Short-term safety and quality of life outcomes following radioembolization in primary and secondary liver tumours: a multi-centre analysis of 200 patients in France

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CIRT-FR Interim Analysis Results
Presented by Prof. Romaric Loffroy
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Conflict of interest

- Consultancy to SIRTEX Medical
200-patient interim analysis of the prospective, post-market, observational study CIRT-FR

• Exhaustively capture the real-life clinical practice of TARE, using SIR-Spheres yttrium-90 resin microspheres in all patients treated in France.

• Data will be used by the French National Authority for Health (HAS) to evaluate the renewal of SIR-Spheres reimbursement for patients with colorectal liver metastases and hepatocellular carcinoma.
31 sites were invited to participate
22 participated
11 enrolling centres
11 not enrolling centres
5 contracting process
4 declined participation
Objectives

- **Primary objective:** to observe the real-life clinical application of TARE with SIR-Spheres Y-90 resin microspheres by means of 5 categories:

|   |   |
|---|---|
| 1. | **First-line** TARE treatment with or without concomitant systemic therapy |
| 2. | **Second or subsequent line** TARE treatment with or without concomitant systemic therapy after previous first-line systemic therapy, including salvage therapy when no other systemic therapies used alone are likely to be efficacious |
| 3. | TARE treatment with or without concomitant systemic therapy **after previous interventional liver-directed procedures or liver surgery** |
| 4. | **Addition of TARE to systemic therapy** (any line) or to any other treatment (e.g. ablation) intended as part of a multimodal curative therapy with any of the following objectives: resectability and/or ablative therapy and/or transplantation |
| 5. | Treatment with TARE in patients **intolerant of chemotherapy** or patients considered not suitable for systemic therapy |
| 6. | **Other** |
Objectives

- **Secondary objectives**: to assess baseline characteristics, safety and quality of life data.

| Secondary objective   | Endpoint                  | Measured according to            |
|-----------------------|---------------------------|----------------------------------|
| Safety                | • Adverse events          | • CTCAE 4.03                     |
| Quality of Life       | • Global health score     | • EORTC QLQ-C30 Scoring Manual v 3.0 |
|                       | • Functional score        |                                  |
|                       | • Symptomatic score       |                                  |
|                       | • HCC Module              | • EORTC QLQ-HCC18 Scoring Manual v 2.0 |
Results – Patient demographics

- **200 patients**
  - treated between August 2017 and June 2020
  - Male, 140 (70%)
  - Age (range 19-92), median 66

- **85% patient coverage in 22 centres**
  - Quarterly case logs, determined that patient coverage of all patients treated at participating sites was 85% (when disregarding one centre, patient coverage was 91%)
Primary endpoint
Results of the three biggest groups representing 74.5% of the patients

First-line treatment
- 61 (30.5%) patients underwent TARE with SIR-Spheres as a first-line treatment

After previous procedures without previous chemotherapy
- 53 (26.5%) patients received the treatment after previous liver-directed interventional radiological procedures or liver surgery in the absence of prior chemotherapy and post hepatic procedures

After previous procedures
- 35 (17.5%) patients received TARE treatment after previous first-line systemic therapy
Safety - Results per patient

| Number of patients with at least one AE n=200 | peri-interventional | <30days | >30days |
|---------------------------------------------|---------------------|---------|---------|
| Overall                                    | Grade 3 or 4        | Overall | Grade 3 | Overall | Grade 3 or 4 |
| 8 (4%)                                     | 4 (2%)              | 24 (12%)| 3 (1.5%)| 122 (61%)| 28 (14%)     |

- 30 day mortality: 1%
- 170 (44.5%) AEs were ungraded
### Safety – Overall results

|                     | peri-interventional AEs | <30days | >30days |
|---------------------|-------------------------|---------|---------|
|                     | Overall AE n=9 (%)      | AEs Grade 3 or 4 n=5 (%) | Overall AE n=42 (%) | AEs Grade 3 or 4 n=6 (%) | Overall AE n=382 (%) | AEs Grade 3 or 4 n=33 (%) |
| Abdominal pain      | 4 (44.4)                | 4 (80)  | 2 (4.8) | -          | 50 (13.1)         | 4 (12.1)              |
| Fatigue             | -                       | -       | 11 (26.2) | -          | 91 (23.8)         | 8 (24.2)              |
| Fever               | -                       | -       | -       | -          | 9 (2.4)           | -                     |
| Nausea              | -                       | -       | 4 (9.5) | -          | 14 (3.7)          | -                     |
| Vomiting            | 1 (11.1)                | 1 (20)  | 4 (9.5) | -          | 6 (1.6)           | 1 (3.0)               |
| RE Induced Gastritis| -                       | -       | 1 (2.4) | -          | -                 | -                     |
| Gastritis           | -                       | -       | -       | -          | 2 (0.5)           | -                     |
| RE Induced GI Ulceration | -                  | -       | 1 (2.4) | -          | -                 | -                     |
| GI Ulceration       | -                       | -       | 1 (2.4) | 1(16.7)    | 3 (0.8)           | 2 (6.1)               |
| REILD               | -                       | -       | 2 (4.8) | 2 (33.3)   | -                 | -                     |
| Radiation Pneumonitis | -                    | -       | -       | -          | -                 | -                     |
| Radiation Cholecystitis | -                  | -       | -       | -          | -                 | -                     |
| Radiation Pancreatitis | -                   | -       | -       | -          | -                 | -                     |
| Other               | 4 (44.4)                | -       | 16 (38.1) | 3 (50)     | 207 (54.1)        | 18 (54.5)             |
Results – Quality of Life (EORTC QLQ-C30)

Global health score for 46 (23%) patients remains relatively constant when compared to baseline.

*Results for functional and symptom score were similar to those shown for global health.*
Results – Quality of Life HCC18 Module

HCC 18 Score for 25 (22%) HCC patients worsened during treatment and 1st follow-up when compared to baseline.

- Follow-up: change from baseline to follow-up, 36% of the patients
- After TRT: change from baseline to TRT, 20% of the patients
Discussion and Limitations

Representativeness
CIRT-FR constitutes a representative study on the real-life application of TARE using SIR-Spheres in France - 85% of all patients treated were included in the study.

Safety
TARE can be considered as a safe treatment alternative.

HRQOL
HRQOL remains relatively constant when compared to baseline. HRQOL observed in controlled trials holds true to the real-life clinical practice.

Limitations
High number of ungraded AEs: 44.5%.
Only 23% of patients provided HRQOL data for all three timepoints required.
More than half of all patients were provided by a single centre.
Conclusion and Outlook

**Comparison to previous data**
Safety and quality of life generated by randomised-controlled trials is reflected when assessing the real-world application of TARE in this interim analysis.

**Reimbursement impact**
Reimbursement is not a deciding factor for treatment administration when a treatment is considered clinically effective.

- **March 2017**
  - Reimbursement decision - mCRC

- **October 2019**
  - Reimbursement decision - HCC

- **August 2022**
  - CIRT-FR final results, over 300 patients

- **August 2022**
  - End of patient follow-up

- **Outlook**
  - CIRT-FR & CIRT data
  - CIRT: general European observational that gathered data on SIRT, over 1000 patients

- **October 2019**
  - Reimbursement decision - HCC

- **End of patient follow-up**
  - CIRT-FR final results, over 300 patients

- **March 2017**
  - Reimbursement decision - mCRC

Reimbursement is not a deciding factor for treatment administration when a treatment is considered clinically effective.
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more information in CVIR

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