P, Simone S, Biachi D. Prevention of peritoneal metastasis from colon cancer
1771 in high risk patients: preliminary results of surgery plus prophylactic HIPEC. *Gastroenterology*
1772 *Research and practice.* 2011. ID: 141585.
- 1773 13. Baratti D, Kasamura S, Deraco M. Colorectal cancer peritoneal metastasis: second look
1774 laparotomy, prophylactic HIPEC or both? *Ann Surg.* 2014. May 30.
- 1775 14. Noura S, Ohue M, Shingai T. Effects of intraperitoneal chemotherapy with mitomycin c on
1776 the prevention of peritoneal recurrence in colorectal cancer patients with positive peritoneal
1777 lavage cytology findings. *Ann Surg Oncol.* 2011; 18: 396-404
- 1778 15. Rufián Peña S, Muñoz Casares F.C., Briceño Delgado F.J. Radical surgery-peritonectomy and
1779 intraoperative intraperitoneal chemotherapy for the treatment of peritoneal carcinomatosis in
1780 recurrent or primary ovarian cancer. *Journal of Surgical Oncology* (2006); 94; 316-324.

- 1781 16. A.Arjona-Sánchez, F.C. Muñoz-Casares, S. Rufián-Peña. Pseudomyxoma peritonei treated
1782 by cytoreductive surgery and hyperthermic intraperitoneal chemotherapy: results from a
1783 single centre. Clin Transl Oncol 2011, 13 (4): 261-267.
- 1784 17. A. Arjona-Sánchez, F.C Muñoz Casares, A.Casado Adam. Outcome of patients with
1785 aggressive pseudomyxoma peritonei treated by cytoreductive surgery and intraperitoneal
1786 chemotherapy. World J Surg 2013, 2013 Jun; 37(6):1263-70.
- 1787 18. F.C. Muñoz-Casares, S. Rufián, A.Arjona-Sánchez. Neoadjuvant intraperitoneal
1788 chemotherapy with paclitaxel for the radical surgical treatment of peritoneal carcinomatosis in
1789 ovarian cancer: a prospective pilot study. Cancer Chemotherapy and Pharmacology. 2011. Jul;
1790 68(1):267-74.
- 1791
- 1792 12. ANNEXES
- 1793 All annexes are provided as separate documents.
- 1794
- 1795 Annex 1. Information sheet for the subject and informed consent
- 1796 Annex 2. Declaration of Helsinki of the World Medical Association
- 1797 Annex 3. List of participating centers
- 1798 Annex 4. Questionnaire QLQ-C30